

Work and the Human Essence

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ABSTRACT Jenkins and Sherman hold that belief in the value of work is artificially inculcated and that a 'leisure society' is desirable and possible, as well as being necessitated by the introduction of microprocessors. After distinguishing between meaningful work and labour (first section), I reply obliquely to their case by contending that meaningful work affords most people their best chance of the necessary good of self-respect (second section), and that it constitutes the exercise of an essential human capacity, the development of which is necessary to human wellbeing (third section). Because of the contingent connections between employment on the one hand and meaningful work and self-respect on the other, we should recognise the value of work and plan for full employment (fourth section).

It is likely, though far from certain, that by the late 1980s towards four million workers in Britain alone will lose their jobs as a result of the introduction of microprocessors, and that unemployment will increase sharply in other developed countries for the same reason. Clerical staff would be those principally affected. The prediction is a controversial one: some hold that micro-processors will in fact create jobs. But even their case predicts some increase in unemployment: for it is held that micro-processors will help Britain to outdo its competitors, who will in varying degrees be driven out of business. So whether it is located in Britain or exported, on all accounts there would be a diminution in the number of those employed.

One reaction to this likelihood is that the affected nations must become leisure societies. "First", Mr Clive Jenkins, General Secretary of ASTMS is reported as saying [1], "we must destroy the work ethic": and elsewhere he and Barrie Sherman make the following claims:

People have two fundamental needs: to live and to reproduce. For this food and the ability to maintain a constant body temperature are essential and this implies a need to obtain clothing and shelter. It is to this end that work is aimed and anything beyond is a luxury in excess of survival. [2]

We do not believe that work *per se* is necessary to human survival or self-esteem. The fact that it appears to be so is a function of two centuries of propaganda and an educational system which maintained the 'idea' of work as its main objective, but which singularly failed to teach about leisure and how to use it. This is not to say that lack of work ... would be acceptable to society as it stands at the moment; indeed this would be patently untrue ... This need for work is, we would argue, an ingrained and inculcated attitude of mind. [3]

... people believe that they *should* work, irrespective of the income problem. Patterns of identity-loss, vandalism, depression, apathy, and increasingly, anger are the symptoms of unemployment. But we cannot believe that these reactions to loss of work are inherent in human nature. Instead

these symptoms represent a series of conditioned responses which even today are being reinforced by (the) establishment. [4]

Rather the work ethic must itself become redundant [5], and people must be enabled and educated to cope with lives of leisure.

Whether or not our current attitudes to work are conditioned in the ways related, these passages raise the prior question of how far it is desirable or acceptable that a large proportion of those in a society able to work should have no opportunity to do so. Many of the reasons for answering in the negative would take me too far afield: I shall concentrate almost entirely on the issues of what is good about work, and what harm is suffered by the individual who lacks it.

Meaningful Work

First we must distinguish between work and labour. P. Herbst, whose apposite account I for the most part follow [6], begins by classifying them as unalienated and alienating respectively: "Roughly speaking, work is conceived to be a species of unalienated action, labour is activity tending to alienation". Without dissenting from the implicit evaluations of work and labour, I mean to employ less controversial terms, and after characterising work and labour without reliance on notions such as 'alienation', to introduce arguments about their merits and demerits in the two sections following.

As Herbst says, work and labour have much in common, however they are distinguished. They consume people's time and energies, may be done more or less quickly, competently and conscientiously, tend to exclude other simultaneous pursuits, and are commonly directed to production, so long as production is construed broadly enough to include services. But work may be contrasted with labour in that the product of work is the objective of the worker, whereas the point of labour is the rewards that it brings. These largely consist in pay and what it will buy, though they may also include friendships formed at the workplace. Labour or toil is the price paid for these advantages.

Thus labour is justified, on this account, by quite contingent and extrinsic advantages, and can lose its whole point when they lapse. Work, on the other hand, can itself *be* a pleasure, just as, on Aristotle's account, pleasure consists in various unimpeded activities. Besides this, work is justified, at least in part, by a product to which it is non-contingently related. Often, of course, it has extrinsic and contingent justifications too: but these do not distinguish it, as it shares them with labour.

Accordingly work, unlike labour, must have a point which the worker can endorse, involving standards of excellence which he or she can also endorse for the kind of product to be produced. With labour, however, this often fails to be the case—though not always: when it is the case, labour temporarily becomes work. The worker, to put things another way, can always identify with his or her work: and works, or can work, autonomously. Before the implications of this are explored, it is worth drawing attention to Herbst's conclusion about the descriptions under which work is best understood.

Herbst here criticises the view on which none of the many alternative descriptions of an activity is more basic than any other. On this view, frustration in one's work can be avoided by endorsing any re-description of one's work which it will bear, such as making money, so long as one's efforts are successful under that description: and one is then achieving what one is about. In actual fact people cannot *care* about

their work under just any description, such as making money, much as they can *desire* to make money. Since in work, as not always in labour, the worker cares about the excellences of the finished product, he or she has reasons for directing effort and energy accordingly: and his or her endeavours will not be understood unless they are described in a manner equal to these facts, in such a way that their accomplishment under that description is necessary for a product of quality. For 'good workmanship is constitutive of good work' (i.e. of a good product) but not constitutive of moneymaking.

Now as 'work' is commonly used of both work and labour in Herbst's senses of those terms, I propose from now onwards to use 'work' in its ordinary sense, and to call what has so far been characterised as 'work' meaningful work'. Andreas Eschete, who discusses meaningful work [7], relates that an important part of its meaningfulness has to do with its object, and this is also the basis of Herbst's distinction; so it is reasonable to introduce his phrase 'meaningful work' for 'work' in Herbst's sense. It is, moreover, worthwhile to pursue his further claim that "a central feature of meaningful work is that it is autonomous".

"The fact that a piece of work bears the distinctive stamp of the worker", he continues, "is a source of the satisfaction found in it." Indeed the context suggests that Eschete means no more by 'autonomous work' than work which "displays our part in its making". Now it might be doubted whether such a distinctive stamp is really a necessary condition of autonomous work, at least in the more usual sense of 'autonomy', i.e. that of self-determined activity on the part of the agent [8]; but it is clearly at any rate part of a sufficient condition, where the other part is, perhaps, that one's stamp or distinctive contribution complies with one's freely adopted standards. Eschete's own account of some of the conditions of autonomy in productive work serves to bring out what is required if work is to be done according to such standards; and indeed it may well be a necessary condition of autonomous work in the usual sense, as well as in Eschete's sense, that it should involve at least the attempt to comply with such standards.

Thus where tasks have been reduced by others than the worker to a routine, little or no room is left for autonomy, and autonomy can be introduced only by either eliminating them or by consolidating them in ways which call for a greater degree of skill and judgement. Routine labour, certainly, can have its own enjoyments, particularly as a holiday from thought; but only where the activity reflects skill or judgement on the labourer's part can it embody the worker's own standards. Indeed the presence of skill or judgement is, I should maintain, a necessary condition of meaningful work, for otherwise there is no scope for the worker to introduce standards of his or her own, about which he or she can care.

But the existence of such standards is insufficient for work to be meaningful. Even in tasks which are not reduced to a routine, autonomy may, as Eschete says, be lacking if the worker has little or no say in planning the work. Work need not have an intrinsic point for the worker just because it is demanding, or just because (another of Eschete's requirements) it is varied. The worker will not be likely to endorse the point of allotted tasks or the standards required for good workmanship unless he or she is enabled to have some say in deciding how their work is to be executed.

Such, then, is meaningful work, on the basis of an account which Eschete derives from Karl Marx. It is interesting that it tallies so closely with the more traditionalist account of workmanship supplied by Herbst. Certainly the exact limits of meaningful work have not been specified: more needs to be said, for example, about which

activities count as production. But enough has been said to allow the questions to be raised of what is desirable about meaningful work and whether people need it.

Meaningful Work and Self-Respect

Eschete treats it as obvious that meaningful work confers self-respect, and argues that this benefit can be in conflict with the good of maximising welfare. But does meaningful work confer self-respect, does it confer it uniquely, and in what way is self-respect beneficial? I consider the last of these questions first.

John Rawls contends that self-respect is a primary good, something which it is rational to want whatever else is wanted [9]. Under self-respect Rawls includes both of the following elements: "a person's sense of his own value, his secure conviction that his conception of the good, his plan of life, is worth carrying out" and also "a confidence in one's ability, so far as it is within one's power, to fulfill one's intentions". From this account it is easy to see why Rawls considers self-respect a primary good. "Without it", he remarks, "nothing may seem worth doing, or if some things have value for us, we lack the will to strive for them. All desire and activity becomes empty and vain, and we sink into apathy and cynicism."

Now if the Aristotelian claim is granted that in the right conditions unimpeded activities are as such intrinsically desirable, then Rawls' remarks, if true, indeed show that everyone has reason to want self-respect and to be glad of it if they have it: for, according to Rawls, without self-respect everyone stands to be deprived of these activities and the pleasures they constitute. Further, Rawls' account of self-respect does indeed imply that those who lack self-respect will lack either the conviction that the standards they endorse are worth caring about or the will to comply with them, and that they may lack both the conviction and the will. Indeed my only reservation with Rawls' account is that in requiring people to have a plan of life if they are to have self-respect, he seems to deprive of self-respect and its benefits the many people who have no plan of life. It is in fact enough if a person's conception of his or her own good involves their having a more-or-less consistent scheme of priorities for living: for this is enough to ensure that they endorse standards affecting their own actions. This modification of Rawls' account of self-respect leaves his argument for its being a primary good intact, while also representing it as accessible to a much wider range of agents. (There are, no doubt, other reasons, connected perhaps with the development of a personality, why self-respect is a primary good and constitutive of a worthwhile life, but I cannot go into them here.)

Our modified account of self-respect also upholds Eschete's assumption that meaningful work confers self-respect. For the agent of meaningful work has standards and aims about which he or she cares; and also is able to apply them and carry them out. For his or her work is constitutive of its products, so if these products have the qualities looked for, the standards and aims are being satisfied. Meaningful work, then, actually satisfies the requirements of self-respect itself, except where work goes badly, or, there again, except where the agent lacks a scheme of priorities for living: but for work of this kind to go badly is at least often a sign not a lack of self-respect but of the dissatisfaction with imperfect work or conditions which self-respect occasions; and again, though meaningful work does not entail that the worker has a scheme of priorities, it tends to generate rather than to retard the growth of a sense of what in life is worth doing.

But is meaningful work indispensable for self-respect? Many people exhibit self-

respect who are not in paid employment. But this is not a conclusive objection to the indispensability claim. For the requirements of meaningful work can be satisfied by many activities besides paid work, such as study in school or university, care at house of the young, the old and the sick, voluntary work for charities, housework, gardening and, in many peasant communities, subsistence farming. It should, all the same, be granted that it is possible to have self-respect without having meaningful work, and some elderly gurus may be in this position. But the possibilities are limited, if only because, as Rawls points out, self-respect is liable to collapse without others' esteem, and accordingly without the belief among his or her neighbours that an agent is complying with accepted standards for worthwhile activities. Moreover it is hard to see how these standards could change so as to accommodate activities which involved no meaningful work, at any rate if they involved no effective contribution to society either. So in all probability meaningful work is the principal, though not the invariable basis of self-respect in most people's lives.

Work that is not meaningful, however, does a good deal less to foster self-respect. For the worker who has to earn a living at this kind of work is compelled to undertake tasks which are either too routine, too repetitive or too much dictated by others to identify with his or her work, and has to see himself or herself as using prime time and energies on work about which he or she does not care. Indeed points such as these are central to Jenkins' and Sherman's case. There may still, however, be self-respect arising from the awareness of ability to support one's dependants, so self-respect may not be wholly undermined, and may to this extent be sustained.

Moreover the loss of employment brings with it the loss *both* of what is for many people their main opportunity for self-respect in meaningful work *and* of the sense of the ability to support oneself and one's dependants. The blow to a worker's morale can often, combined with the frustrations consequent on diminished income, undermine self-respect too much for it to be regained through alternative kinds of unpaid but meaningful work such as those mentioned above. Thus the desirability of a 'leisure society' is already cast in doubt because of the diminished opportunities for self-respect.

Production and the Human Essence

Perhaps, though, the self-respect which it confers is not the only way in which meaningful work is inherently beneficial. The argument linking meaningful work and self-respect turns on certain formal features of the former, but not on its productiveness. I now wish to investigate whether it is good because humans are in some way essentially productive, and are only fulfilled by productive activity. To do this I need first to summarise an argument which I have expounded more fully elsewhere [10] .

Let the essential capacities of a species be those capacities in the absence of which from most members of a species it would not *be* the species which it is. In this sense, of course, what is essential need not be distinctive but may be common to several species, just as what is distinctive may be quite inessential. Now it is, I maintain, a necessary truth that to live well, develop, or flourish as a member of a species involves being able to exercise the essential capacities of that species. Thus to flourish as a jaguar requires command to many faculties common to mammals, plus others such as the ability to run faster than most others can. And similarly a human only lives well if he or she is able to exercise essential human capacities; and is benefited by being enabled to do so. These capacities include among others the

capacities for linguistic communication, for experiencing the wide range of emotions which that makes possible, for some measure of reflection about both practical and theoretical matters, and for forming plans and decisions on the basis of reasons of one's own. If so, then to live well as a human requires the development in some degree of these (and other less distinctive) essential powers.

This argument about the desirability of the ability to exercise essential human powers has the advantage over those employed by Rawls about primary goods that its conclusion is necessary. Rawls' arguments about what is good for people all depend on contingent premises, mostly about what people prefer, and thus have the weakness that if, in some Brave New World, everyone's preferences were caused to change out of all recognition, his conclusions would cease to apply. No doubt there would actually, in such a society, be liabilities in the ability to think for oneself. Yet those lacking it would still have failed to develop as people, and this the argument from essential capacities brings out.

Arguments from essential capacities have recently been criticised by Anthony Quinton [11] and by Mary Midgley [12]. In particular Quinton criticises Aristotle, and Midgley criticises Marx, for arguing from people's differentiating capacities. If this approach were correct, the healthiest and happiest humans would be those in whom ratiocination and language, together with cooking and laughter, were well developed, whether or not the capacities which humans share with other animals, such as those for physical fitness and natural affection, were developed at all. So the argument from differentiating capacities fails. But the objection has no weight in connection with the argument from essential capacities presented above. Indeed there is considerable sympathy, from Midgley at least, for the view that what is good for people is largely determined by their nature, a nature of course which is in some measure shared with other animal species.

Accordingly it remains possible that important conclusions can be derived from Marx's belief that production is of the human essence. The conclusions would not include what Quinton calls 'ethical Stakhanovism', the belief that the best person is the most productive, for, as Quinton points out, Marx avoided Aristotle's mistake of arguing from human capacities directly to ethical conclusions. But the argument from essential capacities concludes not that good people exercise their capacities in a high degree, but only that the ability to exercise these capacities is necessarily good for people, and that in this sense they live better if they have it. Whatever moral, social and political implications this conclusion has (and I shall draw attention to some of them in the fourth section), it does not of course imply that these same people are morally good. By the same token Marx's premise remains of potential relevance to the argument from essential capacities. Besides, as Quinton says, it is clearly superior to Aristotle's account, treating man "as a natural object and not as a pure intelligence". (Though Aristotle has at times a broader account of human nature than this, it cannot be denied that the account of human excellence in Book X of the *Nicomachean Ethics* lends substance to the charge.)

Now Quinton and Midgley both consider two interpretations of Marx. On one of these, Marx's point is that people are productive in that, unlike the animals, they process materials and provide the means of subsistence by the use of tools, rather than just gathering what they need. Here Midgley points out that bees, beavers and termites process materials too, a sound point which Marx himself had in fact made before her about the very same species [13]. Quinton for his part interprets Marx's understanding of production as including productive activity in the realm of ideas, including theories and works of art; and his interpretation is plausibly upheld by

Marx's claim that "... man constructs also in accordance with the laws of beauty" and that he more than "reproduces himself intellectually" (which suggests that he at least does this) [14]. Granted this interpretation, Marx's point cannot turn on the processing of materials or the use of tools, for theories can be produced without either.

The second interpretation supplied by Midgley is of production as the free and deliberate planning of what one does, whether it be gathering, processing or anything else. As Midgley comments, this could be applied to all human activities, and not only to what we mean by 'production'. It would follow that if Marx is looking for the differentiating mark of people, 'production' is the wrong concept, for sport and worship are among the range of activities which can be freely and deliberately planned, but are not production. But when we consider Quinton's presentation of Marx's conclusion, we find that a differentiating premise is not required: "the good life is a life of free and creative productive activity, a life in which men's productive essence is actualised without alienation". This account is well supported by the passages cited by Quinton, and may be accepted for present purposes, as long as it is realised that other interpretations besides it remain possible. It requires as a premise that humans are essentially capable of free and creative productive activity, which can issue in material goods, services, theories, or works of art. (I take 'alienation' to mean to non-actualisation of one's generic essence, and thus to require no extra premise to justify its insertion in Marx's conclusion.)

Quinton in fact maintains that Marx's account of the good life for a human requires that his or her essence be actualised *freely*, "and this is to introduce something that is not intrinsic to his conception of the human essence at all". But the text of the *Economic and Philosophical Manuscripts* suggests otherwise.

They (sc. nonhuman animals) produce only under the compulsion of direct physical needs, while man produces when he is free from physical need and only truly produces in freedom from such need.... The products of animal production belong directly to their physical bodies, while man is free in face of his product.... This production is his active species-life. [15]

So when Quinton holds that Marx's conclusion is "rather a large and perceptive empirical generalisation about the real conditions of long-lasting human satisfaction than a consequence of his account of the essential nature of man" there is reason to dissent. Indeed even if free and creative activity failed to produce long-lasting satisfaction (perhaps as a result of the demoralising effects of pollution), Marx's conclusion would not be undermined. For it concerns not the generation of satisfaction but the good of people as people.

But is Marx's premise true? Is free and creative productive activity an essential human capacity? The inability of infants and of some mentally defective and some senile people to be productive is not itself an objection: for it is not a requirement for an essential capacity that all members of the species concerned should currently be able to exercise it. The question is rather whether a species of which not as many as most members possessed this capacity or potential would be human. The only ground for hesitating over a positive answer is the possibility that not enough humans may have creative potential.

On the other hand, most humans do manifestly possess a capacity for meaningful work. Is meaningful work creative? It need not be innovatory, and, as we have seen, it need not even bear its agent's distinctive stamp. But it is creative in that it is

autonomous, and that the products do depend on the skill or judgement and, to some degree, on the planning of the worker, and take their shape from his or her conception of the operation; and this remains true even if an identical product could have emerged from the work of someone else with the same conception. So, in the derivative sense in which 'creative' is applied to humans, a sense which does not require originality any more than it requires *ex nihilo* reification [16], we may truly assert that meaningful work is creative.

Can we then construe Marx as holding that the capacity for meaningful work is an essential human capacity? Marx, as we have seen, was probably thinking of free and creative productive activity, including the production of theories and of works of art as well as of services and material goods. But there is no difficulty in extending the application of 'meaningful work' to the production of theories and works of art. Thus it was with complete consistency that Herbst, after rejecting (cogently enough) as descriptions of work (or, in the usage of this paper, of meaningful work) 'earning a living', 'making a reputation for oneself', 'earning promotion' and even 'serving his company' and 'doing his duty', accepts as work descriptions proper 'building a house', 'composing a quartet', 'working at a philosophical problem' and 'educating a student'. Now the production of theories and of works of art, like that of goods and services, was probably, as Quinton claims, included by Marx as productive activity, and, as we now see, the same range of cases can also count as meaningful work. So Marx's premise can indeed be taken as signifying that an essential capacity of humans is the capacity for meaningful work.

But if so, it follows by the argument from essential capacities that the ability to exercise meaningful work is necessarily a benefit to people, and that they are harmed by the failure to come by it, the harm lying in their failure to develop as people. Indeed, so long as 'creative' is construed as above, Marx's conclusion is vindicated that "the good life is a life of free and creative productive activity, a life in which men's productive essence is actualised without alienation". Or rather the conclusion is established that this is one constitutive feature of a good life.

Self-Respect, Self-Realisation and the Leisure Society

Is there a right to work? As we have seen, it is impossible to leap from essential capacities to obligations, rights and virtues. But some bridging premises can be supplied. Thus I shall take it for granted that a natural right exists if and only if there are moral reasons for a certain treatment just because of the nature of the species of the individuals affected; and that there *are* moral reasons for supplying people, where possible, with those benefits in the absence of which they suffer harm and those needs but for the satisfaction of which they are stunted as people. There is no need for present purposes to discuss the status of these propositions: for as long as they are accepted, and it is also granted as following from the argument in the second and third sections that to lack the opportunity for meaningful work is to be deprived of a constitutive element in the good life for a person, then there is indeed a natural right to meaningful work. (Marx himself, of course, rejected a rather stronger notion of natural rights: but his beliefs about unalienating work are consistent with there being needs of the fulfilment of which no-one should be deprived. So long as we are aware of the conceptual leap involved, there is no harm in transposing Marx's ideas into the apparently incongruous conceptual framework of natural rights.)

Now micro-processors and other forms of automation eliminate jobs many of

which involve comparatively little scope for meaningful work, and others of which afford considerable such opportunities. (It is all too easy for those who are not clerks to assume that the threatened jobs are mostly soul-destroying, and leave no room for initiative: my own experience of a clerical job does not bear out this view.) Nonetheless, as Jenkins and Sherman might maintain, in some cases the threatened jobs are ones which have on balance failed to maximise self-respect, even allowing for the awareness of the worker that he or she was supporting self and dependants: and in cases where the loss of a job releases time and energy for unpaid meaningful work, the worker actually benefits by being made redundant. Perhaps, then, they might say, if people could be persuaded to attach less significance to employment, there might actually be an overall gain to people's self-respect. There again, the new jobs which result from automation tend, or so the Soviet writer G. Volkov claims [17], to be varied, skilful and reflective ones, and are thus a gain to the self-respect and self-realisation of those fortunate enough to be allotted them; though Jenkins and Sherman refer to research in Scandinavia, the USA and the UK which suggests the very opposite [181].

As against all this, most work embodies traces of autonomy and meaningfulness, and its autonomous and meaningful content could in the great majority of cases be increased in some of the ways mentioned by Eschete. Again, besides the non-contingent connections for which I have been arguing between meaningful work on the one hand and self-respect and self-realisation on the other, there is also, as we have seen, a contingent connection between paid employment and self-respect. Moreover a great many people are unable to any significant extent to perform meaningful work outside regular employment, whether through lack of the esteem, encouragement or fellowship of others, the loss of morale which usually accompanies the loss of a paid job, or the lack of an ability to envisage the value which meaningful work could have for their lives. Education might help here: but I doubt whether it could help enough.

Thus for most people the best hope for meaningful work lies in paid employment: and unless automation and micro-processors maintain the total number of jobs, which as we saw at the outset appears unlikely to happen, this hope is going to be an empty one for a large and growing number of discarded workers. Indeed their natural right to meaningful work is not going to be respected.

This right is not, of course, the only moral consideration, and the other considerations may make it imperative to introduce micro-processors. Nevertheless, since there is a strong moral case against avoidable unemployment, their introduction should be gradual, phased, and restricted to workplaces where the other considerations make it strictly necessary. Moreover, as Clive Jenkins has also said, every moment is precious in the search for new working arrangements, arrangements which will generate additional jobs involving meaningful work. Encouragement is also needed for unpaid work such as ancillary help for the social services, literacy programmes and the keeping of allotments, not only because of the beneficial consequences but also because of the increased opportunities for meaningful activity outside employment.

In practice only the state is able to devise such arrangements on a sufficient scale. It should devise jobs which are creative in the sense used above and which are also socially useful, even where the market value of the goods or services produced does not maximise the worker's productivity in purely economic terms. There is in many cases, of course, an economic case for keeping workers in employment rather than having to pay them unemployment benefits: but my case is quite independent of it.

Rather than laying off workers and preventing school-leavers from finding opportunities to work, societies such as Britain which have the resources to do so should aim at full employment, and seriously set about the devising of opportunities for meaningful work for all those able to take them up [19] .

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NOTES AND REFERENCES

- [1] *The Guardian*, 13th September 1978. ASTMS is the acronym of the Association of Scientific, Technical and Managerial Staffs.
- [2] JENKINS, CLIVE & SHERMAN, BARRIE (1979) *The Collapse of Work*, p. 16 (London, Methuen).
- [3] *Ibid.*, p. 141.
- [4] *Ibid.*, p. 158.
- [5] *Ibid.*, p. 182.
- [6] HERBST, P. (1973) Work, labour and university education, in: PETERS, R.S. (Ed.) *The Philosophy of Education*, pp. 58-74 (London, Oxford University Press). He derives the distinction between work and labour from ARENDT, HANNAH (1958) *The Human Condition*, chapters 3 and 4 (University of Chicago Press).
- [7] ESCHETE, ANDREAS (1974) Contractarianism and the scope of justice, *Ethics*, 85, pp. 38-49.
- [8] This is the sense employed, for example, at p. 146 of DOWNIE, R.S. & TELFER, ELIZABETH (1969) *Respect for Persons* (London, Allen & Unwin).
- [9] RAWLS, JOHN (1972) *A Theory of Justice*, section 67 (London, Oxford University Press). Rawls once mentions meaningful work as a human good (p. 425), but otherwise says little about it.
- [10] In ATTFIELD, ROBIN (1974) On being human, *Inquiry*, 17, pp. 175-192.
- [11] QUINTON, ANTHONY (1975) Has man an essence, in *Nature and Conduct*, pp. 14-35, Institute of Philosophy Lectures, Vol. 8 (London, Macmillan).
- [12] MIDGLEY, MARY (1979) *Man and Beast: the Roots of Human Nature*, pp. 206-209 (Hassocks, Sussex, Harvester Press).
- [13] In the first *Economic and Social Manuscript*, translated and edited by BoTromoRE, T.B. (1963) *Karl Marx, Early Writings*, p. 128 (London, C. A. Watts).
- [14] *Ibid.*
- [15] *Ibid.*
- [16] The sense of 'create' and 'creative' from which this sense is derived and the relation between the two are discussed in ATTFIELD, ROBIN (1980) Religious symbols and the voyage of analogy, *International Journal of Philosophy of Religion*, 11(4), pp. 225-238.
- [17] Voi..Kov, G. (1972) *Man and the Challenge of Technology*, pp. 36f (Moscow, Novosti Press Agency Publishing House).
- [18] *The Collapse of Work*, p. 146.
- [19] I am grateful for comments and suggestions on earlier drafts of this paper to various colleagues and commentators, to the Philosophy Seminar, to the Royal Institute of Philosophy (Northern Branch), Newcastle-upon-Tyne, and in particular to Barry Wilkins and to Mary Midgley.

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Originally published in 1981, *Genes, Mind, and Culture* extended the sociobiological analysis to human behavior via a pioneering, ambitious and wide-ranging analysis of gene-culture evolution. Lumsden and Wilson constructed a theoretical framework for the role of genetics in human behavior and culture. In principle, culture could be unanchored by any evolved genetic mechanisms, or the evolving genome could code for behavior directly, dispensing with culture. More likely, they plausibly argue, both genes and culture are important in humans and the two interact by gene-culture coevolution. The book expands upon the agenda that Wilson had laid out in his 1975 treatise *Sociobiology: The New Synthesis* and in his Pulitzer Prize winning *On Human Nature* in 1978. Sociobiology, they say in the original introduction:

...has not coped with learning and cognition or the consequences of the deep, thorough socialization that characterizes the behavioral development of human beings. The theory of gene-culture coevolution is designed to address these issues and permit the entry of evolutionary theory into the study of the mechanisms that produce the human mind and behavior. As we will show in the coming chapters, it derives patterns of cultural diversity from biological ground rules (p. 24).

Lumsden and Wilson aimed to synthesize the social-scientific study of humans with the Darwinian theory of evolution by developing a comprehensive theory of how genes interact with cultural variation.

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The primary concept they use to effect a connection between genes and culture is the *epigenetic rule*. Epigenetic rules are genetically encoded rules that are instantiated in the nervous system and which select among the cultural variants that one is exposed to. The influence of genes on culture is thus expressed through epigenetic rules or bias curves that bias individual preferences across a set of behaviors. Citing the then available evidence from developmental psychology, Lumsden and Wilson argue that childhood development is the stage at which epigenetic rules are elaborated. Even infants and toddlers respond differently to various sound and visual stimulants (hearing, color classification, taste, and smell). These innate rules affect, for example, the short-term evolution of languages, and consequently, long-term cultural pressure has shaped the genetic basis for the epigenetic rules that affect language. They used the metaphor of the Leash Principle; the epigenetic rules are the leash that genes create during development to make culture do their bidding.

Genes, Mind and Culture provided a clear explanation for how genes might affect learning and development. As such, it established one of the two influential pictures of how culture operates as an evolutionary system. Lumsden and Wilson assume that cultural variants, what they call culturgens, are stored in long-term memory or are readily observable in the external world, and are recalled or taken up and used as the epigenetic rules dictate. This is clearly illustrated by the structure of their formal models in which the cultural variants that individuals use is little if at all dependent upon the culture used by their parents or other members of previous generations (see pp. 286–288 for the critical discussion of parameter choices). In the terms that Cavalli-Sforza and Feldman (1981) adopted to explain the acquisition of cultural variants, their models consider vertical and oblique transmission to be weak. Lumsden and Wilson propose that ‘culturgen usage rates’ do not depend very much upon the previous generation’s usage rates, but mainly upon the usage rates of peers and upon the epigenetic rules. They assume culturgens to be transmitted by socialization but this fact plays little role in the dynamics that they model which keeps track only of usage rates. Consider an example from language. We all have some slang words in our vocabulary and can choose to speak slang or use the more formal equivalent when we speak. If we all know the same slang and same formal words and if this had always been true, then the only thing that can be dynamic is our rate of usage of the two forms. Based on Lumsden and Wilson’s assumptions, we would have to believe that word choices of this type are little affected by individuals’ environments but are strongly determined by the genes they have inherited; some genotypes prefer slang and some prefer formal speech.

These assumptions lead to what Lumsden and Wilson call the thousand-year rule:

...during a period of this length substantial genetic evolution can occur in the epigenetic rules of cultural transmission, resulting in such effects as the genetic assimilation of culturgen preference and the assimilation of bias toward specific decision heuristics (p. 295).

For the authors, the thousand-year rule is one of the key results of their modeling exercise. But, as they realize (p. 296), its applicability is limited to cultural traits that follow their assumptions, such as incest avoidance, personal bonding, recognition of kin, and territory defense. This is an odd list, since all of these traits occur in other

species without any involvement of culture at all. In the thousand-year rule analysis, all that culture adds is some tendency to make mistakes that genes must adapt to by evolving stronger epigenetic rules to filter them out. In this model, and the related model of the ‘complete coevolutionary circuit’, the adaptive advantages of having culture are difficult to discern. Lumsden and Wilson certainly believe that culture has given humans a tremendous adaptive edge, but just what this advantage is does not emerge from their models (Maynard Smith and Warren 1982; Boyd and Richerson 1983).

The second major school of cultural evolution, to which we belong, pictures cultures as sets of complex, highly variable traditions that are transmitted much like genes (Boyd and Richerson 1985; Laland and Brown 2002). Returning to the same language example, we can, of course, choose between a slang and formal word, but most of the words we know were acquired from other speakers of our language. Even if we know more than one language, we still have a quite limited choice of words to use compared to all the words that humans, use or have used in that situation. Slang is often limited to particular groups. Even though the colorful slang of Black Vernacular English leaks into standard American English at a steady rate, few speakers of a Euro-American dialect can pass as BVE speakers. A trained linguist can trace our dialect to a relatively small subset of speakers of our mother tongue. And so it is with social organization, technology, and many other forms of culture. Individuals do not choose to be kayak makers or outrigger canoe makers, members of patrilineal or matrilineal kin groups, or specialists in an advanced division-of-labor economy rather than subsistence farmers any more than they choose their mother tongue. It is mostly a matter of the culture they were brought up in.

In our view of cultural evolution, the decisions we make are far from trivial, but they are made at the *margin*. Individuals acquire most of their culture from others and only tinker around the edges. Simon (1959) famously argued that humans are rather severely constrained decision-makers. In speech, most individuals use their natal dialect though everyone has modest unique features in their pattern of speech that linguists call our idiolect. In our view, decisions about which cultural variants to adopt are influenced not so much by strong epigenetic rules of narrow scope but by weaker, relatively general purpose decision rules that are often subject to environmentally contingent reinforcement. These decision rules might be characterized as “epigenetic rules lite”. As the environment changes, people invent new concepts and words to describe the new elements. If other speakers find a new verb such as “to google” useful, it passes into the language. Weak general purpose decision-making forces act a lot like natural selection. If, on average, people make decisions likely to enhance their fitness when they choose which cultural variants to adopt, this decision-making can act as a surrogate for natural selection. In Lumsden and Wilson’s picture, epigenetic rules control culturgen usage patterns by the brute force of individual decision-making. In our epigenetic rules lite version, the control of culturgen frequencies is shaped by the whole population of minds over successive generations, creating a relatively modest decision-making burden for individual minds. We think that natural selection would have favored a mechanism which relieved individuals of the cognitive heavy lifting that would be involved if we attempted to rationally choose which of the available cultural variants to adopt. Humans learn thousands of concepts,

generalizations, and skills in the course of becoming competent practitioners of their given culture. To vet more than a small fraction of all the alternatives involved by the use of strong epigenetic rules implies an impossible cognitive burden. In the long run, a *population* using a rules-lite method of choosing between variants can evolve quite complex cultural adaptations. We call this ‘the kayak effect’. The skin boats of the Arctic peoples are far too complex for any single person to invent, though once invented, human imitative skills manage to pass the craft on. They are the cumulative product of many independent innovations and modifications occurring over time. And so it is with all the advanced products of culture. We acquire tens of thousands of words from others, yet only a handful of us will have invented one, at least one that entered into the speech of any significant number of people. In this picture, cultural adaptation is typically more rapid than organic adaptation and is often very effective, witness kayaks. It is *culture*, not *genes*, that follows a thousand-year rule. In a thousand years, humans can run up a novel cultural adaptation of some sophistication. Thus most of the adaptive slack will be taken up by culture, not genes, leading to what we might call the one hundred thousand-year rule for genes. In any arena where cultural adaptations are effective, cultural change will be rapid and selection on genes will be correspondingly weakened. People with a recognizably modern capacity for culture seem to have evolved in Africa around 70 thousand years ago, just before they spread out of Africa to colonize the rest of the Old World, following a history of accelerated modernization that dates back 250,000 years ago or more. Cultural evolution is on the order of 100 times faster than genetic evolution, and only rules-lite forces are required to make it so.

In Chap. 7 *The Biogeography of the Mind*, Lumsden and Wilson do consider the costs and benefits of different degrees of flexibility of epigenetic rules and the problems of imagining how a relatively small number of genes can rigidly program a brain. These are the same considerations that suggested the epigenetic rules lite. PJR remembers reading *Genes, Mind, and Culture* closely as soon as it came out in 1981 to see if Boyd and he had gotten scooped. No, the same considerations had led Lumsden and Wilson to a different conclusion.

One of the most important features of the rules-lite picture is that as culture becomes more complex and the decision rules applied to manage it weaker, cultural variation itself begins to respond to natural selection in addition to decision-making forces. Culture is a system for transmitting heritable variation, and selection can affect any sort of heritable variation, not just that carried by genes. Natural selection directly on culture can transform the coevolutionary process from one in which genes tightly control cultural evolution into one in which culture plays a co-ultimate role with genes. For example, groups made up predominantly of people with cultural traditions facilitating cooperation between individuals would have been more successful than groups made up of more competitive individualists. Thus, selection on the basis of cultural variation between groups would favor the kind of social behaviors that make humans suited to live in large, cooperative societies. Cultural variation turns out to be more susceptible to group selection than genes partly because cultural evolution is faster than genetic evolution and can lead quickly to big inter-group differences. Selection on genes alone would never have favored the human skill at cooperating in large groups of unrelated individuals like tribes and nations. If selection is an important force in cul-

tural evolution, the ‘full coevolutionary circuit’ as described by Lumsden and Wilson is incomplete. Culture cannot be kept on a tight epigenetic leash by genes responding to evolving culture because selection on cultural variation creates a cultural environment that selects for genes adapted to that environment, forcing epigenetic rules to evolve to accord with selection on culture rather than culture to accord with selection on genes. For example, most if not all cultures have rules creating obligations to social units composed of distantly related and unrelated individuals (“tribes” for want of a better general term). Innate epigenetic rules arguably do make learning tribal identities and behaving according to the rules of the tribe easy, if not automatic. One explanation for such tribal social instincts is that group selection on cultural variation was the leading mechanism in a coevolutionary process in which culturally mandated social selection culled out genotypes that were too belligerent or clung too tightly to the rules of kin selection. Think of the leash metaphor again, but make the dog big and sometimes quite stubbornly in pursuit of its own goals.

The anniversary edition of *Genes, Mind, and Culture* includes a new 35-page introduction in which Charles Lumsden reviews scientific progress in gene-culture evolution since 1981. He cites considerable accumulated evidence that he believes supports the strong epigenetic rules picture. He includes only a polite nod toward the rules lite alternative. He cites evidence from personality studies by behavior geneticists claiming a large role for genetic variation, the studies of modularist evolutionary psychology like Leda Cosmides and John Tooby, and some findings from gene sequence data involving recently evolved genes affecting language and other cognitive functions. But evidence for epigenetic rules is not necessarily evidence for *strong* rules. Much evidence can be brought to bear suggesting that human cultures include masses of variation not backed up by variation in strong epigenetic rules (Richerson and Boyd 2005). Language is a good example. Surely some innate structures exist that allow and motivate people to talk, or else chimpanzees would learn to talk too. We have some clues about what the genetic substratum of language is from studies of a variant of the FOXP2 gene. The common variant of the human gene evolved quite recently, and the bearers of a rare mutation have a speech handicap. On the other hand, humans have evolved thousands of highly diverse, mutually unintelligible languages. No one suggests that we have thousands of different innate rules underpinning this diversity. As the ready bilingualism of children shows, every person can learn whatever language(s) they are exposed to. The weak epigenetic rules, including relatively general rules not peculiar to language, that govern this evolution are tolerably well understood (Deutscher 2005).

We think it unfortunate that Lumsden and Wilson’s models are not better appreciated among evolutionary psychologists. Tooby and Cosmides (1992) famously argued that the brain consists of hundreds or thousands of cognitive modules that work like strong epigenetic rules. At the same time, they imagine that cognitive modules are species typical mental adaptations and suppose that little genetic variation will exist for them. Lumsden and Wilson’s models show that strong modules, like strong epigenetic rules, ought to come under selection and be variable according to the thousand-year rule. In other words, a politically correct innatism of the sort pioneered by Noam Chomsky in which genes play a strong, direct role in cognition yet do not vary among individuals and among races is probably not possible. The fact that human populations

are behaviorally diverse without having much genetic variation at all, and especially only modest amounts of genetic variation between different populations, suggests that cultural adaptations are largely shielding cognition from strong selection.

Which of these two views of cultural evolution, the Lumsden and Wilson version or the rules-lite version, describes the bulk of cultural variation is in the process of being tested. Human behavior changed substantially as modern humans evolved from archaic ancestors between perhaps 250,000 years ago and 50,000 years ago. Human behavior has evolved from a world dominated by hunter-gatherers 10,000 years ago to one dominated by industrial economies today. The human genome project and its follow-on sequencing of the chimpanzee genome and the haplotypes of a growing number of people from around the world are rapidly giving us a picture of just what genes have changed in the course of human evolution. These genes contain internal evidence about when these changes have occurred. If culture is dependent upon strong selection on epigenetic rules along the lines of the Leash Principle and the Thousand-Year Rule, we might expect to see appreciable change and differentiation in genes that plausibly underlie strong epigenetic rules as agriculture, urbanization, and industrialization have proceeded. On the other hand, if the 100,000-year rule for genes is more correct, we should see few if any new epigenetic rules in the last 10 millennia, but perhaps a considerable number before 50,000 years ago. On the other hand, agriculture changed diets drastically suggesting recent selection for metabolic adjustments. Population increases and the keeping of domestic animals exposed our agricultural ancestors to a suite of new virulent epidemic diseases, suggesting selection of genes involved with resistance to these diseases.

[Sabeti et al. \(2006\)](#) recently reviewed the accumulated evidence for recent selection on nearly 100 genes and gene families. Unfortunately, a functional understanding of the roles of most of these genes is unknown or known only via the pathological effects of rare mutants. The adaptive role of the major alleles is still mostly unknown. Only seven of the genes found to have undergone selection recently seem to have anything to do with the brain at all. Two of them influence brain size (mutations in the genes cause microcephaly), one is related to language, one is related to cerebellar function, one affects a dopamine receptor implicated in personality variation, and one is a gene family related to pain responses. Most recently evolved genes are related to physiology and to infectious disease. For example, LAC is a regulatory gene whose function is well known. A high frequency derived allele in many dairying populations causes adults to secrete lactase as adults, almost certainly a recent response to the culturally evolved practice. Other very recently selected genes may be coevolved responses to agriculture. ADH is associated with alcohol metabolism. MC1R affects skin and hair pigmentation, and alleles common in extra-tropical population probably reflect the expansion of African populations to higher latitudes around 40,000 years ago. A total of five loci are involved with resistance to malaria including HBB whose function in malaria protection (and sickle cell disease) is well known functionally. Malaria is thought to have become a much worse disease in Africa and elsewhere after population density increases due to agriculture made it an epidemic disease. The genes related to personality and pain reception would seem to be the best candidates to be strong epigenetic rules. Brain size probably coevolved with culture and the language related gene (FOXP2) with symbolic expression, an important subset of culture. One of the

brain related genes, *ASPM*, seems to have originated in the Near East about the time that agriculture became important. The *FOXP2* gene evolved around 40,000 years ago roughly the same time modern humans first migrated out of Africa. Although, as Sabeti et al. note, our sample of recently selected genes is still quite crude, we are struck by the paucity of candidate strong epigenetic rules that have evolved in the last few thousand years and the rather larger number that are good to excellent candidates for coevolved responses to complex cultural adaptations like crop cultivation and dairying.

The current plunge in fertility rates, now below replacement in many societies and dropping rapidly in most former population explosion countries, is an interesting current test case for the strong epigenetic rules picture. Modern culture is exerting very strong selection pressure on human genomes for epigenetic rules that would support high fertility. Modern healthy, wealthy women could achieve completed family sizes of eight or so children as against the less than two that prevail in most rich countries today. If any genetic variation for resistance to the demographic transition exists, it should be increasing at a very rapid rate. So far as we are aware, demographers have not yet brought to light any evidence for the existence of such a gene. Interestingly, the Amish and Hutterite societies, among the very few in industrial societies that do maintain something like the fertility that natural selection would favor, appear to do so by cultural not genetic means. Edward Wilson, the ardent conservation biologist, would no doubt hate to see a high fertility epigenetic rule emerge as the best exemplar of the Thousand-Year Rule!

In the face of the building avalanche of evidence from gene sequence and functional genetics studies, no sensible person will be dogmatic about what is a quantitative empirical question. Much less could any of us clearly foresee the outcome of the projects launched 25 years ago. The rules-lite picture seems to us to be necessary to account for cultural diversity in at least some domains like language. On the other hand, strong rules might conceivably dominate in some domains of culture, such as reproductive behavior, though obviously not strongly enough to maintain behavior which efficiently converts resources into offspring in modern societies. The tragedy of science, T.H. Huxley quipped, is that beautiful hypotheses are slain by ugly facts. No matter whose lovely models end up sinking on the new reefs of facts, we salute Lumsden and Wilson as important and tireless pioneers in the pursuit of a synthesis of biology and social science whose contribution is fittingly remembered with this 25th Anniversary Edition.

References

- Boyd, R., & Richerson, P. J. (1983). Why is culture adaptive? *The Quarterly Review of Biology*, 58, 209–214.
- Boyd, R., & Richerson, P. J. (1985). *Culture and the evolutionary process*. Chicago: University of Chicago Press.
- Cavalli-Sforza, L. L., & Feldman, M. W. (1981). *Cultural transmission and evolution: A quantitative approach*. Princeton: Princeton University Press.
- Deutscher, G. (2005). *The unfolding of language: An evolutionary tour of mankind's greatest invention*. New York: Henry Holt.
- Laland, K. N., & Brown, G. R. (2002). *Sense and nonsense: Evolutionary perspectives on human behaviour*. Oxford: Oxford University Press.
- Maynard Smith, J., & Warren, N. (1982). Models in cultural and genetic change. *Evolution*, 36, 620–627.

- Richerson, P. J., & Boyd, R. (2005). *Not by genes alone: How cultural transformed human evolution*. Chicago: University of Chicago Press.
- Sabeti, P. C., Schaffner, S. F., Fry, B., Lohmueller, J., Varilly, P., Shamovsky, O., Palma, A., Mikkelsen, T. S., Altshuler, D., & Lander, E. S. (2006). Positive natural selection in the human lineage. *Science*, 312, 1615–1620 + Supplementary Material online.
- Simon, H. A. (1959) Theories of decision-making in economics and behavioral science. *American Economic Review*, 49, 253–283.
- Tooby, J., & Cosmides, L. (1992). The psychological foundations of culture. In J. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture*. New York: Oxford University Press.

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Essence and Alienation: Marx's Theory of Human Nature*

CHRIS BYRON

ABSTRACT: Marx's theory of human nature has been frequently misinterpreted. Theorists argue that Marx saw human nature as fluid. Other theorists fail to see human nature's necessary connection to Marx's theory of alienation. The validity of Marx's theory of human nature, and alienation, are contingent upon a mutual acceptance. One cannot fully defend Marx's theory of alienation without accepting his theory of human nature, and vice versa. This necessary interconnection emerges from examination of Marx's trans-historical views on human nature, when compared critically with mainstream theories of Marxian human nature. The key to understanding Marx's theory of human nature entails a distinction between essence and essentialism, and their connection to a theory of expression. Marx is an essentialist in regard to human nature, but sees human essence as an ensemble of socio-historical relations. These particular relations shape human nature's expression.

THE SCHOLARSHIP ON MARX'S THEORY of human nature is conflictual. The texts where Marx mentions human nature, human essence, essentialism, and uniquely human attributes have been accessible to scholars for over half a century, yet many readers of Marx have radically different interpretations of these texts. Some scholars argue that Marx's theory of human nature is historical, and that human nature is different in different modes of production. This is one of the more popular readings of Marx, which I will call a historicist reading. Others (*e.g.*, Althusser, 2006) believe there was

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an epistemological break that occurred between the young and the old Marx, and that the mature Marx rejected all essentialist theories. Finally, some argue that Marx's theories of history and economics are not incongruent with a trans-historical (*i.e.*, the same at all moments in history) theory of human nature, but that there is a dearth of scholarship on what exactly is trans-historical about human nature. I want to propose my own positive theory about what Marx thought human nature was. Theorists have positioned themselves in one of these three camps, but very few have actually attempted to spell out explicitly what Marx's trans-historical view of human nature actually was. Even those that say Marx does not reject a theory of human nature (*e.g.*, Geras, 1983; Callinicos, 1984) have written almost nothing on what Marx's theory of human nature actually is. The aim of this essay is to do just that, and then to show human nature's essential relationship with Marx's theory of alienation. In addition to arguing that Marx held a trans-historical view of human nature, I also aim to show that human nature is a *necessary* condition for demonstrating that alienation does occur in capitalist society, and presumably any other society that suppresses the better parts of species-being.

My argument will be threefold. First, I will show that Marx held to a trans-historical view of human nature, and in so doing I will specify what that view positively entails. Second, I will show how Marx's theory of alienation and human nature are interconnected, with the perversion of a trans-historical human nature serving as the necessary condition for the realization of alienation in capitalist society. Finally, I will argue that Marx's trans-historical essentialism is not in contradiction with his views in the sixth Thesis on Feuerbach, that "the essence of man is no abstraction inherent in each single individual. In reality, it is the ensemble of the social relations" (in Engels, 2010, 82). Traditionally theories of essentialism combined with non-enduring essence are not seen as compatible. I do not think this incompatibility obtains for a dialectical thinker like Marx. I argue that recognizing the validity of this combined position allows us to see that while society conditions our historical essence, it is our essential human nature that is alienated. Moreover, our essential/trans-historical human nature is a necessary foundation for historical alienation. In order to justify these three arguments, against previous interpretations of Marx's theory of human nature, I will first

clarify the competing readings, and then offer a common-ground suggestion for readers to use in deciding which interpretation of Marx's work is most prudent.

Competing Readings of "Human Nature"

Several camps have been established in the Marxism and human nature debate. Given these different camps it would be helpful to have a definition of human nature which is unifying. "Human nature" ought to be defined as an attribute of the human species that is uniquely/distinctly human. Therefore, hunger would not be an aspect of our distinctly human nature. Human nature can also be historicist or trans-historical. It may be the case that we have unique attributes that exist at all times in all moments of history (trans-historical), or it may be the case that what is uniquely human is also correspondent to a particular mode of production (historicist). The proffered definition of human nature does not rule out any of these competing camps too hastily.

There is the Althusserian camp, which believes essentialist philosophies and Marxian theories of human nature are something the mature Marx rejected. Any claims about a universal essence are primarily ideological (Althusser, 2006, 4987). The Althusserians could agree that human nature is what is uniquely human, and then argue that there is in fact nothing trans-historically unique about human beings in general. Instead history is a process without an essential subject, and so attempts to clarify and figure out what is uniquely human are confused at best, and ideological mistakes at worst.

Another camp is the one that claims that Marx's theory of human nature is historicist (D'Amato, 2006, 18–34; Sayers, 1998, 3–14; Sayers, 2011, 78–101). Each individual has a human nature, but it is contingent upon time and place, and is subject to change. Individuals who occupy radically different places in history have different human natures. Again, members of this camp can accept my proffered definition and still use it to fortify their arguments; *e.g.*, what is uniquely human is different for humans in slave society, feudalism, capitalism, and/or socialism, and human nature could even be different based on one's class location within a mode of production. There is therefore no trans-historical human nature.

Finally there is a camp of thinkers who argue that Marx did have a positive view of human nature, but what that positive view was has not been wholly fleshed out (Geras, 1983).

Many prominent Marx scholars have rejected a Marxian theory of human nature: "Tom Bottomore, Robert D. Cumming, Eugene Kamenka, Louis Althusser, Vernon Venable, Robert Tucker, Kate Soper, Colin Summer, and Sidney Hook; to name but a few" (Geras, 1983, 4951). One way to refute this claim is to show that throughout Marx's life, in all his theoretical works, he held fast to an enduring theory of human nature. In analyzing his theoretical works we ought to remember that human nature is that quality that is *distinctly* human. Distinctly human qualities are qualities that separate humans from non-human animals. Traits that *we share* with other animals (*e.g.*, thirst) are merely *aspects of our animal nature*, even if they sometimes take on a different form from other animals. Thus, any theoretical speculation that Marx makes regarding the uniqueness of humans has a use-value in interpreting his theory of human nature.

Marx's Comments on Human Nature

Before undertaking a chronological examination of Marx's quotes on human nature, it is necessary to state why this procedure is important. Many of the authors that have discussed Marx and human nature have often held fast to a single quote or set of quotes, or have attempted to establish an ontological or epistemological break in Marx's theory. My general aim here is to show that Marx actually maintained a view of human nature (as defined above as that which is uniquely human) from his earliest writings all the way through *Capital*.

Due to space, some of Marx's excerpts on human nature will not be quoted; not all of his comments develop his theories of human nature and species-being in a new direction from the works preceding and following it (*e.g.*, *On the Jewish Question*). It is important to put forth Marx's views in chronological order, so that one can see what is maintained in Marx's philosophical development. Many philosophers, most often Althusserians, believe that the sixth Thesis on Feuerbach marks an epistemological break for Marx, negating his previous views of human nature. However, by reading Marx in chronological order, it can be shown that Marx made use of a theory of human nature even after the sixth Thesis. Thus, this supposed epistemological break

certainly did not prevent Marx from holding onto a concept of human nature. And even if an epistemological break of sorts did occur, a theory of human nature was maintained.

Marx's 1844 *Notes on James Mill* were his first writings dealing with human nature. These notes mark the first development of his theory of species activity:

Species-activity and the species-spirit whose real, conscious and authentic existence consists in social activity and social enjoyment. Since the essence of man is the true community of man, men, by activating their own essence, produce, create this human community, this social being which is no abstract, universal power standing over against the solitary individual, but is the essence of every individual, his own activity, his own life, his own spirit, his own wealth. (Marx, 1844, 265–6.)

Marx is saying here that the human essence is the ability to *produce* within a community in a way that serves the community and oneself. When *camera obscura* productive relations (*e.g.*, capitalism) begin to take effect, “our products are not united for each other by the bond of *human nature*” (Marx 1844, 275):

Let us suppose that we had produced as human beings. In that event each of us would have doubly affirmed himself and his neighbor in his production. (1) In my production I would have objectified the specific character of my individuality and for that reason I would both have enjoyed the expression of my own individual life during my activity and also, in contemplating the object, I would experience an individual pleasure, I would experience my personality. . . . (2) In your use or enjoyment of my product I would have the immediate satisfaction and knowledge in my labor I had gratified a human need, *i.e.*, that I had objectified human nature. . . . (3) . . . I would have directly confirmed and realized my authentic nature. . . . Our production would be as many mirrors from which our natures would shine forth. This relation would be mutual: what applies to me would also apply to you. (Marx, 1844, 277–8.)

Marx believes that human nature and acts of production should not be wholly separated. Human beings have a natural disposition to produce products with spontaneous creativity, in a manner that is conducive to individual and social gratification. In producing a unique product, individuals affirm their *uniqueness*, and in distributing said product, they gratify others. And through that gratification

an individual can further gratify themselves. Simultaneously, the same producer depends upon the same relationship of unique production and exchange from someone else. Therefore what seems unique to them is in reality common to all human beings.

An example of this sort of unique productive behavior would be Ray Kurzweil's blind reader. The blind reader is a technological device that allows blind people to read certain texts. This was a device intended for someone else, someone other than Ray Kurzweil, but one that he derived great satisfaction from creating (Ikenson, 2004, 139–140). The ability to create products for other members of our species, which serves their needs (and not just our own), is part of what it is to be distinctly human, according to Marx. This trait is part of our human nature, since it is uniquely human.

Although the *Notes on James Mill* were written in Marx's early philosophical development, there is little theoretical variance from this position later on. Marx's *Economic and Philosophic Manuscripts of 1844* (*EP Manuscripts*) mark the next stage of working through his theory of — among other things — human nature.

In the essay on “Estranged Labor,” Marx argues that economic determinants (*e.g.*, wages, capital, rent) pervert the best parts of human nature. Beginning with the affirmative statement of human nature, he writes (1844, 74): “Man is a species-being, not only because in practice and in theory he adopts the species as his object (his own as well as those of other things), but — and this is only another way of expressing it — also because he treats himself as the actual, living species; because he treats himself as a universal and therefore a free being.” Marx goes on to compare the similarities between humans and animals, but notes a distinction, namely that humanity's “species character” is productive life “in the character of its life-activity” as free and conscious. That is, free production — production without anything but nature's material constraints — is what distinguishes the activity of humans from that of other species. Whereas life-activity for the animals is identical to the animal essence, free man makes life-activity “the object of his will and of his consciousness.” This distinguishing aspect makes humanity a species-being. One sees their species as an object that their free production will consciously and freely take into account, thus confirming their kinship as a species-being. The lexicon is different, and productive consciousness is added

in as a universalizing aspect of humankind's essence; nevertheless, the theme is congruent with Marx's *Notes on James Mill*.

One could object that Marx is incorrect to view production as a uniquely human activity. Other animals engage in productive activity. However, Marx argues that animal production is strictly for immediate need(s), whereas humans produce "even when [they are] free from physical need and only truly [produce] in freedom therefrom." Marx is strengthening his point that whereas the life-activity of animals is fixed, people's life-activity when free is a confirmation of their species-being *via* their freedom to produce objects that transcend mere subsistence needs (Marx, 1844, 76). Ultimately, one's freely produced product is the objective confirmation of their essence, and its reception in society is *a fortiori* objective confirmation of their species-being.

In 1845, Marx and Engels drafted their first book together: *The Holy Family, or Critique of Critical Criticism*, trying to develop "the science of real men and their historical development" (Marx and Engels, 1845, 8). They refer to human nature in this book. When their views on human nature are read in connection with their scientific goal, it is safe to infer that the two thinkers believed that they could develop a science of humans that included the notion of human nature. They utilize the notion of human nature when referring to alienation in capitalist society:

The propertied class and the class of the proletariat present the same human self-estrangement. . . . The class of the proletariat feels annihilated in estrangement; it sees in it its own powerlessness and the reality of an inhuman existence. It is . . . abasement, the indignation at that abasement, an *indignation* to which it is necessarily driven by the contradiction between its human *nature* and its condition of life, which is the outright, resolute and comprehensive negation of that nature. (Marx and Engels, 1845a, 43; emphasis in original.)

They argue that the estrangement and degradation the laborer feels under capitalism is the antithesis of a flourishing human nature. Human nature is under capitalist labor relations. The importance of this passage is that Marx is developing his theory of human nature from his *Notes on James Mill* by combining it with his earlier developed theory of alienation.

The next text to consider humanity's essence can be found in the "Theses on Feuerbach," written in 1845. These were written on a single sheet of paper, never meant for publication (Engels, 1886, 8).

Critiquing Feuerbach's *Essence of Christianity* and his views of man, Marx wrote:

Feuerbach resolves the religious essence into the human essence. But the human essence is no abstraction inherent in each single individual. In its reality it is the ensemble of the social relations. Feuerbach, who does not enter upon a criticism of this real essence, is consequently compelled: 1. to abstract from the historical process and to fix the religious sentiment as something by itself and to presuppose an abstract — isolated — human individual. 2. Essence, therefore, can be comprehended only as "genus," as an internal, dumb generality which naturally unites the many individuals. (Marx, 1844, 423.)

This note is *prima facie* a refutation of the previous views held by Marx regarding human nature/essence, and is therefore often clung to by Althusserians.¹ Yet this is the case only *prima facie*. For now the thesis is worth mentioning because it is *possibly* a view of human nature. The concept of essence has taken on a new meaning in Marx's work that should be *distinguished* from human nature. For many anti-essentialist Marxists, this is a point at which Marx's concept of essence is developing into anti-humanism, *i.e.*, a rejection of trans-historical human nature.

The next statement made by Marx regarding human nature can be found in *The German Ideology*, written in 1845–46. In *The German Ideology* Marx makes one statement regarding what is distinctly human:

Men can be distinguished from animals by consciousness, by religion or anything else you like. They themselves begin to distinguish themselves from animals as soon as they begin to produce their means of subsistence, a step which is conditioned by their physical organization. By producing their means of subsistence men are indirectly producing their actual material life. (Marx and Engels, 1845b, 42.)

Marx goes on to point out how the material world around people conditions what they can produce for subsistence. This part of the development of human nature is often cited by historicists. They see a

1 Norman Geras compellingly disagrees; Geras, 1983.

necessary and fluid relationship between our historical human nature and the changing of the external material world. Marx is making a general point though, that whereas a bird can only make a nest, and a bee can only make a hive, a human can build different types of homes in a diverse array of environments. Indeed, in order for one to begin to distinguish themselves *via* abstract thought and religion, their essence must initially be objectified in production, which requires its own subjective abstract thought. As Marx argues, “the production of ideas, of conceptions, of consciousness, is at first directly interwoven with the material activity and the material intercourse of men, the language of real life” (Marx and Engels, 1845b, 47). Initially this material activity is free and necessary production. Historically people are first and foremost producers. It is only later that they are religious and ideological.

Marx’s *Capital* is the culmination of decades of research which astutely brings together a lot of his earlier works into a comprehensible system. Although Althusserian Marxists argue for an epistemological break in Marx’s work, and historicists argue for a fluid theory of human nature, there are passages about human nature in *Capital* that are congruent with Marx’s previous views of human nature. For instance, in the beginning of *Capital* when Marx is distinguishing use value from exchange value, he states: “Labor, then, as the creator of use-values, as useful labor, is a condition of human existence which is independent of all forms of society; it is an eternal natural necessity which mediates the metabolism between man and nature, and therefore human life itself” (Marx, 1867, 133; emphasis added). The trans-historical aspect of this claim is important. For Marx use values are often historical. For instance, a blow gun has no use value for a pilot in Wisconsin, and an airplane would have no use value for a hunter-gatherer. What remains trans-historical, though, are humans’ creative laboring capacities and their need to labor. The degree to which people are creative in their labors is an attribute Marx believes is *uniquely* human.

David Harvey points out that “in his earlier works Marx made much of the idea of a distinctly human ‘species being’. . . . This idea takes a backseat in the formulations of *Capital*, but it does occasionally exercise a shadowy influence” (Harvey, 2010, 112). Marx’s chapter on “The Labor Process” recalls earlier statements he made regarding the uniqueness of humanity’s labor — especially compared to other animals — and universal aspects of species-being (*i.e.*, our uniquely

human trait). In the labor process, the human being “sets in motion the natural forces which belong to his body . . . in order to appropriate the materials of nature in a form adapted to his own needs. . . . he acts upon external nature and changes it, and in this way he simultaneously changes his own nature” (Marx, 1867, 283). Before proceeding, it is again important to note that *prima facie* this quote endorses the historicist reading, but only *prima facie*. Marx only states that the labor process changes our *nature* and not our *human nature*. Since he refers to our human nature at other points in the same work, this distinction should not be seen as arbitrary. The distinction is important, given the common-sense definition of human nature that is being used to assess these quotes. People’s *nature* can change, *i.e.*, they can switch from having a hunger for tomatoes to having a hunger for salmon, but their *human nature* has not been necessarily impacted. *Human nature* is what is uniquely and particular human. Our *nature* is what is generalizable about us, but not necessarily distinct from other animals. Marx follows the comment on our nature with a trans-historical comment on what is unique about the human labor process:

[Let us] presuppose labor in a form which it *is an exclusively human characteristic*. A spider conducts operations that resemble those of a weaver, and a bee puts to shame many an architect in the construction of her cells. But *what distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality*. At the end of every labour-process, we get a result that already existed in the imagination of the labourer at its commencement. He not only effects a change of form in the material on which he works, but he also realizes a purpose of his own that gives the law to his *modus operandi*, and to which he must subordinate his will. And this subordination is no mere momentary act. Besides the exertion of the bodily organs, the process demands that, during the whole operation, the workman’s will be steadily in consonance with his purpose. This means close attention. The less he is attracted by the nature of the work, and the mode in which it is carried on, and the less, therefore, he enjoys it as something which gives play to his bodily and mental powers, the more close his attention is forced to be. (Marx, 1867, 283–4; emphasis added.)

As Harvey argues, Marx is returning to his previous views, which can be found in *The EP Manuscripts* and the *Notes on James Mill*. Marx is indicating a dialectical relationship between the material world, ideas, and their fruition (or lack thereof). Within the labor process, the

material world loosely conditions what we can creatively think about and subsequently produce. For instance, the ancient Greeks cannot creatively design and produce an igloo, nor can the Inuit creatively produce the Parthenon. The actual act of ingenious fathoming is part of the creative element *that distinguishes humans from other animals*. It is in *Capital* that Marx reaffirmed this theory that human nature entails people's free and conscious productive capacity.

Marx makes one more reference to human nature in *Capital*, Volume I, in a chapter on the "labor fund" and the transformation of surplus value into capital. In a footnote critiquing Jeremy Bentham, he states:

The principle of utility was no discovery of Bentham. He simply reproduced in his dull way what Helvétius and other Frenchmen had said with spirit in the 18th century. To know what is useful for a dog, one must study dog-nature. This nature itself is not to be deduced from the principle of utility. Applying this to man, he that would criticize all human acts, movements, relations, etc., by the principle of utility, must first deal with human nature in general, and then with human nature as modified in each historical epoch. (Marx, 1867, 758.)

Marx argues that Bentham is representing humankind's relationship to philosophical thought categories as they appear in the present historical moment, not trans-historically. Historicists are guilty of a similar mistake. Utilitarianism is an imprudent way of improving the welfare of human beings, when it fails to consider that the capitalist mode of production is a *camera obscura* of human nature. No matter how utilitarian we make capitalism, human nature is not in conformity with the capitalistic labor process. Marx posits that the Utilitarians never consider "human nature in general," which would alert them to the harmful nature of capitalistic Utilitarianism.

Marx's comments on human nature found in the *Grundrisse*, Volume III of *Capital*, and *Theories of Surplus Value* are not divergent. When Marx's views on labor, species-being, human essence, and human nature are analyzed together, we come across some very consistent themes of what distinguishes humans from other animals. People can produce with ingenuity and should produce for free expression. Individuals' free and conscious production serves to gratify themselves and their fellow humans, and in so doing confirms what is distinctively

human. This is Marx's view of human nature. It is a view of human nature because it is a view about what is unique to the human species. Marx believes this unique laboring capacity of humans "is a condition of human existence which is independent of all forms of society; it is an eternal natural necessity which mediates the metabolism between man and nature, and therefore human life itself" (Marx, 1867, 133).

Alienation as Perversion of Human Nature

I will argue that a trans-historicist reading of Marx's theory of human nature allows for a strengthening of Marx's theory of alienation. Whereas a historicist would be hard pressed to say just what exactly is being alienated (if not human nature, then what?), and an Althusserian is forced to choose between two Marxist epistemologies (a false disjunction), a trans-historical reading has the benefit of fortifying the theory of alienation and being consistent with the totality of Marx's theoretical works.

In his essay on *Estranged Labor*, Marx argues that political economists do not study the economy from the point of view of labor. This oversight hides the alienating circumstances of production. For the capitalists, labor produces unprecedented luxury. For the laborer, labor produces privation, deformity, idiocy, and a cog-like existence (Marx, 1844, 71).

There are four specific components of Marx's theory of alienation. Alienation begins in the *act of production*. Marx (1844, 72) says that "the product is after all but the summary of the activity of production. If then the product of labor is alienation, production itself must be active alienation, the alienation of activity, the activity of alienation."

The second component for alienation to obtain is that production cannot be under the laborer's control. Capitalists and capital control the worker's productive life. The worker does not get to exercise their intrinsic nature in work, but takes orders from the alien forces of the market and their capitalist exploiter. The evidence Marx posits as proof of this aspect of alienation is that people avoid work "like the plague" once they leave the workplace. If spontaneous work is the consummate fulfillment of human nature, people ought to revel in it; but by being denied the best parts of their human nature, they recoil from more labor. Since what is essentially human is now negated, people therefore only feel free and active in their "animal functions

— eating, drinking, procreating. . . . what is animal becomes human and what is human becomes animal,” leading to “self-estrangement” (Marx, 1844, 72–3).

The third aspect of alienation is that individuals are alienated from their species-being. “In practice and in theory he adopts the species (his own as well as those of other things) as his object, but — and this is only another way of expressing it — also because he treats himself as the actual, living species; because he treats himself as a *universal* and therefore a free being” (Marx, 1844, 72–3). In capitalism, individuals no longer produce for their fellow species; this form of producing is foreign to them. One’s only reason for producing now is to satisfy their individual need for subsistence. In abstract political economy, and in the real world, workers now work for themselves as individuals, and not for their fellow humans. “Free, conscious activity,” as one’s characteristic form of labor, is nonexistent; labor is coerced, and since it is performed in a perfunctory manner, it ceases to be “conscious activity.”

The fourth aspect of alienation is a direct corollary of the previous problems. If one is alienated from their species-being, they are consequently alienated from their fellow species, *i.e.*, other humans. Marx (1844, 77) points out that, if “that man’s species nature is estranged [alienated] from” him, then it necessarily follows that he is estranged from other men, as all men share the same “essential nature.” And that essential nature is to produce as a species-being.

Marx sees alienated labor as a unique historical moment predicated upon specific social and material productive conditions. Alienated labor is not insurmountable, nor is it a necessary condition for social production. Historicists are right to point this out. Marx believes the act of producing one’s product for one’s fellow humans, of one’s own free and conscious volition, is an objective measurement of the consummation of one’s fulfilled life activity. If humans are a species-being, they can return to free production through class struggle. Marx retained this adamant view that humanity was not always alienated into his late years. Thus, he states in the *Grundrisse*:

What requires explanation is not *unity* of living and active human beings with the natural, inorganic conditions of their exchange of matter with nature, and therefore their appropriation of nature; nor, of course, is this the result of an historical process. What we must explain is the *separation* between these

inorganic conditions of human existence and this active being, a separation which is posited in its complete form only in the relationship between wage labour and capital. (Marx, 1857.)

It is the disunity of humans from their natural way of life that is fully consummated under capitalism.

In his essay on "Estranged Labor," Marx is taking the categories of political economy and negating them against his theory of species-being, *i.e.*, that aspect of our nature which is distinctly human. Thus, Marx is not seeing people as a mere social product devoid of trans-historical qualities (*i.e.*, he is not seeing humanity as a historicist Marxist would). If people were strictly social products, then there would be nothing *enduring or stable* to rebuff political economy against, because socio-political-economic relations would reflect the fluid nature of human beings. If one's *essence is just a reflection* of their social being, then there *is nothing for their essence to be alienated from*. Enduring (*i.e.*, trans-historical) human nature is thus a *necessary* condition for alienation.

I argue that human nature plays a necessary role in the Marxian theory of alienation. Marx argues that humans are alienated from the products of their labor, the act of production, their species-being, and their fellow humans. When one is alienated from their species-being, they are subsequently alienated from themselves. All four moments in the productive process lead to the obtaining of alienation. However, an enduring theory of human nature is necessary for a theory of historical alienation.

Marx's theory of alienation is contradictory if one believes that he holds no view of human nature. Moreover, human nature can serve as the backbone by which to critique capitalism. I see three reasons why this is true.

First, to posit that people are alienated from their species-being, is to posit that there is a trans-historical nature of humankind. If one's essence is nothing but the totality of one's social relations, as a historicist would argue, then one cannot possibly be alienated, *as there's no enduring thing to be alienated from*. Simply put, if Marx is not an essentialist, and believes there is nothing at root enduring in the human being, then the logical consequence of this view is that Marx believes individuals to be an absolute product of social conditioning. There is no dialectical relationship between human nature and

nurture which takes on different forms at different points in history. Individuals are strictly a mirror of their entire social ensemble. Thus, instead of being alienated from human nature, as Marx states, one can only be a unique product of their social environment. There is no enduring state of humanity on which to weigh the claim that people are alienated from themselves; and yet Marx makes this very claim.

The second reason why human nature is a necessary condition in Marx's theory of alienation, is found in Marx's argument that people are alienated from their fellow humans. If one loses the life activity of species-being, Marx explicitly concludes that they will be alienated from other humans, because this activity is in conformity with all humankind's essential nature. This means that if one were to again produce in a species-being fashion, then it would be in harmony with their essential nature. This leads to the subsequent conclusion that whether one is living under communism, or alienated capitalism, their essential nature is enduring. *What is changing is how this enduring aspect of human nature gets expressed.*

Third, individuals are alienated from the product and the activity of production. People produce products of alienation in a capitalist society. Since Marx believes this alienated activity is not a necessary condition for human production, he must believe there is an alternative (*i.e.*, socialism). Moreover, Marx argues that this alienated productive activity is leading to an animal-like existence, where what is specifically human is lost. All that is left is fulfillment of one's animal function (pleasure). At issue here is human productive expression, as *distinct* from our animal function. What does it mean to produce in a uniquely human way?

Human nature is that part of our nature which is unique to our species. Marx argues that free and conscious production, which expresses our species-being nature, is a uniquely human capacity. Alienation during productive activity denies humans an essential expression of their human nature. This denial perverts our human nature, leading us to only express our animal functions. To argue that people are *presently alienated* from their products, productive activity, species-being, and fellow humans, is to *heavily suggest* that what is *presently estranged* need not always be estranged. Indeed, for humans to realize the best of their inner nature, they ought to maintain a positive view of human nature; one that goes beyond our present particular form of alienation.

The Sixth Thesis — Essence and Essentialism

Detractors of a positive theory of Marxian human nature often point to the sixth “Thesis on Feuerbach.” A cursory reading of the thesis suggests Marx was a historicist, or conducting an epistemological break (*a la* Althusser). Indeed, John Bellamy Foster, quoting from *The Poverty of Philosophy* along with the sixth Thesis, concludes that “rejecting all essentialism (apart from the practical, transformative nature of humanity itself, as *Homo Faber*),” Marx gave us his sixth Thesis. “In other words, human beings did not consist of some fixed *human nature* residing in each individual, but rather, as he was to argue later, all history was nothing but the development (that is, self-development) of human nature through social intercourse” (Foster, 2000, 113). I argue that this reading is incorrect. If it were correct, we would have to give up on Marx’s theory of alienation.

The sixth Thesis is:

Feuerbach resolves the religious essence into the human essence. But the human essence is no abstraction inherent in each single individual. In its reality it is the ensemble of the social relations. Feuerbach, who does not enter upon a criticism of this real essence, is consequently compelled:

1. To abstract from the historical process and to fix the religious sentiment as something by itself and to presuppose an abstract — isolated — human individual.

2. Essence, therefore, can be comprehended only as “genus,” as an internal, dumb generality which naturally unites the many individuals. (In Engels, 1886, 82.)²

If essence is “no abstraction inherent in each single individual [but] in . . . reality . . . the ensemble of the social relations,” we must jettison the theory of alienation, because enduring human nature is a necessary condition for the existence of alienation. And according to a certain reading of the sixth Thesis, there is not an enduring human nature.

Seemingly there is a contradiction between this Thesis, and Marx’s later theoretical writings quoted above. However, Marx can

2 Normal Geras, in *Marx and Human Nature*, provides several analytically keen arguments against a historicist and Althusserian reading of the sixth Thesis. I will not reiterate those criticisms.

be defended from the appearance of contradiction by ironically getting at the essence of what he means by essence. There is no necessary contradiction in accepting both the sixth Thesis and Marx's latter claims.

A contradictory reading can be avoided if Marx is read as being an *essentialist* who sees an *overall essence*, *i.e.*, the totality of human essence, as fluctuating in human beings. What is essential to humans, *i.e.*, their species-being, is their creative and complex productive capacities that are capable of serving the needs of others. When their species-being is perverted they are alienated. In one sense Foster is right that humans are *Homo Faber*, but the way in which humans express *their enduring human nature* — fully, freely, and mostly consciously — is to be *Homo Faber* in a way that confirms species-being; contra Foster's view. Alex Callinicos (1984, 70), affirms this reading: "Under capitalist society, the worker is compelled to sell his strength and his skill to the capitalist. As a result he controls neither the products of his labor, nor his labor itself. What should be his life-activity, through which he affirms his humanity, or 'species-being', becomes a mere means to an end," and becomes alienated from his "human nature."

If this expression of human nature is what should qualify as part of what it is to be essentially human, then what should be made of the claim that Marx sees essence as always changing? For Marx, essence and essentialism are analytically distinct, but practically united. Essentialism is a necessary condition in how we are to view people's total historical essence. Essence is to be understood as human being's adaptation to their material circumstances, which are regionally unique and historically changing, *i.e.*, "the ensemble of the social relations." If we see essentialism's expression, against a social backdrop or ensemble, then these numerous phrases concerning individuals "developing" and "transforming" their "nature" can be synthesized. Human being's essentialism — that part of them that is enduring, *i.e.*, their human nature — is *expressed* differently in different social settings. However, our human nature is not expressed differently because it itself is different, but because circumstances, social relations, material factors, etc., are different.

The overlooked element in the debate about Marx's work and human nature is the notion of expression. How human nature is *expressed* in a particular socio-economic environment is going to *be a part of the total essence of man*. Human nature is a necessary condition

for having a broader essence.³ No matter what mode of production we find humans in, their human nature remains an *essential* component of their capabilities and needs; but its *expression* can be alienated, mitigated, or flourishing. When analyzing the essence of someone, we must consider the *expression* of their human nature in conjunction with the socio-economic particularities of a given historical moment.

Instead of seeing Marx as conducting some kind of epistemological break, or changing his mind about human nature and essence, we should see him as developing a new theory of essence in general. One of the final chapters in Volume III of *Capital* confirms why we should fight for an economic mode of production that allows our human nature to flourish:

In fact, the realm of freedom actually begins only where labor which is determined by necessity and mundane considerations ceases; thus in the very nature of things it lies beyond the sphere of actual material production. Just as the savage must wrestle with Nature to satisfy his wants, to maintain and reproduce life, so must civilized man, and he must do so in all social formations and under all possible modes of production. With his development this realm of physical necessity expands as a result of his wants; but, at the same time, the forces of production which satisfy these wants also increase. Freedom in this field can only consist in socialized man, the associated producers, rationally regulating their interchange with Nature, bringing it under their common control, instead of being ruled by it as by the blind forces of Nature; and *achieving this with the least expenditure of energy and under conditions most favorable to, and worthy of, their human nature.* (Marx, 1894, 959; emphasis added.)

Concluding Remarks

For anyone who wants to maintain Marx's theory of alienation, the third moment of alienation (alienation of the species-being) needs to be reconciled with his theory of human nature and essence. His trans-historicist views of human nature, combined with historical expression, can offer this reconciliation. Furthermore, we need to address the issue of people's essence under capitalism and recognize that although it is completely perverted, exploited, and alienated, *this essence of crippled*

3 This could be true even if one does not have a positive view of what human nature actually is. However, Marx does have a positive view, as outlined above.

humanity is not what makes us essentially human. Indeed, it is certainly not what separates us from other animals. As Marx notes, alienation is often an expression of our animal function. If we recognize human nature as our essential component and social relations as part of our historical essence, we solve the apparent riddle both in the contradiction of alienation and the contradiction of Marx's sixth Thesis. Finally, for those committed to critically changing society, if we can establish the scientific veracity of Marx's theory of human nature and alienation, then we have a vantage point from which we can consistently and objectively critique any unsatisfactory mode of production. If creative and social production is the hallmark of our human nature, and the flourishing of our nature is good, then it follows that any society that perverts our human nature is in need of transformation.

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REFERENCES

- Althusser, Louis. 2006. *For Marx*. New York: Verso.
- Byron, Chris. 2013. "Marx's Human Nature: Distinguishing Essence from Essentialism." *With Sober Senses* (March 1).
- Callinicos, Alex. 1984. *The Revolutionary Ideas of Marx*. London: Bookmarks.
- D'amato, Paul. 2006. *The Meaning of Marxism*. Chicago, Illinois: Haymarket Books.
- Engels, Frederick. 2010 (1886). *Ludwig Feuerbach and the Outcome of Classical German Philosophy*. New York: International Publishers.
- Foster, John Bellamy. 2000. *Marx's Ecology*. New York: Monthly Review Press.
- Geras, Norman. 1983. *Marx and Human Nature*. London: Verso.
- Harvey, David. 2010. *A Companion to Marx's Capital*. New York: Verso.
- Ikenson, Ben. 2004. *Patents: Ingenious Inventions, How They Work, and How They Came to Be*. New York: Black Dog & Leventhal.
- Marx, Karl. 1857. Pre-Capitalist Economic Formations. Part 1 (section of *Grundrisse*). Available at www.marxists.org/archive/marx/works/1857/precapitalist/ch01.htm
- . 1970 (1859). *A Contribution to the Critique of Political Economy*. New York: International Publishers.
- . 1990 (1867). *Capital*, Volume I. New York: Penguin.
- . 1991 (1894). *Capital*, Volume III. New York: Penguin.
- . 1992 (1844). *Early Writings*. New York: Penguin.
- . 2007 (1844). *The Economic and Philosophic Manuscripts of 1844*. Mineola, New York: Dover.

- Marx, Karl, and Frederick Engels. 1975 (1845a). *The Holy Family, or Critique of Critical Criticism*. Moscow: Progress Publishers.
- . 1995 (1845b). *The German Ideology*. New York: International Publishers.
- Sayers, Sean. 1998. *Marxism and Human Nature*. New York: Routledge.
- . 2011. *Marx and Alienation*. New York: Palgrave Macmillan.

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Knowing as Being? A Metaphysical Reading of the Identity of Intellect and Intelligibles in Aquinas

Therese Scarpelli Cory

Abstract. I argue that Thomas Aquinas's Identity Formula—the statement that the “intellect in act is the intelligible in act”—does not, as is usually supposed, express his position on how the intellect accesses extramental realities (responding to the so-called “mind-world gap”). Instead, it should be understood as a claim about the metaphysics of intellection, according to which the perfection requisite for performing the act of understanding is what could be called “intellectual-intelligible being.” In reinterpreting Aquinas's Identity Formula, I explore what it means to be “in act” as an intellect or intelligible (*intelligibile actu, intellectus actu*), his curious comments about an “order” or “genus” of intelligibles, and the relationship of understanding and being-understood.

I.

Introduction. One of the key issues in which contemporary readers of Aquinas's philosophy of mind have been interested is his handling of what is called the “mind-world gap”: i.e., the ontological “distance” between the intellect “in here” and the objects “out there.” How does the intellect relate to what is “outside” or extramental? Can it somehow unite directly with treeness as it exists in that tree growing on the banks of the Mississippi? Or does it instead merely cognize an intramental “likeness” of treeness, a picture scrolling across a screen “inside” the Cartesian mental theater? (The same questions could be raised concerning senses or imagination, for that matter, but the focus of this study will be on the intellect.)

Aquinas's analysis of the intellect's relation to extramental objects, as is well known, hinges upon what he calls the “intelligible species.” For Aquinas, my sensory experiences of trees cause “phantasms” in my imagination that are likenesses of individual trees. From these

phantasms, the agent intellect produces or abstracts an intelligible species, a likeness of the essence “tree” which informs my possible intellect, enabling me to perform the act of understanding treeness. The informing species “tree” seems to enable the intellect to access extramental treeness directly, without itself functioning as an intermediate object of cognition, since Aquinas insists that these species are not “that which is cognized, but rather that by which one cognizes.”¹

But *what kind* of access does the intellect have to extramental essences by means of species? In attempting to answer this question, scholars have focused on two claims in Aquinas, which we can call the “Identity Formula” and the “Likeness Formula”:

Identity Formula: The intellect-in-act is that which is actually intellected (*intellectus in actu est intellectum in actu*); alternatively: The intellect-in-act is the intelligible-in-act (*intellectus in actu est intelligibile in actu*).

Likeness Formula: “The species is a *likeness (similitudo)*” of the essences of material objects.²

¹ ST Ia.85.2. All translations are mine, from the Latin. Texts of Aquinas are cited according to the Leonine edition (abbreviated Leon.) where available; his commentary on the *Sentences* is cited according to Busa; and *De potentia* and the commentary on *Metaphysics* are cited according to the Marietti edition.

² *Sent.* II.17.2.1 (Busa 1.173): “Primo, quia, ut dictum est, species quae est forma intellectus possibilis, non est eadem numero in phantasmate et in subjecto; sed est similitudo illius; unde sequitur quod intellectus nullo modo nobis conjungatur, et sic per ipsum non intelligemus”; SCG 1.53 (Leon. 13.150): “Non autem ita quod ipsum intelligere sit actio transiens in intellectum, sicut calefactio transit in calefactum, sed manet in intelligente: sed habet relationem ad rem quae intelligitur, ex eo quod species praedicta, quae est principium intellectualis operationis ut forma, est similitudo illius.”

It is commonly assumed that both formulae address the mind-world gap, and that hence both articulate how the intellect relates to treeness *as it exists in this tree outside the mind*. But these two formulae are not quite congruent: One mentions *identity* or *unity*, whereas the other mentions *likeness*.³ In attempting to reconcile them, scholars have noticed Aquinas's repeated claims that there can be no *numerical identity* between an immaterial intellect and material extramental objects—which has been taken as licensing a less-than-literal interpretation of the Identity Formula.⁴ The scholarly trend, then, has been to take the Likeness Formula as the normative statement of the intellect's relation to objects and to deflate the Identity Formula to match.⁵

³ Leon Spruit, *Species Intelligibilis: From Perception to Knowledge*, vol. 1 (Leiden: Brill, 1994), 173: "If the species is really distinguished from the concretely known object, then how is it possible that our cognition consists (ontologically) in the identity of knowing mind and known object? If Aristotle's tense remarks about the identity of mind and object are taken literally, the intelligible species can only jeopardize this identity."

⁴ See the texts cited in n2 above, as well as *Quodl.* 8.2.1, ad 2.

⁵ Readers of Aquinas disagree, however, on how to interpret "likeness" and hence how far identity claims should be deflated. For differing takes on the problem, see Joseph Owens, "Aristotle and Aquinas on Cognition," *Canadian Journal of Philosophy*, 17 Supp. (1991): 103–23; John Haldane, "Mind-World Identity and the Anti-Realist Challenge," in *Reality, Representation, and Projection*, ed. John Haldane and Crispin Wright (Oxford: Oxford University Press, 1993), 15–37; Robert Pasnau, *Theories of Cognition in the Later Middle Ages*, Appendix A (Cambridge: Cambridge University Press, 1997), 295–305; Claude Panaccio, "Aquinas on Intellectual Representation," in *Ancient and Medieval Theories of Intentionality*, ed. Dominik Perler (Leiden/Boston/Köln: Brill, 2001), 185–202; John O'Callaghan, *Thomist Realism and the Linguistic Turn: Toward a More Perfect Form of*

I argue, however, that these efforts at reconciling the two formulae have been misdirected, since Aquinas never intended the Identity Formula as a claim about how the mind-world gap is bridged, nor about how the intellect is related to objects other than itself (e.g., treeness in its extramental existence). Rather, he is *describing the metaphysical condition of an intellect-in-act*. In other words, where the Likeness Formula articulates a psychological or epistemological claim about how our intellect relates to the extramental world, the Identity Formula makes *a metaphysical claim about what an activated intellect is in itself, or what kind of being an intellect has when it is actively thinking about treeness*.

On my reading, the Identity Formula thus articulates an important aspect of what one might call Aquinas's *metaphysics of intellection*. To an extent that, I think, remains to be fully appreciated, Aquinas analyzes intellection in terms of metaphysical change—the actualizing of a certain kind of being to which our soul is in potency, akin to the actualizing of water's potency for heat or skin's potency to become sunburnt. And the Identity Formula, as I read it, describes this kind of being that an actualized intellect has—namely, a curious kind of being that is both intellectual and intelligible, such that *to be intellectually active* is *to be realized as an actually intelligible entity*, and vice versa. In other words, the Identity Formula asserts the convertibility of intellectuality and intelligibility, which, it seems to me, amounts to saying that the kind of being that is intellectual-intelligible is essentially self-manifesting.

The present study aims solely to sketch out this reinterpretation of the Identity Formula, so as to separate definitively Aquinas's remarks about intellectual-intelligible identity from his position on intellectual access to extramental objects. By distinguishing the *Existence* (Notre Dame, IN: University of Notre Dame Press, 2003); Jeffrey Brower and Susan Brower-Toland, "Aquinas on Mental Representation: Concepts and Intentionality," *Philosophical Review* 117 (2003): 193–243.

respective conceptual contributions of the Identity Formula and the Likeness Formula, it lays the groundwork for understanding Aquinas's approach to the mind-world gap, though for reasons of space, I cannot here unpack any of those further implications.

The procedure will be as follows. The next section will show that for Aquinas, nothing physical and extramental can be intelligible-in-act. Then in the third section, in order to see what it means, exactly, to exist as "intelligible in act," I will examine more closely Aquinas's curious remarks about what he mysteriously calls the "order" or "genus" of intelligibles. Finally, I will show that for Aquinas intellectuality and intelligibility are convertible, and that it is precisely this intellectual-intelligible being that the Identity Formula describes.

II.

Understanding Intelligible-in-Act as Separate from Extramental. For Aquinas, the "intelligible in act" in the Identity Formula cannot be some extramental essence such as the treeness of that tree—because he repeatedly asserts that the intelligible in act cannot be a material body, or even something "outside" relative to a given intellect. Let us consider some examples of each claim.

First, in several places Aquinas explains that immateriality is necessary for being intelligible in act. No form instantiated in matter can actually be intelligible: "The thing that exists outside the soul is in no way touched by the [act of intellection], because the intellect's act does not go forth into exterior matter to change it [i.e., it is not a transitive/productive act]. Hence the thing outside the soul [here, a material thing] is in every way outside the genus of intelligibles."⁶ Indeed treeness in *this tree on the banks of the Mississippi* can only ever be

⁶ *De potentia* 7.10 (Marietti, 210): "Quaedam vero sunt ad quae quidem alia ordinantur, et non e converso, quia sunt omnino extrinseca ab illo genere actionum vel virtutum quas consequitur talis ordo; sicut patet quod scientia refertur ad scibile, quia sciens, per actum intelligibilem, ordinem habet ad rem scitam quae est extra animam. Ipsa vero res quae est

potentially intelligible, because there it is in an enmattered state. In order to be known, treeness must acquire a *new, immaterial mode of being*, the same being that the intellect has: “The forms that are intellected in act are one with the intellect that is actually understanding. Hence, if it is on account of being without matter that forms are intellected-in-act, then it is on account of being without matter that something understands.”⁷ Even the phantasms in the imagination (e.g., “Fido”), from which intelligible species are abstracted (e.g., “dog”), are not

extra animam, omnino non attingitur a tali actu, cum actus intellectus non sit transiens in exteriorem materiam mutandam; unde et ipsa res quae est extra animam, omnino est extra genus intelligibile. Et propter hoc relatio quae consequitur actum intellectus, non potest esse in ea.”

⁷ SCG 1.44 (Leon. 13.130): “Ex hoc aliqua res est intelligens quod est sine materia: cuius signum est quod formae fiunt intellectae in actu per abstractionem a materia. Unde et intellectus est universalium et non singularium: quia materia est individuationis principium. Formae autem intellectae in actu fiunt unum cum intellectu actu intelligente. Unde, si ex hoc sunt formae intellectae in actu quod sunt sine materia, oportet rem aliquam ex hoc esse intelligentem quod est sine materia. Ostensum est autem supra Deum esse omnino immaterialem. Est igitur intelligens.” See also *Sent.* I.35.1.1, ad 3; *Quodl.* 3.8; *DV* 8.7. On intentional existence or *esse intentionale/intelligibile*, see *ST* Ia.56.2, ad 3; and Ia-IIae.50.4, ad 2; with somewhat different analyses in Carlos B. Bazán, “*Intellectum Speculativum*: Averroes, Thomas Aquinas, and Siger of Brabant on the Intelligible Object,” *Journal of the History of Philosophy* 19 (1981): 425–46; Deborah L. Black, “Mental Existence in Thomas Aquinas and Avicenna,” *Mediaeval Studies* 61 (1999): 45–79; and Brower and Brower-Toland, “Aquinas on Mental Representation: Concepts and Intentionality,” *Philosophical Review* 117 (2003): 193–243.

intelligible in act, Aquinas insists, because they are forms of a corporeal organ; hence, the intellect in act is not “one” with the phantasms.⁸

Second, in explicating the unity of intellect and intelligible, Aquinas associates intelligibility in act with being *inside* the relevant intellect, and potential intelligibility with being *outside* the relevant intellect. For instance, in SCG 1.51, he writes:

The intelligible in act is the intellect in act, just as the sensible in act is the sense in act. But according as intelligible and intellect are distinct from each other, both are in potency, as is clear in the case of sense. For sight is not actually seeing, nor is the visible actually seen, unless sight is informed by the visible species, so that in this way, from sight and the visible one thing comes to be. If therefore God’s intelligibles were outside his intellect, it would follow that his intellect would be in potency [to them] and likewise the intelligibles [would be in potency to him]. And then they would need something reducing them to act, which is impossible.⁹

⁸ SCG 2.59 (Leon. 13.415): “Intellectus in actu et intelligibile in actu sunt unum: sicut sensus in actu et sensibile in actu. Non autem intellectus in potentia et intelligibile in potentia: sicut nec sensus in potentia et sensibile in potentia. Species igitur rei, secundum quod est in phantasmatis, non est intelligibilis actu: non enim sic est unum cum intellectu in actu sed secundum quod est a phantasmatis abstracta; sicut nec species coloris est sensata in actu secundum quod est in lapide, sed solum secundum quod est in pupilla.”

⁹ SCG 1.51 (Leon. 13.148): “Intelligibile in actu est intellectus in actu: sicut et sensibile in actu est sensus in actu. Secundum vero quod intelligibile ab intellectu distinguitur, est utrumque in potentia, sicut et in sensu patet: nam neque visus est videns actu, neque visibile videtur actu, nisi cum visus informatur visibilis specie, ut sic ex visu et visibili unum fiat. Si igitur intelligibilia Dei sunt extra intellectum ipsius, sequetur quod intellectus suus sit in

Aquinas here offers an extremely interesting analysis of the implications of being “inside” versus “outside” an intellect. Something that is *outside* an intellect (e.g., the treeness of that tree), is necessarily *distinct from* that intellect. And *qua* distinct from that intellect, treeness is merely in potency to be understood, or potentially intelligible to that intellect. The implication thus seems to be that conversely, something that is *inside* an intellect is *one with* that intellect and hence *actually understood, or actually intelligible* to that intellect.¹⁰

Actual intelligibility belongs to what exists *intramentally*: “The intelligible is within the intellect [*intra intellectum*] with respect to what is understood.”¹¹ Treeness existing extramentally is “other than” an intellect (any intellect), so in that condition it is not actually intelligible. This picture is additionally confirmed by *Quaestio disputata de spiritualibus creaturis* 9, ad 6, where Aquinas states that “what is understood” (*intellectum*) is metaphysically “constituted or formed by the operation of intellect.” Once again, he seems to be describing something *internal* to the knower; in any case, he cannot be referring to *treeness in its extramental existence*, since on his view, essences exist in the real world independently of our minds.¹²

potentia, et similiter intelligibilia ipsius. Et sic indigebit aliquo reducete in actu. Quod est impossibile: nam hoc esset eo prius.”

¹⁰ And see *DV* 8.6 (Leon. 22/2.238: 141–2): “[I]ntellectus intelligit omne illud quod est actu intelligibile in ipso.”

¹¹ *SCG* 2.98 (Leon. 13. 582): “Intelligibile est intra intellectum quantum ad id quod intelligitur.”

¹² *QDSC* 9, ad 6 (Leon. 24/2.97: 415–40): “Intellectum autem, sive res intellecta, se habet [ad intellectum possibilem] ut constitutum vel formatum per operationem intellectus. ... Res igitur intellecta a duobus intellectibus est quodammodo una et eadem, et quodammodo

III.

Aquinas's Genus of Intelligibles. The “intelligible in act” that is identical with the “intellect in act,” then, cannot be *that tree growing there on the banks of the River Main*. That tree is physical, exists outside intellect, and is formed independently of intellect—whereas what is intelligible in act is immaterial, exists intellectually, and is formed by intellect. It seems, then, that Aquinas’s Identity Formula cannot be intended to articulate the relationship between *my intellect* and *that tree* (bridging the mind-world gap).

So what *does* the Identity Formula articulate, exactly? What is “intelligible-tree-in-act,” if not this or that tree? The key to the conundrum lies in Aquinas’s doctrine of the “genus of intelligibles,” to which we now turn.

Aquinas frequently contrasts the “order of beings” or “order of natural beings” with an order or genus of intelligibles (*ordo/genus intelligibilium*).¹³ This intelligible “order” comprises God, angels (i.e., self-subsisting intelligible forms), and human intellects, as *De veritate* 8.6 shows:

The one understanding [*intelligens*] and what is understood [*intellectum*]—insofar as from them is made something one, which is the intellect in act—are one single principle of this act of understanding. ... Nothing prevents something from being in act in one respect and in potency in another, just as a diaphanous body is indeed actually a body but only potentially colored. Similarly, it is possible for something to be a being actually, which is only in potency in the genus of intelligibles. Now there is a grade of act and potency in multae: quia ex parte rei quae cognoscitur est una et eadem, ex parte vero ipsius cognitionis est alia et alia”; and *Quodl.* 8.2.2.

¹³ For just a few examples: *ST* Ia.14.2, ad 3; Ia-IIae.50.6; *De malo* 16.12, ad 4.

beings, because something is only in potency, i.e., prime matter, and something is only in act, i.e., God; and something is in act and in potency, i.e., everything else in between. And in the same way, in the genus of intelligibles there is something that is only in act, namely the divine essence, and something that is only in potency, namely the [human] possible intellect, which is in this way placed in the order of intelligibles as prime matter in the order of sensibles, as the Commentator says about *De anima* III. But all angelic substances are intermediate, having something of potency and of act, not only in the genus of beings [*in genere entium*], but also in the genus of intelligibles [*in genere intelligibilium*]. Therefore prime matter cannot perform any action unless it is perfected by its form; and then that action is a certain emanation from the form rather than from the matter, but things that are actually existing can perform actions insofar as they are in act. In the same way, our possible intellect cannot understand anything before being perfected by an actually intelligible form. For it then understands the thing whose form it is; nor can it understand itself except by the actually intelligible form existing in it. But the intellect of an angel, which has an essence which is, as it were, an act in the genus of intelligibles, present to itself, can understand that which is intelligible with itself [*apud ipsum*], that is, its essence, not by some likeness, but by itself.¹⁴

Here Aquinas sketches two parallel “orders”: The “order of beings”¹⁵ and the “order of intelligibles.” The order of being comprises:

- a) a principle that is a sheer potency for form (prime matter);

¹⁴ DV 8.6 (Leon. 22/2.238: 116–77).

¹⁵ More often, when interested only in comparing human intellects and angels,

Aquinas draws the comparison instead to the order of “sensible” beings; see, e.g., SCG 2.96.

- b) a principle that is sheer actuality, *Ipsum Esse Subsistens* (God, the source of all being);
- c) everything in between: substances partly in potency and partly in act (in other words, hylomorphic substances composed of prime matter and substantial form, e.g., trees or humans—or self-subsisting forms whose essences are in potency to existence, i.e., angels).

Similarly, the order of intelligible being comprises:

- a) a principle that is sheer potency for intelligible form (the human possible intellect);
- b) a principle that is sheer actuality, *Ipsum Intelligere Subsistens*¹⁶ (God, the principle of all intelligible being);
- c) what is in between: entities partly actual and partly potential in intelligible being (angels, but also human intellects informed by an intelligible species and actively understanding something, as we will see).

Now for Aquinas, to say that *x* is “in act” in a genus is just to say that *x* has the kind of being relevant to that genus—and that *x* has that being actually, and not merely potentially.

Moreover, as the above text explicitly states, being “in act” is necessary for performing the relevant kind of action. For example, when cold water is heated, it becomes “hot in act”; it has the being or actuality of heat, and thus is a member of the genus of “hot things.” As such, it can perform the act proper to hot things, namely, heating. Similarly, to be “intelligible in act” is to have, actually and not merely potentially, intelligible being—and hence to have membership in the “genus of intelligibles.”

It is important to note that, despite the imprecise language of the text, Aquinas does not hold that prime matter and the human possible intellect on one end, and God on the other

¹⁶ See, e.g., *SCG* 1.102; *ST* Ia.14.4, ad 2; *ST* Ia.54.1.

end, are *contained under* the “genus of beings”¹⁷ or the genus of intelligibles, respectively, as additional members of that genus. Rather, they are *principles of the members that are “in act” in the genus*. To say that God is “first” or “highest” in a genus, for Aquinas, does not imply that God is contained under that genus (*sub genere comprehensum*), but rather that he is the supreme cause of all items existing within that genus.¹⁸ Similarly, prime matter is not on its own a member (“in act”) of the genus of being, because it has no being of its own. Prime matter is included in “what is” only *qua* composed with substantial form, as part of an existing hylomorphic substance, e.g., a tree or a dog. It exists only as a natural substance’s *potency for substantial form*.¹⁹ As we will see in a moment, something analogous is true of the human possible intellect.

Properly speaking, then, the members of the “order of beings”—i.e., “beings in act”—are *creaturely substances*, whether pure subsisting forms like angels, or hylomorphically composed entities like trees, cows, and humans. Now what about the members of the genus of intelligibles, i.e., entities that are intelligibles “in act”?

¹⁷ The looseness of the formulation extends to the phrase *genus entium*, since Aquinas in fact follows Aristotle in denying that being is, strictly speaking, a genus (in which case it would have to be differentiated, *per impossibile*, by some formality from outside itself); see Aristotle *Metaph.* 3.3; and Aquinas, *In Metaph.* 3.8, no. 11.

¹⁸ *Sup. Boet. De Trin.* 1.1.2, ad 4 (Leon. 50.85.168–73): “Dicendum, quod intellectus et intelligibile sunt unius generis sicut potentia et actus. Deus autem quamvis non sit in genere intelligibilium quasi sub genere comprehensum, utpote generis naturam participans, pertinet tamen ad hoc genus ut principium”; and compare *SCG* 3.59 (Leon. 14.163–164): “Summum autem in genere intelligibilium est divina substantia.”

¹⁹ See, e.g., *DV* 3.5; *ST* Ia.44.2; *In Phys.* 1.14.

At first, Aquinas's description of the "order of intelligibles" gives the impression that only angels are privileged to be "in act" in this order. After all, he repeatedly says that human possible intellects are intelligible "in potency," whereas angels are intelligible "in act." But closer consideration shows that Aquinas does not intend to deny that the human possible intellect can *ever* be "in act" in this genus (otherwise it would make no sense to say that the human intellect is intelligible *in potency*). Rather, the contrast he draws has to do with the natural condition of human versus angelic intellects. By nature, our possible intellect is a potency for intelligible form; whereas by nature, angels are self-subsisting intelligible forms. Thus, angels are *by nature* intelligible in act, whereas the human intellect only *accidentally becomes* intelligible in act when it is informed by an intelligible species and engaged in the act of understanding.

The human knower's acquiring of intelligibility in act is clearly described in the passage just cited from *De veritate* 8.6: "Prime matter cannot perform any action unless it is perfected by its form ... In the same way, our possible intellect cannot understand anything before being perfected by an actually intelligible form." In other words, because prime matter is a sheer potency for natural form, it is only "in act" as a being *qua* perfected by substantial form (say, duck-form). Together, matter and form constitute a *hylomorphically-composed substance* (a duck), and it is this substance that performs duck-actions. Similarly, because the human possible intellect is a sheer potency for intelligible form, it is only "in act" as an intelligible *qua* perfected by the intelligible species. Together, possible intellect and intelligible species constitute a single "composite," and it is this composite which performs the act of understanding, as Aquinas makes clear in *Sent.* IV.49.2.1: "Just as something that is one being *simpliciter* is made from matter and the natural form whereby it has existence [esse], so too something that is one in understanding is made from the intellect itself and the form by which it understands. ... The intellect in potency is as it were matter, and the intelligible species is as it were form; and the intellect actually understanding is as it were

composed of both.”²⁰It is in becoming this “one” (the intellect-formed-by-the-species-in-the-act-of-understanding) that the possible intellect is rendered accidentally “in act” in the genus of intelligibles. “For the intellect is rendered into act by the intelligible form insofar as it is understanding, just as a natural thing is rendered actual in natural being by its own form.”²¹

²⁰ *Sent.* IV.49.2.1 (Busa 1.684): “Sicut enim ex forma naturali qua aliquid habet esse, et materia, efficitur unum ens simpliciter; ita ex forma qua intellectus intelligit, et ipso intellectu, fit unum in intelligendo. In rebus autem naturalibus res per se subsistens non potest esse forma alicujus materiae, si illa res habeat materiam partem sui; quia non potest esse ut materia sit forma alicujus: sed si illa res per se subsistens sit forma tantum, nihil prohibet eam effici formam alicujus materiae, et fieri quo est ipsius compositi, sicut patet de anima. In intellectu autem oportet accipere ipsum intellectum in potentia quasi materiam, et speciem intelligibilem quasi formam; et intellectus in actu intelligens erit quasi compositum ex utroque”; *SCG* 3.43 (Leon. 14.111): “Intellectus possibilis se habeat ad illas species sicut materia ad formam”; *Sent* I.35.1.1, ad 3 (Busa 1.91): “Ad hoc quod sit intelligens in actu, oportet quod intelligibile in potentia fiat intelligibile in actu per hoc quod species ejus denudatur ab omnibus appenditiis materiae per virtutem intellectus agentis; et oportet quod haec species, quae est intellecta in actu, perficiat intellectum in potentia: ex quorum conjunctione efficitur unum perfectum, quod est intellectus in actu”; and *De veritate* 8.6..

²¹ *SCG* 4.19 (Leon. 15.74): “Intellectus enim fit in actu per formam intelligibilem inquantum est intelligens, sicut res naturalis fit actu in esse naturali per propriam formam”; *ST* Ia.14.2, ad 2 (Leon. 4.169): “Per hoc quod [intellectus] est in potentia, differt ab intelligibili, et assimilatur ei per speciem intelligibilem, quae est similitudo rei intellectae; et perficitur per ipsam, sicut potentia per actum.”

“For our possible intellect only cognizes itself by the intelligible species, by which it is rendered into act in intelligible being [*qua fit actu in esse intelligibili*].”²²

Thus where the possible intellect is analogous to prime matter in the order of intelligibles, the abstracted intelligible species is analogous to corporeal substantial forms such as “duck-form.” Now for Aquinas, as a good hylomorphist, it is not only the case that prime matter exists in dependence on substantial form. Corporeal substantial forms, conversely, exist only *qua* instantiated in prime matter (in other words, there is no self-subsisting duck-form existing in the order of beings—only *ducks* composed of matter and substantial form).

The same is true of the *intelligible* form or species that is the likeness of extramental duckness: This intelligible species exists in act only as the form of an intellect-in-act. There is nowhere else for it to exist. “Actually intelligible duck” does not subsist by itself in the order of intelligibles, just as there is no separately subsistent “duck substantial form” or Form of Duckness in the order of beings. And an “actually intelligible species” cannot exist in a physical substrate, because actual intelligibility implies immateriality (as we shall see later). Thus the actually intelligible species “duck” exists *only* as the form of the composite that is the intellect in act, as Aquinas explains:

The intellect in act and intelligible in act are one, as are the sense in act and the sensible in act. But the intellect in potency [is not one with] the intelligible in potency, and neither is the sense in potency one with the sensible in potency.

Therefore, the species of a thing insofar as it is in the phantasms is not actually

²² SCG 2.98 (Leon. 13.580): “Intellectus igitur possibilis noster non cognoscit seipsum nisi per speciem intelligibilem, qua fit actu in esse intelligibili.” In addition, see for instance *Sent* II.17.2.1; *SCG* 1.46, 1.53, 2.59, 3.42, 3.51; *ST* Ia.76.2, 85.2; *QDSC* 2; and for discussion see Spruit, *Species intelligibilis* 1: 12–16.

intelligible; for [this species] is not one with the intellect in act in this state, but rather according to its being abstracted from phantasms—just as the species of color is not actually sensed according to its being in the stone, but only according to its being in the pupil.²³

There is, consequently, quite a strong analogy between the ontological co-dependence of prime matter and substantial form, and the ontological co-dependence of the possible intellect and the intelligible species: Prime matter and substantial form exist in the order of being, and similarly the possible intellect and the intelligible species exist in the order of intelligibles, not independently, but only in composition with each other, forming something “one.”²⁴ (The

²³ SCG 2.59 (Leon. 13.415): “Intellectus in actu et intelligibile in actu sunt unum: sicut sensus in actu et sensibile in actu. Non autem intellectus in potentia et intelligibile in potentia: sicut nec sensus in potentia et sensibile in potentia. Species igitur rei, secundum quod est in phantasmatibus, non est intelligibilis actu: non enim sic est unum cum intellectu in actu sed secundum quod est a phantasmatibus abstracta; sicut nec species coloris est sensata in actu secundum quod est in lapide, sed solum secundum quod est in pupilla.” See also SCG 2.76 (Leon. 13.480): “Sicut materia prima perficitur per formas naturales, quae sunt extra animam, ita intellectus possibilis perficitur per formas intellectas in actu”; QDDA 18, ad 5 (Leon. 24/1.159: 411–14): “Comparatur igitur forma intellectiua ad intellectum possibilem sicut forma naturalis ad materiam primam, prout est intellecta in actu, non prout est habitualiter”; InDA III.1 (Leon. 45/1.206: 323–5): “Species igitur intelligibilis non est forma intellectus possibilis nisi secundum quod est intelligibilis actu.”

²⁴ Hence I disagree with Pasnau’s assessment *Thomas Aquinas on Human Nature: A Philosophical Study of Summa theologiae Ia* 75–89 (Cambridge: Cambridge University Press, 2002), 333–5, that the comparison to prime matter is merely epistemological, in the sense that the human intellect, like prime matter, can only be known through form. While the

analogy breaks down, however, on the fact that for Aquinas, the intellectual potency is a property of the intellectual soul, and hence can exist in that substrate *as a potency* without intelligible form; in contrast, since prime matter is the most fundamental substrate, it cannot exist *at all* apart from substantial form.)

Consequently, for Aquinas, *both* angels and the human-intellect-actually-understanding are “in act” in the genus of intelligibles: in other words, they have “actually intelligible” being. But they are members *for different reasons* and *in importantly different ways*. The nature of an angel is to be a self-subsisting intelligible form.²⁵ Since form is what guarantees actuality in a genus, these intelligible forms are naturally “in act” in intelligible being. Angels are “in act” in the order of intelligibles, therefore, *naturally* and as *simple forms*. The human intellect, however, is merely a potency for intelligible being that must be *rendered intelligibly actual* in order to gain admittance to the genus of intelligibles. It acquires this actuality only *qua* informed by an abstracted intelligible form (species), whose membership in the genus of intelligibles conversely depends on its informing some human possible intellect. Hence the human intellect and the abstracted species become “actual” in the epistemological composition is certainly true, Aquinas *also* sees the intellect as metaphysically analogous to prime matter.

²⁵ SCG 2.96 (Leon. 13.571): “Secundum ordinem intellectuum est ordo intelligibilium. Sed ea quae sunt secundum seipsa intelligibilia, sunt superiora in ordine intelligibilium his quae non sunt intelligibilia nisi quia nos facimus ea intelligibilia. Eiusmodi autem oportet esse omnia intelligibilia a sensibilibus accepta: nam sensibilia non sunt secundum se intelligibilia. Huiusmodi autem intelligibilia sunt quae intelligit intellectus noster. Intellectus igitur substantiae separatae, cum sit superior intellectu nostro, non intelligit intelligibilia a sensibilibus accepta, sed quae sunt secundum se intelligibilia actu.”

order of intelligibles merely *accidentally*, as part of the “one” that they together compose: the species-informed-intellect-in-the-act-of-understanding.

Thus angels and the human intellect-in-act both have intelligible being, but in different *modes*: Angels are actually intelligible naturally, as simple forms, whereas the human intellect-in-act is actually intelligible accidentally and by composition.²⁶ The human intellect (inhering in the soul) informed by an actually intelligible species is thus analogous to a potency for heat (inhering in a quantity of water) that is accidentally perfected by acquiring the form of heat—whereas the angelic intellect is analogous to a hypothetical self-subsisting form of heat.²⁷

²⁶ This is what Aquinas means when he says that an angel is intelligible and hence understands itself “by its essence,” whereas a human intellect is intelligible and hence understands itself “by its species”; see, e.g., *ST* Ia.87.1, arg. 2 (Leon. 5.355): “Praeterea, angelus et anima humana conveniunt in genere intellectualis substantiae. Sed angelus intelligit seipsum per essentiam suam”; and Aquinas’s response ad 2 (Leon. 5.356): “Essentia Angeli est sicut actus in genere intelligibilium, et ideo se habet et ut intellectus, et ut intellectum. Unde Angelus suam essentiam per seipsum apprehendit. Non autem intellectus humanus, qui vel est omnino in potentia respectu intelligibilium, sicut intellectus possibilis; vel est actus intelligibilium quae abstrahuntur a phantasmatibus, sicut intellectus agens”; and Therese Scarpelli Cory, *Aquinas on Human Self-Knowledge* (Cambridge: Cambridge University Press, 2013), 112.

²⁷ *ST* Ia.56.1 (Leon. 5.62): “Nihil autem differt, ad hoc quod forma sit principium actionis, quod ipsa forma sit alii inhaerens, et quod sit per se subsistens: non enim minus calor calefaceret si esset per se subsistens, quam calefacit inhaerens. Sic igitur et si aliquid in genere intelligibilium se habeat ut forma intelligibilis subsistens, intelliget seipsum. Angelus

IV.

The Relation between Intellect-in-Act and Intelligible-in-Act. Now what does the metaphysical analysis of act and potency in the “order of intelligibles” have to do with the Identity Formula and its claims that “the intellect in act is one with the intelligible in act”? The answer could perhaps already be glimpsed in the last section, but it remains to be extracted explicitly. Let us return to *De veritate* 8.6, where I would like to draw attention to a surprising and typically-overlooked aspect of the analogy Aquinas draws between formed matter and the species-formed intellect. The analogy, as we saw in the previous section, is grounded on the premise that something only produces an act if it has a form that makes it be “in act” (actual) in the relevant genus. For instance, prime matter on its own is only potentially fire and hence cannot perform the act characteristic of fire, namely, burning. In order to burn, something must be “actual fire,” which requires that prime matter be perfected by substantial *fire-form*. Similarly, the possible intellect on its own is only an intellectual potency and hence cannot perform the act characteristic of intellects, namely understanding. In order to understand trees, it must be made intellect-in-act, which requires that the intellectual potency be perfected by an intelligible form “tree.” “The intellect in act [is the principle of] this act of understanding ... our possible intellect cannot understand anything before being perfected by an actually intelligible form.”

Now such remarks are so familiar to readers of Aquinas that it is easy to miss the peculiarity. Fire performs its characteristic act of burning in virtue of its *fire-form*. So one might have expected Aquinas to say, similarly, that the intellect-in-act performs its characteristic act of understanding in virtue of having *intellect-form*. Instead, he describes the form of the intellect-in-act as “*intelligible form*.” In other words, to become *intellect-in-act*, autem, cum sit immaterialis, est quaedam forma subsistens, et per hoc intelligibilis actu. Unde sequitur quod per suam formam, quae est sua substantia, seipsum intelligat.”

the intellect must acquire an *intelligible* perfection. The kind of being that must be “in act” to ground the operation of understanding, is *intelligible being*. To be perfected *as intelligible* is to be perfected *as intellect*, and vice versa.

The crucial implication here is that intellectual actuality and intelligible actuality are one and the same. And now we begin to see why all the entities he lists in the “order of intelligibles” are intellects (human intellect, angels, God). The order of intelligibles is the order of intellects, because to be “in act” intelligibly is to be “in act” intellectually.²⁸ The convertibility of intellectuality and intelligibility comes sharply into focus in Aquinas’s comments on *Metaphysics* Lambda:

And [Aristotle] says that it belongs to the nature [*ratio*] of the intellect that it should understand itself insofar as it assumes or conceives [*transmit vel concipit*] in itself something intelligible; for the intellect becomes intelligible by its attaining something intelligible. And therefore, because the intellect becomes intelligible in conceiving something intelligible, it follows that intellect and intelligible are the same. And he explains how the intellect attains the intelligible. The intellect is related to the intelligible as potency to act, and the perfectible to its perfection: and just as the perfectible is receptive of its perfection, so too the intellect is receptive of its intelligible. ... And thus each [intellect] is rendered into act insofar as it receives the intelligible: for to be in act in the genus of intelligibles is to be intelligible [*hoc autem est esse actu in genere intelligibilium, quod est esse intelligibile*]. And because each is acting [*agens*] insofar as it is in act, it follows that insofar as the intellect attains the

²⁸ See the explicit equivalence in 2.96 (Leon. 13.571): “Secundum ordinem intellectuum est ordo intelligibilium.”

intelligible, it comes to be acting and operating—that is to say,
understanding.²⁹

The analysis here is determinedly metaphysical in character, specifying the kind of actualization that must take place in order for an intellect to bring forth acts of understanding. Indeed it seems to me that the verbs “assuming and conceiving” (*transumit* and *concipit*) ought to be interpreted literally as denoting a metaphysical transformation rather than a psychological “conceptualization.” Crucially, the intellect’s *attaining* intelligible treeness is explicated as the intellect’s *becoming* intelligible treeness—and this becoming is what justifies the claim that “intellect and intelligible are the same.” Indeed, it is only in becoming

²⁹ *In Metaph.* 12.8, no. 2539–40 (Marietti 594): “Et dicit, quod hoc est de ratione intellectus, quod intelligat seipsum inquantum transumit vel concipit in se aliquid intelligibile; fit enim intellectus intelligibilis per hoc quod attingit aliquod intelligibile. Et ideo, cum ipse intellectus fiat intelligibilis concipiendo aliquod intelligibile, sequetur quod idem sit intellectus et intelligibile. Quomodo autem intellectus attingat intelligibile exponit. Intellectus enim comparatur ad intelligibile sicut potentia ad actum, et perfectibile ad perfectionem: et sicut perfectibile est susceptivum perfectionis, ita intellectus est susceptivus sui intelligibilis. Intelligibile autem proprie est substantia; nam obiectum intellectus est quod quid est; et propter hoc dicit, quod intellectus est susceptivus intelligibilis et substantiae. Et quia unumquodque fit actu inquantum recipit intelligibile: hoc autem est esse actu in genere intelligibilium, quod est esse intelligibile. Et, quia unumquodque inquantum est actu, est agens, sequitur quod intellectus inquantum attingit intelligibile, fiat agens et operans, idest intelligens”; compare *SCG* 2.55 (Leon. 13.394): “Intelligibile est propria perfectio intellectus: unde intellectus in actu et intelligibile in actu sunt unum. Quod igitur convenit intelligibili inquantum est intelligibile, oportet convenire intellectui inquantum huiusmodi: quia perfectio et perfectibile sunt unius generis.”

actually intelligible treeness (or catness, etc.), that the intellect is perfected *as intellect*, which is why only that which is actually intelligible can “come to be understanding,” i.e., perform the intellectual operation. And so, just as fire heats insofar as it is *actually hot*, so too the intellect understands insofar as it is *actually intelligible*.

Aquinas sketches out the same picture at length in commenting on *De anima* III:

The possible intellect is intelligible, not by its essence, but by some intelligible species, like other intelligibles. Aristotle shows this from the fact that what is actually understood [*intellectum in actu*] and the one actually understanding [*intelligens actu*] are one. Now something is intelligible in act [*intelligibile in actu*] by being actually abstract from matter ... So if we receive intelligibles-in-act, the intellect is one and the same with that which is understood. ...

Therefore the species of the thing actually understood is the species of the intellect itself, and thus by that species, it can understand itself. ... But the reason that the possible intellect does not understand itself by its essence but rather by an intelligible species, is that it is only a potency in the order of intelligibles. For the Philosopher shows in *Metaphysics* 9 that nothing is understood except insofar as it is in act. And something similar is true of sensible things. For that which is only in potency in them, namely prime matter, has no action by its own essence, but only by a form joined to it: but sensible substances, which are in one respect in act and in another respect in potency, have some action in their own right. Similarly, the possible intellect, which is only in potency in the order of intelligibles, does not understand, nor is it understood, except by a species received in it. But God, who is pure act in the order of intelligibles, and the other separate substances which are in the

middle between potency and act, both understand and are understood by their essence.³⁰

Once again, the perfection of the possible intellect (*intellectual* perfection) precisely consists in *intelligible being*. And hence, as Aquinas twice underscores in the above text, the principle of the intellect's intelligible-intellectual perfection (the species in the case of the human intellect, and the Divine essence in the case of God) is not only the source of its *understanding* but also of its *being-understood*.

These and similar texts, on my view, show that Aquinas is committed to the convertibility of intellectuality and intelligibility. To be “in act” as an intellect *just is* to be “in act” as an intelligible. And it is this being “in act” in intellectual-intelligible being, that is the metaphysical requirement for performing an act of understanding.

Aquinas's Identity Formula now appears in a new light. Given what we have just seen, I contend that when he says that “the intellect in act is the intelligible in act,” he is setting up the metaphysical conditions under which the act of understanding is performed. What the Identity Formula stipulates is that in order for me to be actually understanding “tree,” intellect and intelligible tree must be “one” in me. This “one” is not some strange hybrid compound that straddles the ontological distinction between me and the physical trees growing on the banks of the Main. Rather, it is something within the knower: *the intellectual instantiation of intelligible “tree”* and (the flip side of the same coin) *the “tree”-perfection of my intellect*. More specifically, in the case of human knowing, the “something one” from which the act of understanding “tree” proceeds is exactly what I described earlier as composed of the “matter” of the possible intellect and the “form” of the actually intelligible species, which together constitute the “one” that is “intellect-in-act.”³¹ And the claim of the Identity Formula is

³⁰ In DA III.3 (Leon. 45/1.216: 65–106).

³¹ See, e.g., *Sent.* IV.49.2.1.

simply that this “one” (the species-formed intellect in the act of thinking about trees) is not only “intellect-in-act” but also equally “intelligible-treeness-in-act.” (By analogy, one might similarly say that a duck is equally “enmattered duck-form” and “duck-formed matter”). This intellectual-intelligible tree-being provides me the right kind of being for bringing forth an act of understanding “tree.”³² Consequently, and crucially, the act of understanding does not *connect* what is “inside” with what is “outside” but is *produced* from a prior, intramental union: “The intellectual operation is not a real middle [*media secundum rem*] between what is understanding and what understands³³; rather, it proceeds from both according as they are united.”³⁴

³² SCG 2.50 (Leon. 13.383): “Secundum autem quod [species] sunt intelligibiles actu, fiunt unum cum intellectu.”

³³ In other words, it is not a transitive act.

³⁴ DV 8.6, ad 11 (Leon. 22/2.239: 245–8): “Operatio intellectualis non est media secundum rem inter intelligens et intellectum, sed procedit ex utroque, secundum quod sunt unita”; ST Ia.54.1, ad 3 (Leon. 5.40): “Actio quae transit in aliquid extrinsecum, est realiter media inter agens et subiectum recipiens actionem. Sed actio quae manet in agente, non est realiter medium inter agens et obiectum, sed secundum modum significandi tantum, realiter vero consequitur unionem obiecti cum agente. Ex hoc enim quod intellectum fit unum cum intelligente, consequitur intelligere, quasi quidam effectus differens ab utroque.” And having to do exclusively with the operation proceeding from the union of the two (without remarking on its not being a middle): DV 8.6, ad 3 (Leon. 22/2.239:189–93): “Ad tertium dicendum, quod intellectum et intelligens non se habent ut agens et patiens; sed ambo se habent ut unum agens, ut patet ex dictis, quamvis quantum ad modum loquendi videantur ut agens et patiens significari”; see also DV 8.7, ad 6 s.c. (Leon. 22/2.244:392–9): “Cognoscens et cognitum non se habent sicut agens et patiens, ut ex dictis patet, sed sicut duo ex quibus fit unum cognitionis

An analogy might help clarify how this interpretation of the Identity Formula differs from the standard interpretation. When I shout, “The chair is on fire!” I do not mean that the chair has become related to *an independent flame in a match* even though this relationship originally caused the chair to catch fire. Rather, I mean that *the chair’s own potency for fire has been actualized*, so that the *chair itself now burns with its own fire*. Similarly, by saying that “the intellect-in-act is actually intelligible treeness,” Aquinas is not describing the intellect’s relationship with an extramental tree (even if some such relationship causes, or results from, the intellect’s becoming intelligible treeness). Rather “being intelligible treeness” is the state that the perfected intellect is in. To become intellectually actual is to be realized *as* some intelligible—treeness or catness or something else.

The Identity Formula, then, has nothing to do with specifying the intellect’s relation to extramental objects, such as the treeness existing in this tree growing on the banks of the Mississippi. (Indeed as we saw in §I, the treeness existing in this tree does not in itself have the characteristics of intelligible being, so the intellect-in-act’s identity with the intelligible-in-act cannot be an identity with *that physical extramental treeness*). The doctrine of the Identity Formula, instead, is that intellects and intelligibles, which are distinct from each other insofar as they are in potency to each other, are *co-actualized* or *co-realized* as *one and the same entity*, a kind of being that is both intellectual and intelligible. The “actually intelligible tree” with which the intellect-in-act is identical is not treeness as it exists extramentally. Rather, it is *the intellectual-intelligible being of the intellect that is thinking about trees*.

V.

principium; et ideo non sufficit ad cognitionem contactus inter cognoscens et cognoscibile; sed oportet quod cognoscibile cognoscenti uniatur ut forma vel per essentiam suam vel per similitudinem suam.”

Conclusion: Identity and Representation. But this interpretation of the Identity Formula may raise a serious objection. After all, Aquinas not only says that the intellect *is* the intelligible or what is intellected (*intelligibile, intellectum in actu*), but he also speaks of the intellect *cognizing* or *understanding* or *thinking about* intelligibles. So if someone is thinking about intelligible treeness, and actually intelligible treeness is *her own actualized intellect*, then it seems that whether she knows it or not, she is *really* thinking about her own intellect. But that would be just the kind of extreme representationalism—the intellect’s cognizing solely its own internal impressions—that Aquinas explicitly rejects.³⁵

³⁵ See *ST Ia.85.2* (Leon. 5.334): “Sed haec opinio manifeste apparet falsa ex duobus. Primo quidem, quia eadem sunt quae intelligimus, et de quibus sunt scientiae. Si igitur ea quae intelligimus essent solum species quae sunt in anima, sequeretur quod scientiae omnes non essent de rebus quae sunt extra animam, sed solum de speciebus intelligibilibus quae sunt in anima; sicut secundum Platonicos omnes scientiae sunt de ideis, quas ponebant esse intellecta in actu. Secundo, quia sequeretur error antiquorum dicentium quod omne quod videtur est verum; et sic quod contradictoriae essent simul verae. Si enim potentia non cognoscit nisi propriam passionem, de ea solum iudicat. Sic autem videtur aliquid, secundum quod potentia cognoscitiva afficitur. Semper ergo iudicium potentiae cognoscitivae erit de eo quod iudicat, scilicet de propria passione, secundum quod est; et ita omne iudicium erit verum. Puta si gustus non sentit nisi propriam passionem, cum aliquis habens sanum gustum iudicat mel esse dulce, vere iudicabit; et similiter si ille qui habet gustum infectum, iudicet mel esse amarum, vere iudicabit: uterque enim iudicat secundum quod gustus eius afficitur. Et sic sequitur quod omnis opinio aequaliter erit vera, et universaliter omnis acceptio.”. Even Pasnau, who ascribes to Aquinas a “soft” representationalist theory whereby the species serves as a cognized internal intermediary whereby we cognize extramental essences, holds that the species is not that about which we are thinking; rather, cognizing it enables us to think

As mentioned in the introduction, it would take a much longer study to evaluate how exactly Aquinas handles the mind-world gap. (The process is complicated by the fact that the usual dichotomy of realism vs. representationalism is, in my view, problematically anachronistic when applied to Aquinas). So here instead I merely want to point out one reason to believe that extreme representationalism at least *need not follow* from the view I have described. The reason is that the objection equates *x*'s being intelligible with *x*'s being the psychological object of thought. With that equation in place, extreme representationalism naturally follows from the claim that the intelligible *is* the perfected intellect. But Aquinas does not appear to equate intelligibility with psychological objectification. Instead, some of his remarks suggest a distinction between what *perfects* the intellect versus the extramental object *about which it is thinking*: “The understood thing [*res intellecta*] is the perfection of the one understanding according to its likeness which it has in the intellect: for it is not the stone that is outside the soul that perfects our possible intellect.”³⁶

about something else. Robert Pasnau, “Id Quo Cognoscimus,” in *Theories of Perception in Medieval and Early Modern Philosophy*, ed. Simo Knuuttila and Pekka Kärkkäinen (Dordrecht: Springer, 2008), 131–49.

³⁶ SCG 2.99 (Leon. 13.594): “Sed si recte consideretur, res intellecta est perfectio intelligentis secundum suam similitudinem quam habet in intellectu: non enim lapis qui est extra animam, est perfectio intellectus possibilis nostri”; *Sent.* IV.50.1.4, ad 5 (Busa 1.705): “Operatio, prout est accidens quoddam habens esse in subjecto, non extenditur ultra suum subjectum; sed prout comparatur ad objectum, sic ultra suum subjectum extenditur, sicut nunc per animam existentem in corpore cognoscimus ea quae in caelo sunt; et sic etiam nihil prohibet animam separatam distantia secundum locum cognoscere”; QDDA 3, ad 7 (Leon. 24/1.29): “Licet species intelligibilis qua intellectus formaliter intelligit sit in intellectu possibili istius uel illius hominis, ex quo intellectus possibiles sunt plures, id tamen quod

Here it seems to me that he is distinguishing the extramental stone as object of understanding (*res intellecta*), from the intelligible stone that is the perfection of the intellect. So it seems that my intellectual-intelligible actualization should not be confused with the object to which the intellect-in-act intentionally directs itself. If this is the case, the intellect's metaphysical actualization *as actually intelligible treeness* need not imply that it is *thinking about the actually intelligible treeness that it is*.³⁷

Indeed, as we saw, the intellect's actualization as intellect/intelligible-in-act is precisely the *precondition for producing* the intellectual operation of thinking about something. The reason, for Aquinas, is that this actualization establishes a “likeness” between the intellect-intelligible-in-act and the extramental object—and “likeness” is the basis for all cognition:

It must be considered that the exterior thing that is understood by us does not exist in our intellect according to its proper nature, but rather it is necessary for its species to be in our intellect, whereby the intellect is rendered into act. And existing in act by that species as though by its own form, the intellect understands the thing itself. But this does not occur as though the act of understanding were an act that goes forth into the thing understood, as when heat goes forth into the thing heated—but rather the act remains in the one who intelligitur per huiusmodi species est unum, si consideremus habito respectu ad rem intellectam, quia uniuersale quod intelligitur ab utroque, est idem in omnibus. Et quod per species multiplicatas in diuersis, id quod est unum in omnibus possit intelligi, contingit ex immaterialitate specierum, quae repraesentant rem absque materialibus conditionibus indiuiduantibus, ex quibus una natura secundum speciem multiplicatur numero in diuersis.”

³⁷ Though of course Aquinas holds that intramental realities can also be the object of thought, when we turn out attention inward; see *ST* Ia.85.2.

understands. Nevertheless, it has a relation to the thing that is understood, from the fact that the aforementioned species, which is the principle of the intellectual operation as a form, is its likeness.³⁸

The intellect's identity with the intelligible, then, is not *reducible* to a kind of relation to extramental objects. Rather, its intellectual-intelligible being is the *foundation* for a relation of likeness, which enables me to think about extramental objects. But that is a story for another time.³⁹

³⁸ SCG 1.53 (Leon. 13.150): “Considerandum est quod res exterior intellecta a nobis in intellectu nostro non existit secundum propriam naturam, sed oportet quod species eius sit in intellectu nostro, per quam fit intellectus in actu. Existens autem in actu per huiusmodi speciem sicut per propriam formam, intelligit rem ipsam. Non autem ita quod ipsum intelligere sit actio transiens in intellectum, sicut calefactio transit in calefactum, sed manet in intelligente: sed habet relationem ad rem quae intelligitur, ex eo quod species praedicta, quae est principium intellectualis operationis ut forma, est similitudo illius.”

³⁹ I am grateful to the Alexander von Humboldt Foundation for supporting the research for this paper; to Dag Hasse, Jörn Müller, Dominik Perler, Elena Baltuta, Stefan Schmid, and audiences at the University of Würzburg and the 2016 Symposium Thomisticum for helpful remarks and discussions; and to Kirsten Anderson and Trevor Anderson for assistance preparing the manuscript.

ARE THERE ANY INSTINCTS?

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THE conception of instinctive activities is a fairly definite one in general psychology, and we may without hesitation accept it as it is generally understood; namely, as designating any responses which have not been learned.

The conception of *an instinct*, or of *instincts* is however a very confused one, and recent texts show great vacillation in the application of the term. Some authors apply the term to what Warren in his recent classification² lists as *instincts*, and also to what Warren lists as *reflexes*. Some authors restrict the term to groups of activities which are unconscious: others insist on consciousness as one of the specific differentia of "instinct." In most cases, it is assumed that "instinct" does not involve volition: but I do not think all authors would agree to this restriction. I refrain from introducing pertinent illustrations solely because I do not wish it supposed that I have more pointed objections to certain methods of treatment than I have to a great many others.

The greatest confusion of all results from the failure to distinguish between the instinct as a group of activities *teleologically* defined, and the instinct as a *physiological* group. It makes considerable difference whether, for example, we consider the "feeding instinct," as made up of the activities which result in food being secured; or consider it as a certain physiological group of activities which we may name from its most characteristic result, but which is defined by its actual reaction characters, and in that way distinguished from other physiological groups.

The confusion may perhaps not be an important matter for general psychology in its present state of development. Certainly, the presence of the confusion in some general texts seems to have no particular bearing on the further work in these texts. In social psychology however, the term is capable of great abuse, and is decidedly dangerous unless applied in a carefully considered and standardized

¹A paper presented before the American Psychological Association, Cambridge, Mass., Dec. 29, 1919.

²Psychological Review, 1919, Vol. 26, pp. 197-203.

way; and it is from the point of view of social psychology that I am here approaching the topic. I am not concerned for the present as to whether the "instinct," as defined, shall turn out to be conscious or unconscious; or whether if conscious, it is volitional or non-volitional: I am concerned simply with the question of the definition itself; whether it is to be teleological or physiological.

The term "instinct" might be applied consistently, as it is applied at times, to a certain definite group of muscular and glandular performances—a form of behavior, in one of the various meanings of the elusive term "behavior"—resulting from a definite stimulus or complex of stimuli. The concatenated movements of the muscles of the face, throat, and viscera, with attendant glandular changes, which make up the sucking reaction of the infant: or the disposition to make these movements upon certain stimuli: might very well be designated as "instinct," regardless of whether consciousness or volition is involved, and quite apart from the fact that the reaction may be useful. That there are "instincts" in this physiological sense of the term, I suppose no one could deny: certainly I shall not deny it. But it is very difficult to adhere to this meaning of the term, if we may judge by the procedure of the various authors who deal with the topic, and I am very strongly convinced that it is not at present possible to secure agreement to confine the term to this meaning.

At any rate, I propose to join in the neglect of the physiological use of the term, and formulate the inquiry to ask whether there are "instincts" in the teleological sense—the sense in which the term is used in McDougall's *Social Psychology*.

In the teleological use of the term, as I have already indicated, the activities are grouped and classified in accordance with the results obtained in the outer world, physiological and psychological groupings being largely neglected, and where introduced, being always subsidiary to the teleological groupings. Thus; the "instinct of flight" includes all those activities which result in a get-away from a dangerous locality: the "instinct of repulsion," all those activities which remove something from the animal's environment: the "instinct of curiosity" includes the activities leading to examination: "pugnacity" includes the movements which eventuate in combat: the "parental instinct" is the sum of the activities which result in the care and protection of the child: the "instinct of reproduction" includes those activities which result in the propagation of the species: The "gregarious instinct" is the composite of activities which result in forming a herd and

holding it together, and so on through the list. (Of course I mean that the tendency to these activities constitute the "instincts," but the shorter expressions are not misleading).

This teleological grouping of activities under the concept of "instinct," so forcibly represented by McDougall, is apparently widely accepted, and so thoroughly fixed that there is little possibility of using the term in any other way. In discussing the question whether or not there is an "instinct," as a usefully discriminable entity, we are therefore not denying the physiological grouping previously mentioned. Nor are we denying the possibility of a psychological grouping: such may be discoverable, although no one has so far made any serious search for it. New terms will have to be found for these groupings.

The grouping of activities into "instincts" may be admitted to be a useful procedure, if it be clearly understood to be a device of convenience only, similar to the arrangement of documents in a well ordered filing system. Just as there may be different filing systems for different purposes, so different classifications of "instincts" are useful, if they are not misunderstood as being anything more. We may classify "instincts" under two, four, twenty, or a thousand headings, according to the particular purposes we have in view, and may then use another classification for another purpose.

The constant tendency in social psychology is to consider these convenient groupings, arbitrarily made, as if they were series of natural and generic distributions on the psychological level, and to deduce a set of important deductions from the classification adopted. Having posited a "pugnacious instinct," for example, one writer proceeds gravely to infer that war is forever a necessity, as the expression of this "instinct." Controversy over the hypothetical "moral instinct" is another illustration of confused procedure. As a matter of fact, there is or is not a "moral instinct," according to the plan of the author. If it is deemed useful to segregate, in the outer world, certain effects which are to be named "moral"—and this segregation can unquestionably be made—any unlearned tendencies which contribute to these effects, legitimately make up a "moral instinct." If the classification of effects as "moral" is not chosen, then of course there is, for the author choosing, no "moral instinct." Again; if it is advisable to distinguish between the mere process of copulation and the processes of conception and birth, there is an "amatory instinct," distinguishable from the "reproductive:" otherwise there is not.

The impossibility of considering the teleological classification of

"instincts" as more than a matter of convenience, is shown by the overlapping of the "instincts." Even the teleologists point out that "pugnacity" arises from other "instincts." As a matter of fact, there are very few actual responses of the animal which do not form part of a number of "instincts," whatever the system of classification. The same physiological activities, and in part the same conscious processes, are involved, in primitive man, in pursuing a deer for food, and in pursuing a female for amatory purposes. In other cases the same reactions may now be classed as mere "flight," now as manifestations of "gregariousness," now as manifestations of "self abasement." The same fears and perhaps the same desires may be involved in several cases.

I am sure that all the activities, physiological and psychological, of which the animal is capable, participate at some time or other in the expression of the "reproductive instinct." By taking the teleological "instinct" as if it were a psychological or physiological entity, the Freudians accordingly arrive at the grand conclusion that there is nothing in the animal world but "sex instinct." The reactions shown by a child may later be utilized by the "sex instinct." Hence, it is assumed that in its first appearance, the reaction is "sexual." In stating that serious results flow from the confusion of the teleological and the psychological points of view I am not theorizing, but referring to plain and deplorable matters of fact.

The present tendency to develop social psychology on the basis of a classification of "instincts" results in as many kinds of social psychology as there are classifications: and the possible number is legion. By assuming that some preferred classification represents an ultimate list of essentially different units, a psychologist is enabled to develop a system which is in reality nothing but a logical deduction from the assumptions made in the list adopted. Each system may be as logically perfect as any other. In the same way, Euclidean geometry, hyperbolic geometry, and parabolic geometry, each legitimate and exclusive of the other, are built up, each on its definite postulates. As an illustration of this sort of construction in social psychology we may compare Trotter's *Instincts of the Herd in Peace and War* with McDougall's *Social Psychology*, and with the Freudian system. One might go further, and consider the less sharply drawn systems resulting from the assumption of moral and religious "instincts." If an "instinct to imitate" be assumed, still different systems result.

The consequences of carrying over to psychology the teleological

conception of "instincts" are much complicated by further assumptions concerning the role of consciousness, and of volition. We might examine the deplorable consequences of this complication in child psychology, where, if possible, the confusion is even worse than in social psychology: but it is better to deal with the more fundamental fallacy, and settle it in such a way as to abort the fallacies based upon it.

With teleology as a method, we need have no quarrel, and we should not lightly underestimate its importance. Perhaps it may be of far greater value than psychology. Perhaps there is no such a thing as social psychology. But if so, let us call the topic by some other name, and cease to delude ourselves into accepting it as psychology. Personally, I am inclined to favor the belief that a social psychology may be developed. In such a science, teleological methods may legitimately be employed, if properly labeled, just as physiological methods may be. One must however beware of a teleology masquerading as psychology, even though it utilizes a great deal of psychological material, and employs some psychological methods.

Accepting the term "instinct" in the sense in which it is most emphatically used at the present time, we must conclude that for psychology there are no "instincts." There is a great deal of *instinctive activity*, both conscious and unconscious, and probably both volitional and non-volitional: instinctive perceptions and thoughts no less than instinctive acts and emotions. These activities may well be considered in their physiological groupings, and possibly in their psychological groupings, if such groupings are discoverable. I am at present inclined to think that the possibility of discovering social psychology rests upon the possibility of discovering psychological groupings of instinctive activity: and neither of these discoveries is likely to be made until we cease talking of "instincts."³

³There is of course no objection to the use of the term *instinct* in the general sense, just as we use the general term *intelligence*. The objection is to using the expressions *an instinct* or *instincts* to indicate anything except a classification for purposes of convenience, or else in a distinctly teleological sense.



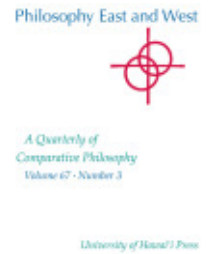
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HEIDEGGER AND MULLĀ ṢADRĀ ON THE MEANING OF METAPHYSICS



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Introduction

The aim of the present study is to analyze the general outlook of Heidegger and Mullā Ṣadrā with regard to the meaning of metaphysics, occupying as it does a central position in their respective philosophies. It should first be made clear that “metaphysics” refers to First Philosophy or the *scientia divina* (*al-ḥikma al-ilāhiyya*) in the philosophical system of Ṣadrā.¹ The English word “metaphysics” can be traced back to its etymological source in the Greek plural noun-phrase *ta meta ta phusika* (that which is beyond nature), which became *metaphysica* in Medieval Latin. The word was used both as a title for Aristotle’s seminal work *Metaphysics* and as the name of the “science” that was its subject matter. The term for metaphysics in every modern European language (French: *la métaphysique*; German: *Die Metaphysik*; Spanish: *la metafísica*) is an adaptation of the Latin word to the orthographic and phonetic requirements of that language.² Although in the Arabic tradition the word metaphysics is rendered *mā ba’d al-ṭabī’a* (that which is beyond/after nature), in reality it means “the science of divine affairs.” However, unlike Arabic, the European words (including English) derived from *metaphysica* are free from any such internal indications of their meaning. What is important to note in all this is that both Heidegger and Ṣadrā inherited the common historical meaning of the word “metaphysics” as it had been developed in the Aristotelian tradition. Second, the meaning of metaphysics can be understood in the sense of its subject matter, method, issues and important questions, and goals, all of which ultimately determine the general outlook of any given philosophical system.

Basic Starting Points

Any comparative study must first begin by delineating the problems that confront its subject of inquiry. As the present article investigates two philosophical systems that are significantly different from each other in terms of their historical, cultural, and linguistic contexts, it is necessary to lay bare the basic starting points from which the investigation will be carried out. Thus, I will first list some of the key reasons explaining why a comparative treatment of Heidegger and Ṣadrā’s metaphysics is possible/meaningful.

1. Both of our philosophers share a common received history of philosophy, namely the Greco-Islamic tradition stretching from the Presocratics and extending

to the great medieval philosophers, such as Avicenna (d. 1037) and Averroes (d. 1198). (In Heidegger's case, he received the Islamic tradition of philosophy primarily through the Christian scholastics with whom he was so familiar.) Thus, the historical starting point of both of these thinkers seems to be common, although one should accordingly keep in mind the differences in their conceptions of philosophy and the history of metaphysics.

2. Both Heidegger and Ṣadrā deemed it necessary to make "being" the central issue of their philosophy, and each of their respective philosophies is recognized as "existential philosophy."³ Both endeavored to delve into the "meaning" of being, and also used it as a hermeneutic device to account for almost all other key philosophical concepts, such as reality, time, temporality, human being, being-in-the-world, and so on. Furthermore, as Heidegger claimed to restore the meaning of being, which, according to him had been forgotten since the time of Plato, Mullā Ṣadrā, too, is said to have revolutionized the notion of being (*wujūd*), as he broke free of the dominant Avicennan existent-centered (*mawjūd* instead of *wujūd*) metaphysics and the long-standing substance-based metaphysics of Aristotelianism.⁴ Mullā Ṣadrā went as far as to argue that if one remains ignorant of "being," one will remain ignorant of all other fundamental sciences, and that an understanding of being is foundational to all categories of cognition (Ṣadrā 1984, *al-Mashā'ir*, pp. 4–5).

3. As with Heidegger, Ṣadrā's approach to the problem of being is also "phenomenological,"⁵ seeking as it does to overcome simple binaries between subject and object.⁶

4. Heidegger and Ṣadrā both stand at the end of two distinct philosophical traditions,⁷ and so where they go with the question of being has everything to do with how they inherited their traditions.

Now I will highlight some of the fundamental differences in the approaches of both Heidegger and Ṣadrā in the domain of metaphysics, thereby problematizing these "comparative" points listed above. (We will delve into the details of these and related points later in this article.)

1. Even though both Heidegger and Ṣadrā make "being" their fundamental project, their analyses of being lead them to arrive at conclusions that are substantially different from one another. Thus, in the case of Heidegger, an understanding of being leads one toward the notion of "being-toward-death," while in the case of Ṣadrā it leads one toward "being-toward-beyond-death."

2. The concept of the "primacy of being" or *aṣālat al-wujūd* in the philosophy of Ṣadrā requires one to accept the premises of the "self-evident nature" (*badīhiyya*), "univocality" (*ishtarāk ma'nawī*), and "universality" (*kullīyya*) of "being" in the first place (Ṣadrā 1989, *al-Asfār*, 1:35–39, 1:119). However, Heidegger rejects all of these key premises of being (*wujūd*) and regards them as the historical "prejudices regarding being" to which philosophers have slavishly clung (Heidegger 1993, p. 42).

3. Heidegger does not accept the principle of "multiple worlds" extending beyond the physical realm, whereas for Ṣadrā the hierarchy of multiple worlds, namely

the physical, the imaginal (*'ālam al-mithāl*), and the Divine, is a basic feature of his cosmology.

4. The concept of “infinity” bears no particular philosophical significance for Heidegger, while the being of the Absolute as the “Infinite by virtue of [Its own] infinity” (*mā lā yatanāhī bimā lā yatanāhī*) is an essential aspect of Ṣadrā’s thought (Ṣadrā 2003, *al-Shawāhid*, p. 135).

5. Ṣadrā’s philosophy regards concepts such as “soul,” “intellect,” and the interior levels of the human self as possessing gradational realities, while in Heidegger’s project of existentialist philosophy, such points of view carry no significance (Ṣadrā 2003, *al-Shawāhid*, pp. 299 ff.). With these points in mind, it is important to emphasize that the purpose of this study is not to suggest that any comparison of Heidegger and Ṣadrā would be futile. Rather, the goal here is to clarify the general outlook of these two philosophers concerning the meaning of metaphysics. Taking into account the fundamental differences that exist between the Heideggerian and Ṣadrāian notion of metaphysics, the way will then be paved for future fruitful comparative explorations of their respective philosophies.

A Note on Problems in Previous Scholarship

Some scholars (e.g., see Açıkgenç 1993, Munfarid 2005, and Kamal 2006) have endeavored to prove that there exists a great deal of similarity between the philosophies of Heidegger and Ṣadrā. Muhammad Kamal, for example, attempts to show how the doctrine of the “primacy of being” (*aṣālat al-wujūd*)⁸ in Ṣadrā’s transcendent philosophy (*al-ḥikma al-muta’āliya*) bears close resemblance to the concept of *Dasein* in Heidegger’s philosophy (Kamal 2006, pp. 42–49).

Now if the meaning of being implies different things for both Heidegger and Ṣadrā, then we may justifiably ask how useful an exercise it would be to study their ontologies alongside one another. In Ṣadrā’s philosophy, the “primacy” (*aṣālat*) of being (*wujūd*) stands in contrast to the primacy of quiddity (*aṣālat al-māhiyya*) or the perspectival standpoint of being (*i’tibāriyyat alwujūd*), whereas in Heidegger’s philosophy “being” is not situated over and against “quiddity” as such, since he is not concerned with the traditional “existence-essence” distinction that is so characteristic of medieval philosophy from Avicenna onwards. In accordance with his position that says that “being is given as a gift to man,” Heidegger’s starting point is the existential condition of modern humanity.⁹ Likewise, although Açıkgenç 1993 is insightful in many regards, it too suffers from artificial comparisons of categories that imply different things in different contexts. A case in point is the comparison of “the modalities of being” in both Ṣadrā and Heidegger (Açıkgenç 1993, pp. 81 ff.), which requires an altogether different “methodology” if it is to be compared at all, since the context of this concept is markedly different in each case.

The failure to make such basic distinctions so essential to a proper comparative study of both Heidegger and Ṣadrā seems to be the norm rather than the exception. A most pertinent example in this regard is an article by Muḥammad Asadī, one of Iran’s most prominent Heidegger scholars. Since Heidegger has gained much

prominence in contemporary Iran, it would be appropriate to bring in an Iranian perspective on his philosophy. In Asadī's investigation (2008), he attempts to tackle a problem akin to that of the subject matter of the present article. However, Asadī relies almost exclusively on one specific Heideggerian treatise, namely his *Letter on Humanism*. The particular background to this short text aside,¹⁰ Heidegger of course dedicated a number of key works to the problem of metaphysics, such as *Was Ist Metaphysik*; *Die Grundbegriffe der Metaphysik: Einsamkeit-Endlichkeit-Welt*; *Einführung in die Metaphysik*; and *Kant und das Problem der Metaphysik*. Thus, Asadī does not portray an accurate picture of Heidegger's understanding of the meaning of metaphysics, particularly his treatment of the central question of "why there are beings rather than nothing." Asadī would also have to account for Heidegger's evaluation of traditional Western metaphysics, as his treatment of being in particular is formulated in response to his critical perspective on the "history of being" from Plato until his own time. Moreover, Heidegger scholars normally distinguish between the "earlier" Heidegger and the "later" Heidegger.¹¹ However, this, too, is absent from Asadī's study. Additionally, although his study contains some useful points concerning the notion of "ontotheology"¹² in Heidegger, other key features of his thought, such as the "oblivion" of being, the meaning of being, and the significance of the problem of "nothingness," are passed over in silence.

A final point is in order here. One of the key differences that previous scholars have failed to take into account is the fact that Heidegger's ontology is fundamentally critical of, and therefore unconcerned with, any God-like notion entering into the discussion of metaphysics. That is to say, Heidegger maintains that if one has faith in a "religion" or in "God," she will be unable to partake in concrete metaphysical discussions. Since metaphysics for Heidegger begins with the question of "why are there beings rather than nothing" or "why is there anything at all rather than nothing," a commitment to belief in a deity would preclude the possibility that these questions be authentically probed without relinquishing one's theological beliefs (Heidegger 2000, pp. 7–8). For this reason Heidegger says that Christian philosophy is a "square circle." This kind of assessment, which actually colors all of Heidegger's incomplete and hence misinformed reading of the history of medieval philosophy (for which, see below), would clearly also apply to someone like Ṣadrā.¹³

The Subject Matter of Metaphysics and its Justification

Heidegger approaches the subject matter of metaphysics from different angles that complement one another. In his view, metaphysical inquiry must represent a holistic point of view and should be based on the intrinsic standpoint of the existent/being that questions. He regards such an inquiry to be inseparable from the individual who questions, and hence his saying, "we are questioning, here and now, for ourselves" (Heidegger 1993, pp. 239–241). In the previous section it was pointed out that for Heidegger metaphysical inquiry originates from the existential condition of modern humans, and with this statement he is elaborating on the same issue. It is important to note that when Heidegger mentions "for ourselves" he implies our "ego," whereas

a theocentric philosopher like Ṣadrā would supplant the notion of the ego with a universal reality (*ḥaqīqa kullīyya*) of the self, which has its root at the very center of the divine reality (Ṣadrā 2007, *Īqāz*, pp. 29–31). At any rate, Heidegger conceives of the subject matter and queries of metaphysics in multifarious ways:

Metaphysics is a questioning in which we inquire into beings as a whole, and inquire in such a way that in so doing we ourselves, the questioners, are thereby also included in the question, placed into question. (Heidegger 1995, p. 9).

Metaphysics is comprehensive questioning. The questions: what is world, finitude, and individuation constitute such comprehensive questioning. (Heidegger 1995, p. 24).

Metaphysics-metaphysical knowledge is a comprehensive questioning in this twofold sense: [1] that beings as a whole are in each case conceptually included in every metaphysical question; and [2] that whoever is involved in metaphysical questioning is in each case caught up in the question as well, and is fundamentally affected by the act of questioning and the object of questioning. (Heidegger 1995, p. 50)

In the account above it can be seen that Heidegger accepts “*being qua being*” (that is, “being as a whole”), which is the traditional Aristotelian subject matter of metaphysics, as the fundamental concern of metaphysics. However, what is new in his definition of the subject matter of metaphysics is that (1) the questioner, who intends to investigate the nature of being *qua* being, is always caught up in her own “act of questioning,” whereas in ancient philosophy it is not clear how the one who is questioning metaphysically is herself put into the question by this act of questioning (and it is precisely this point that gives Heidegger and his readers the possibility of understanding what is new in modern metaphysics in terms of its metaphysical content), and (2) the focal concerns of metaphysics are world, finitude, and solitude, which will be discussed at length in the section below on the three fundamental prejudices regarding being.

It may be noted here in passing that another great philosopher, Avicenna, defines metaphysics as the science that deals with the most general of all things, that is, with being itself. For him, the goal of metaphysics is to analyze the principles that govern “beings as such,” and through this analysis the philosopher is led to the existence of the first principle (*al-aṣl al-awwal*) and its relation to possible beings (*mumkin al-wujūd*) (Avicenna [Ibn Sīnā] 2005, *al-Shifāʾ*, pp. 10–12). In addition, Heidegger reasons that an inquiry concerning “nothing” in itself brings us face to face with metaphysics. Thus, it is not surprising that in his book *What Is Metaphysics* he devotes long chapters to the problem of “nothing,” and at the end of the book invites his readers to cogitate on the question “why are there beings at all instead of nothing.” He concludes that *an inquiry concerning the issue of nothing eventually leads us to the problem of being*. To wit, there is a subtle link between the issue of nothing and the fundamental question of metaphysics, “why are there beings at all instead of nothing.”

On the other hand, for Ṣadrā metaphysics encompasses metaphysics in both its general sense (*ilāhiyāt bi-l-maʾnā al-aʾamm*) and its specific sense (*ilāhiyāt bi-l-maʾnā*

al-akhāṣṣ). Before we proceed to analyze the philosophical justification of the subject matter of metaphysics in Ṣadrā, it should be kept in mind that the definition of metaphysics in Islamic philosophy has been adapted from Aristotle's manifold formulations of it.¹⁴ It is known that the subject matter of every science is determined by the essential (intrinsic) accidents (*al-'awāriḍ al-dhātī*) of that very science, which are predicated of the subject directly and without any intermediary (Ṣadrā 2003, pp. 141–142). Considered thus, topics including the primacy of being, modulation in the loci of manifestation of being (*tashkīk fī maẓāhir al-wujūd*),¹⁵ the modulated unicity of the reality of being (*waḥdat tashkīk ḥaqīqat al-wujūd*), necessity and possibility (*wujūd wa imkān*), unity and multiplicity (*waḥda wa kathra*), temporality and eternity (*ḥudūth wa qidam*), *materia* and the disengaged from matter (*mujarrad wa mādda*), cause and effect, potentiality and actuality, and so forth all can be considered essential (intrinsic) accidents of *wujūd*. Now the question that ensues from this is that if the philosophy of Heidegger, too, rests on being and the fact that he is well acquainted with peripatetic philosophy, then why are the essential accidents of being that have just been delineated above not discussed at all in his philosophy? The only answer that can be given to such a question is that although Heidegger discusses being, his *goals* and *methods* are a world apart from those of the peripatetic philosophers.

The subject matter of metaphysics, according to Ṣadrā, is the reality of being or the existent (*ḥaqīqat al-wujūd aw mawjūd*) (Ṣadrā 2003, *al-Shawāhid*, p. 145). The concept of the existent (*mawjūd*), which is taken to be the subject matter of metaphysics, and other concepts (as mentioned above) that are predicated of it as its essential accidents, all indicate the external world as an “accident” of accidents and quiddities (*māhiyyāt*). It was mentioned before that the category of quiddity plays no significant role in the Heideggerian perspective; also, the notion of being that he expounds is a “be-ing” of beings (Sheehan 2001). In addition, unlike Ṣadrā, Heidegger does not distinguish between the concept and reality of being, whereas such a distinction plays a crucial role in the Ṣadrīan perspective (Izutsu 1971, pp. 19–22). We may notice here as well that the subject matter of metaphysics in Ṣadrā is absolute being (*al-wujūd al-muṭlaq*), and not the absoluteness of being (*muṭlaq al-wujūd*). This is because the absoluteness of being does not have any particular rulings (*aḥkām*) and can embrace both the absolute and determined (*muqayyad*) being. On the other hand, the absolute being is a being that is not limited by any particular determination, and although it is negatively conditioned (*bi-sharṭ-lā*) in relation to all conditionings and determinations, it is nonetheless a condition unto itself by virtue of its being “negatively conditioned.” Thus, the subject matter of metaphysics is the reality of being, without its being limited by the condition of quantity, physicality, or temporality. Ṣadrā broaches several reasons for the philosophical justification of the subject matter of metaphysics.

We may add here that Ṣadrā's discussion of the subject matter of metaphysics can be traced back to the Euclidean paradigm of proof methodology (Avigad et al. 2009). This paradigm allows one to begin from axioms and self-evident principles such as the *a priori* nature of the intuition of the concept of being. Using such prin-

ciples, Ṣadrā postulates and constructs syllogisms to demonstrate the subject matter of metaphysics. Among his numerous reasonings, two of the most important ones are discussed below.¹⁶

Proof I

Minor premise: there is a general rule and criterion concerning every science that states that “the subject matter of every science depends on the essential [intrinsic] accidents (*al-‘awāriḍ al-dhātī*), which are predicated of it directly and without any intermediary.”

Major premise: when analyzing the problems of philosophy we find that all the predicates and rulings (*maḥmūlāt wa aḥkām*) of them, in one way or another, without considering any restrictions and conditions, relate to being *qua* being (*wujūd bi-mā huwa wujūd*).

Conclusion: Therefore, the subject matter of metaphysics should be being *qua* being. (Ṣadrā 2003, *al-Shawāhid*, p. 182; cf. Āmūlī 2007, 1 :228–230).

Proof II

The subject matter of every science should be demonstrated in a science that lies hierarchically above it. Metaphysics is a *prima scientia* and its subject matter (that is, “being”) is the most self-evident of all. Therefore, the subject matter of metaphysics should be being *qua* being (Ṣadrā 2003, *al-Shawāhid*, p. 184; cf. Āmūlī 2007, 1 :233–234).

In analyzing Ṣadrā’s reasoning, it becomes evident that he does not depart from the traditional Aristotelian notion of metaphysics, although his formulation adds certain nuances to it. On the contrary, even though Heidegger was familiar with the Aristotelian canon, he justifies his notion of metaphysics from the standpoint of phenomenology and the existential human condition.¹⁷ His reasoning is based on the concept of nothing and the question that he frequently repeats, namely “why is there anything at all rather than nothing.” However, Heidegger adds that all things eventually end up in “being,” and without considering “being” a philosophy would not be a philosophy (Heidegger 1996, introduction).

The Criticism of Traditional Metaphysics and the Problem of Onto-Theology

At the core of the Heideggerian critique of traditional metaphysics rests the assumption that philosophizing involves “free questioning” or simply “free thinking,” and in the Middle Ages, because of the ubiquity of religious beliefs and orientations proper to it, philosophy in the true sense could not exist (Heidegger 1995, pp. 45–48).¹⁸ He frankly states that “fundamentally there was no philosophy in the Middle Ages” (*ibid.*, p. 45). If we accept such a judgment, it would imply that great figures such as Avicenna, Suhrawardī (d. 1191), Naṣīr al-Dīn Ṭūsī (d. 1274), Mullā Ṣadrā, Maimonides (d. 1204), Ibn Gabirol (d. 1058), Thomas Aquinas (d. 1274), Duns Scotus (d. 1308), St. Anselm (d. 1109), and William of Ockham (d. 1347) were not really

“philosophers.” In a similar vein, titles such as Islamic or Arabic philosophy and Christian or Jewish philosophy are but names empty of content. It is worth mentioning that Heidegger was acquainted with Islamic philosophy, as he mentions it in his writings (Heidegger 1995, p. 44; Corbin 1981; Akbarian and Neuve-Eglise 2008). However, it is clear from his opinions that although he knew Latin well, he did not pay serious attention to the works of Muslim philosophers. For instance, he states (mistakenly) that the existence-essence distinction is an Aristotelian idea, whereas now it is well known that this is an Avicennan innovation.

According to Heidegger, although in traditional metaphysics (roughly from Plato onward) the topic of being *qua* being is discussed, the crucial issue of how the questioner himself is included in the inquiry has never been investigated. However, it is only in modern philosophy (indicating his own philosophy) that a comprehensive questioning that also encompasses the “inquirer” can be seen (Heidegger 1996, p. 31). In his view, the question of the “meaning of being” has been forgotten by the tradition, and traditional philosophers have failed to heed the difference between “ontic” and “ontological.”¹⁹ It is for this reason that when they ask the question “what is being?” (or “what is that which is?”), they simultaneously ask: which being is the highest (or supreme) being, and in what sense is it the highest being? This duality in the question of the Being of beings can be united under the title “onto-theology.”²⁰ Heidegger’s main contention is that metaphysics thinks theologically when it “thinks of the totality of beings as such . . . with regard to the supreme, all-founding being” (Heidegger 1969, pp. 70–71, 139). He asseverates, for the reasons mentioned above, that the meaning of being in the metaphysics of traditional philosophers becomes a muddy affair, and the main problem thus remains veiled. As traditional metaphysicians do not account for the difference between ontic and ontological, they are in a quest for an ultimate reality and consequently innovate innumerable names for it according to different “historical molds” (*prägun*g): *Phusis*, *Logos*, *Hen*, *Idea*, *Energeia*, Substantiality, Objectivity, Subjectivity, Will to Power, and *Ousia*, the proto-substance, which are but fallacious.

From the preceding paragraphs it is not hard to deduce that concepts such as the Necessary Being (*wājib al-wujūd*) or the absolutely unconditioned being (*wujūd lā bi-sharṭ maqṣamī*) in Islamic philosophy, too, will be rendered futile from the Heideggerian standpoint. On the other hand, Ṣadrā as well, from his own standpoint, may ask how the Heideggerian claims that state that traditional philosophers did not account for the “questioner” in the inquiry of being and the meaning of being are justified. This question is particularly pertinent since Heidegger’s claims are ambiguous. May it not be said that all the essential accidents of being are also predicated of the “philosopher” (who is the inquirer), as *being qua being* encompasses all beings? If so, then how can Heidegger claim that the questioner is not included in the act of questioning? In addition, Ṣadrā reckons that the concept of being has a corresponding reality, and he analyzes it from various angles (Ṣadrā 1984, *al-Mashā’ir*, pp. 10 ff.; see also Lāhijī 2007, pp. 125 ff.). Furthermore, does not his conclusion, which is based on the premise that being is a unified hierarchic reality (*haqīqa wāḥida dhī marātib*), lead us to shed light on the meaning of being? Also, Heidegger does not

consider that Avicenna's philosophy testifies to the emergence of a phenomenological philosophical tradition that takes the question of being to be the most central concern of philosophical investigations. He does not account for what is "the other" within the history of Western metaphysics. In his investigation of the phenomenology of being in Avicenna and Heidegger, El-Bizri concludes that Heidegger's claims about the oblivion of being in traditional metaphysics need to be reevaluated, as they emerge from his incomplete reading of the history of metaphysics. It is significant that Heidegger ignores Avicenna's treatment of the problem of being and the centrality of that question within all the subsequent developments of Avicennan phenomenological ontology up to Mullā Ṣadrā (El-Bizri 2000, p. xlviii).

The Three Fundamental Prejudices Regarding Being

In the previous discussion we saw that Heidegger claims that philosophers in the Western tradition have rather disregarded the meaning of being. Now since Heidegger wants to expatiate on the meaning of being, he provides reasons as to why traditional philosophers have failed to heed the meaning of being. This, he says, is owing to the prejudices regarding being that they held. First, philosophers claim that being is the most "universal" concept.²¹ Curiously, even though Heidegger claims that this is a "prejudice" regarding being, he himself accepts that the universality of being is other than the universality of genus, and that the universality of the former "surpasses" the universality of the latter in degree. That is to say, "being" does not delimit the highest region of beings insofar as they are conceptually articulated according to genus and species. He, like the medieval philosophers, takes being to be a *transcendens*. In *Being and Time* he states:

Being, as the basic theme of philosophy, is no genus of an entity; yet it pertains to every entity. Its "universality" is to be sought higher up. Being and the structure of being lie beyond every entity and every possible character that an entity may possess. *Being is the transcendens pure and simple*. . . (Heidegger 1996, p. 38)

Thus, his claims, namely that philosophers' statements concerning universality are ambiguous and that Aristotle did not clarify the relation between being and genus, are rather idiosyncratic. He further states that although one says accordingly that "being" is the most universal concept, it cannot mean that it is the clearest of all concepts and that it needs no further discussion. According to Heidegger, the concept of "being" is rather the most obscure of all.

What is rather surprising from the preceding claim is that it is unclear as to which of the philosophers states that the universality of being implies that it is the clearest of all concepts. The Persian philosopher Sabzawārī says that "the concept of being is the clearest of all things, yet its reality is the most hidden of all" (Sabzawārī 2005, p. 56). That is, the meaning (implying its reality) of being is the hardest of all to apprehend. Also, philosophers such as Avicenna and Mullā Ṣadrā believe that "being" does not fall under the so-called Aristotelian categories (see, e.g., Ṭūsī 2012, pp. 588 ff.). Although Heidegger acknowledges the preceding statement, he insists

that it is a “prejudice” regarding being. Moreover, he does not demonstrate how the argument of the traditional philosophers is logically untenable.

The second prejudice concerning being, according to Heidegger, is the statement that the concept of being is indefinable. This conclusion is drawn from its highest universality. This is so as one cannot undertake to define *being* without beginning in this way: “It is . . .” This beginning may be expressed or implied. Thus, in order to define *being*, one must say, “It is . . .” and hence employ the word to be defined in its definition (Pascal 1912, p. 169). So far, Heidegger accepts the statement of philosophers, whereas from another standpoint he raises the objection that the indefinability of being does not eliminate the question of its meaning; it rather demands that we look at that question thoroughly (Heidegger 1993, p. 43). According to Herman Philipse, Heidegger’s objection regarding the second prejudice of being misses the point. In his view, the verb “to be” and the noun “being” cannot be defined in the traditional way of a *definitio per genus proximum et differentiam specificam*, and surely this does not exempt one from analyzing their meanings (Phlipse 1998, pp. 33–38). If this were the case, then how could Heidegger, whose primary concern is the meaning of being, extract any meaning from “being?” It is worth noting that Ṣadrā in his *Asfār* (1989, 1:78–86, 1:318–23) analyzes at length the concepts of predicative (*rābiṭ*) and relational (*rābiṭa*) being, and, more recently, Hā’irī Yazdī (2006, pp. 11–20) too discusses the problem of “is” (Persian: *ast*) and “to be” (Persian: *hast*) in order to clarify this matter. The problem of “to be” can be resolved by making recourse to logic and semantics, but Heidegger does not address this issue from these angles.

The third prejudice regarding being relates to its being a self-evident concept. Everybody seems to understand what statements such as “The sky *is* blue” or “I *am* happy” mean. According to Heidegger, this average comprehensibility only demonstrates the incomprehensibility of being. The fact that we live already with an understanding of Being and that the meaning of Being is at the same time shrouded in mystery proves the fundamental necessity of recovering the question of the meaning of “Being.” In truth, the third prejudice hints at a subtle point. The difference between propositions such as “God exists,” “the world exists,” and “man exists” is noteworthy, and Muslim philosophers including Ṣadrā, in order to avoid *petitio principii*, propose two types of universals: the univocal universal (*al-kullī al-muṭawāṭī’*) and the modulated universal (*al-kullī al-mushakkik*). As famed theologians such as Fakhr al-Dīn al-Rāzī (d. 1210) failed to discern different types of universals, they called philosophers into question (unjustifiably) for failing to demonstrate how God, too, can “exist” in a similar sense that a creature exists. (For an elaborate discussion on this issue see, e.g., Ṭūsī 2012, p. 271, and Bihishtī 2011, pp. 204–208.) It is apparent from the reasoning of Heidegger that he, too, did not pay attention to the lesser known universal—that is, the modulated universal—which can resolve the apparent inconsistency of the propositions he raised. Nevertheless, to his credit, Heidegger points out the subtle nuances in the aforementioned propositions, which, to my knowledge, nobody had done before him in the history of Western philosophy. It should be noted in the end that all three of the prejudices

regarding being are crucial if we are to accept the Ṣadrīan notion of the “primacy of being.”

What Is the *Scientia Divina* (*al-ḥikma al-ilāhiyya*) or Metaphysics

The meaning of *scientia divina* or *metaphysica* is familiar to those who are at home with the Neoplatonic corpuses, especially those of Plotinus. It becomes easy, then, to realize that Mullā Ṣadrā adds nothing substantially new to the definition of metaphysics. Thus, Ṣadrā’s definition—following a long tradition in Islamic metaphysics—of philosophy as the art of “becoming God-like” (*al-tashabbuh bi-l-bārī’*), or what he would call “deiformity” (*ta’alluh*) (Ṣadrā 1989, 1:3–18), is very much akin to the notion of *theosis* (cf. Edwards 2000, pp. 1–50, and Rizvi 2013). Becoming God-like is the well-known definition of philosophy in Plato and Platonism (Plato, *Theaetetus* 176b). And Ṣadrā defines philosophy as perfecting the soul (*istikmāl al-nafs*) by grasping the inner reality of entities or by knowing things as they are in themselves through rational demonstration, and not through opinion or adherence to authority (Ṣadrā 1989, *al-Asfār*, 1:20). For Ṣadrā, the implication of perfecting the soul entails partaking of knowledge in the intelligible world by disciplining the soul, which is immersed in material bodies and hence in all its attachments (*ta’alluqāt*) (ibid., pp. 20–22). The philosopher endeavors to gain nearness to the Real (*al-ḥaqq*) by acquiring the knowledge of intelligible forms that ultimately reside in God’s knowledge. For this reason, knowledge of the Divine is an essential aspect of philosophy (*ḥikma*), as Ṣadrā says in his book *The Origin and the Return* (*al-Mabda’ wa-l-ma’ād*):

Without doubt the cognition of the Essence of the Real (*dhāt al-ḥaqq*), and the hierarchy of Its existence which possesses perfect attributes . . . can be considered the best subject for the *scientia divina* (*al-ḥikma al-ilāhiyya*). (Ṣadrā 2011, p. 21)

Thus it can be inferred that metaphysics is the heart of philosophy, when philosophy is taken in a general sense (i.e., the overall process of philosophizing). The heart of philosophical knowledge for Ṣadrā, then, is the attainment of the knowledge of the Real, His names and attributes, and His acts. What is at issue is that in the Ṣadrīan perspective reality is considered in terms of being (*wujūd*) and its reality (*ḥaqīqa*). Thus, the perfection of soul, too, is a particular mode of being. But knowledge of being as a concrete state of consciousness cannot take shape until the soul is able to disengage (*tajrīd*) itself from matter (*mādda*). The human soul is a combination of both baseness and perfection. It was formed out of the elements and compounds, and its outward nature is base in relation to other substances and entities. However, the essence of the human soul possesses a perfection that stretches to the very limit of the transcendent One (Ṣadrā 1989, *al-Asfār*, 1:21–24; cf. Rizvi 2013). So metaphysics requires the honing of both theoretical and practical faculties in order to attain what Ṣadrā calls “illuminative presence” (*ḥuḍūr ishrāqī*) (Ṣadrā 1984, p. 24). The soul, due to its immersion in matter, cannot attain such a lofty state of “presence” unless it has disengaged itself from material (worldly) attachments. Although

theoretical or speculative philosophy may enable one to gain knowledge of being through rational argumentation, it will only result in mental knowledge in contrast to presential knowledge, as “modes of consciousness” will not correspond to the “modes of being” in such a condition. Hence, such a philosopher will remain trapped in an existential impasse.

On the other hand, a true aspirant of philosophy will try to free herself from carnal desires and material ambitions by ascetic practices (*riyāḍāt*) and by following the precepts of the Divine Law (Ṣadrā 1987, *Tafsīr*, 1:2–4). She will strive to become God-like by adorning her character with God’s quality traits (in accordance with a famous Prophetic tradition). In short, virtues and morals cannot be separated from philosophy (*ḥikma*). Thus, it should not come as a surprise when Ṣadrā exhorts his readers in the *Asfār* that before they begin to read this book they should “purify” their souls from vain desires and mindless fancies (Ṣadrā 1989, *al-Asfār*, 1:12–18). In order to purify one’s soul or achieve what is known as catharsis, one needs to perform various “spiritual exercises” related to both the body and the heart, and this process corresponds exactly to what Pierre Hadot calls “philosophy as a way of life.”²² It is worth mentioning here that for most Greek and Roman or even Indian philosophers such a method (i.e., catharsis) had always been a primary condition for the acquisition of metaphysical knowledge. (For an elaborate documentation of how philosophy in ancient Greece was a “method for living a virtuous life,” see Hadot 1995.)

Although Ṣadrā never specifies whether he had a Sufi/spiritual master (*shaykh*), he nonetheless emphasizes that without guidance and learning, it will be very difficult to practice a philosophical method, that is, the techniques of spiritual exercises (Ṣadrā 1987, *Tafsīr*, 1:2–3; cf. Rizvi 2013, p. 143). On the other hand, it is evident from the work of Heidegger that catharsis is not a prerequisite for the understanding of *Dasein*, and he does not have much to say on attaining virtues as a necessary condition of philosophy.²³ From the standpoint of Heidegger, all of Ṣadrā’s errors would lie in the fact that the latter takes the reality of being to be a “self-subsistent reality by itself,” whereas *Dasein* or the Being of beings of the former is not an independent entity on its own. Statements concerning the purification of soul are pointless from the Heideggerian perspective.

Ṣadrā makes it clear that the soul of a person is an eternal unit, and it acquires perfection by gaining the likenesses of the intellects (*‘uqūl*) and God. He argues that the worlds are stratified into three distinct layers of existence: physical (*jismānī*), imaginal (*mithālī*), and intellectual (*‘aqlānī*). Furthermore, all beings are located in these three distinct modes of existence (*wujūd*) (Ṣadrā 2011, *al-Mabda’*, p. 150). However, when he discusses the issue of the universal human (*al-insān al-kāmil*), he mentions a fourth mode of existence—the divine imperium. This is to explicate the truth that the universal human is the reflection of the greatest name of God, “Allah,” which encompasses all other countless divine names, and embraces existence at all levels (Ṣadrā 2008, *al-Mazāhir*, pp. 83–85).²⁴ In Ṣadrā’s ontology *wujūd* is a gradational reality (*al-ḥaqīqa al-mushakkika*) that self-determines itself due to its unconditioned nature, and consequently becomes conditioned into various “forms/

existents" that after mental analysis are identified as quiddities (Şadrā 1989, *al-Asfār*, 2:6, chaps. 28–29).

As for the concept of infinitude (*lā yatanāhī*), it can be said briefly that the reality of being is at once delimited (*muqayyad*) and infinite, and the absolutely unconditioned being (*wujūd lā bi-sharṭ maqṣamī*), by virtue of its being unconditioned, constitutes the reality of all things. That is, no entity can be devoid of the "light" of being; otherwise it would be non-existent. The infinite assemblies of entities are but shadows of it (Şadrā 1989, *al-Asfār*, 6:85–89). To conclude, for Şadrā the fundamental meaning of metaphysics rests on the perfection of the soul, the hierarchy of being, and the concept of infinitude, whereas for Heidegger, as we shall see, such concepts do not possess much philosophical value.

The Three Fundamental Concerns of Heidegger's Metaphysics

It is not the aim of this section to expound on the fundamental concepts in Heideggerian metaphysics, as this study began with an objective to delineate the meaning of metaphysics only. As such, this section will briefly touch upon the fundamental concerns in the metaphysics of Heidegger so as to gain a general outlook on it. In his various works, Heidegger mentions the world, finitude, and solitude as the fundamental concerns of metaphysics (see, e.g., Heidegger 1995, pp. 169–277).²⁵ However, it should be remembered that all these concepts ultimately lead us back to the problem of *Dasein*. After analyzing these notions, it will be observed that the "general outlook" of Heidegger differs from that of Mullā Şadrā significantly. Heidegger asserts that the "world" is not the external world we experience in our ordinary life. According to him, "world" means the sum totality of beings; for example, when humans behold light they realize that they are beings among other beings. The world here implies the totality of beings per se (Heidegger 1995, pp. 174 ff.). Heidegger states that material objects such as stones do not have a world, while animals other than humans are poor in world. However, it is only the human being who has a world in a genuine sense. The human being in one sense is part of the world but in another both the lord and servant of the world. Such an outlook emanates from the phenomenological view that he espouses in his *Being and Time*. As for "finitude" he states:

Finitude is not some property that is merely attached to us, but *is our fundamental way of being*. If we wish to become what we are, we cannot abandon this finitude or deceive ourselves about it, but must safeguard it. Such preservation is the innermost process of our being finite, i.e., it is our innermost becoming finite. Finitude only is in truly becoming finite. (Heidegger 1995, pp. 71–74)

In Heidegger's view, finitude is our fundamental mode of being, and in becoming a finite being or in realizing that our existence is finite there occurs solitude with respect to our *Dasein*. In order to understand the concept of "solitude" in the Heideggerian sense, it should be noted that all the aforementioned notions are interconnected. When they come together they find a unity. According to Heidegger, this

solitude is rather that solitariness in which each human being first of all enters into a nearness to what is essential in all things, a nearness to world. In the opinion of Heidegger, it is not sufficient that we simply ask ourselves these three fundamental questions about world, finitude, and solitude. Rather, we need to strengthen our way of being by assimilating in our *Dasein* the deep truths hidden in these notions. To add a contextual basis to the discussion of them, it can be mentioned that Heidegger asserts that the traditional notion of the self—composed of body-soul-spirit—does not reveal much about ourselves. For, in his view, this “overlooks the question of the *being* of this unified extant” (Heidegger 1999, pp. 34–35).

From the preceding analysis it becomes clear that the Heideggerian outlook of metaphysics is based on a different set of notions than those to which Ṣadrā would subscribe. Categories including soul, spirit (*Geist*), and the hierarchy of the worlds do not carry much substance for the Heideggerian perspective, and even if he sometimes uses these terms he has in mind meanings that would be incomprehensible from a Ṣadrīan perspective. But this makes sense perfectly, as Heidegger believes in the finitude of being and the non-existence of the Necessary Being (*wājib al-wujūd*). Just as Ṣadrā’s interpretation of the notion of metaphysics would be unacceptable to Heidegger, the Heideggerian philosophical worldview, too, would be alien to Ṣadrā, for whom philosophy begins with the trace of “transcendence” (see, e.g., Ṣadrā 1989, *al-Asfār*, 1:14). Heidegger’s views concerning religion or god(s) are clear from his discussions about these in various published materials, although his words sometimes seem to bear contradictory shades of meaning.²⁶

Conclusion

The aim of this study has been to elaborate on the meaning of metaphysics in Heidegger and Mullā Ṣadrā. In the course of our analysis we have seen that our philosophers differ from each other considerably as to how metaphysics should be conceptualized. It should be noted, however, that the *Weltanschauung* of these two philosophers has taken shape in very different contexts. The context of Heidegger’s project was set with reference to the following factors: (1) the method of Descartes (the method of doubting), even though Heidegger disagrees with the notion of *res cogitans*; (2) the Kantian claim that the *Noumenon* cannot be known even though such a claim is self-contradictory (if the *Noumenon* is unknowable and nobody has ever known it, then how is it possible to declare “it” unknowable without contradicting oneself?); (3) the philosophy of Hegel concerning the soul and Geist; (4) Nietzsche’s diatribe against Christianity (Heidegger 1991); and (5) the pioneering studies of Husserl on phenomenology. Taking into account these factors, it can be said that the starting point of Heidegger is a species of phenomenology, with minor differences with the phenomenology of his mentor, Husserl.²⁷ In this context, the subject examines the contents of her experience and consciousness in relation to the world and other entities (according to Heidegger’s own interpretation), without, however, letting beliefs—religious or otherwise—affect the process. The findings of Heidegger demonstrate that the being of the human (after she has found *Dasein*

and apprehended its meaning) is ultimately finite and after its death there is nothing more to experience or say. That is to say, in this particular philosophy, which is associated with the existential destiny of a human, there is no place for her apart from her “earthly mode of being.” When a human looks into her inner self, she only sees therein her *Dasein*, not the Throne of the All-Merciful (*‘arsh al-rahmān*) or the Kingdom of God.

It is thus natural to imagine that such a metaphysical framework would seem thoroughly unsatisfying for a philosopher like Mullā Ṣadrā, for whom metaphysics is never separate from the divine reality. It was mentioned in the previous section that concepts such as the perfection of the soul, the hierarchy of being, *theosis*, catharsis, and infinitude possess real significance in the Ṣadrīan metaphysical perspective. The other crucial point to note is that Ṣadrā’s metaphysics is closely intertwined with his epistemology, in which mystical (epistemological) concepts including (mystical) unveiling (*kashf*), illumination (*ishrāq*), direct witnessing (*shuhūd*), and inspiration (*ilhām*) play an important part. However, concepts such as these would seem like a loose argument (*musāmaḥa*) from the Heideggerian standpoint. What is interesting to note, however, is that Heidegger was well acquainted with the Scholastic tradition, and he was a Jesuit in his early life.²⁸ In addition, he was well versed in Greek and Latin, which suggests that he was thoroughly familiar with the philosophico-mystical literature in these archaic languages. But his *Dasein* is not a self-enlisted entity. Rather it is always expressed in “relation” to something else, for instance “being-of,” “being-in,” and “being-and.” To wit, it cannot be imagined “in itself.” That is the reason why, in his *Einführung in die Metaphysik*, after the discussion of the limitations of being, he devotes many chapters to “being and becoming,” “being and seeming,” “being and thinking,” and “being and the ought” (Heidegger 2000, pp. 98–213).

The crux of the argument is that in metaphysical thinking, religion or any belief-system should not interfere. However, the implication of the aforementioned analysis should not lead us to think that these two philosophers do not have any similarities. To be sure, despite the fundamental differences in their notion of metaphysics, they come together in their analysis of a number of (sporadic) philosophical problems, the full discussion of which falls outside the scope of the present study. However, in the final analysis, based on the evidence established in the present study, it can be concluded that the general outlooks of Heidegger and Mullā Ṣadrā remain worlds apart.

Notes

- 1 – Ṣadrā uses the term *scientia divina* or First Philosophy (or metaphysics) in his magnum opus *Asfār* in three different ways. Other terms such as *ḥikma ilāhiyya* (divine sophia/philosophy) or *falsafa ilāhiyya* (divine philosophy) are also used to describe the subject matter of metaphysics. However, sometimes he also combines both theology (*kalām*) and science under the same heading. For an

elaborate discussion on all this, see Arnzen 2007, pp. 202–203 and 236 ff. See also Eichner 2007, which examines and compares how Fakhr al-Dīn al-Rāzī's approach to *al-umūr al-'āmma* (general metaphysics) differs from that of our author, and how theology and first philosophy are integrated in the latter's conception of metaphysics.

- 2 – See the section titled “Metaphysics” in Michael Wheeler's article on Heidegger in the *Stanford Encyclopedia of Philosophy* (Wheeler 2011; accessed on November 21, 2013). For Heidegger's own analysis of the term “metaphysics,” see Heidegger 1995, pp. 25 ff.
- 3 – For the naming of “existentialist” philosophy, see Sajjādī 2005. Although Sajjādī characterizes Ṣadrā's philosophy as “existentialist,” his use of the term differs from the general notion of “Existentialism” as understood in academic circles on both sides of the Atlantic. For a fruitful analysis of being and its scope in the thought of Heidegger, see *A Companion to Heidegger* (Dreyfus and Wrathall 2005, pp. 1–17). See also Kamal 2010, chap. 2.
- 4 – For a helpful discussion on how Ṣadrā's philosophy signals a revolutionary shift from “existent” to “existence,” see Izutsu 1971, pp. 24–29.
- 5 – The term “phenomenology” is used in the sense of analyzing the contents of one's consciousness and perception. It is to be contrasted with the philosophical position in epistemology that suggests that physical objects are synonymous with statements about persons having certain sensations, as in the case of George Berkeley, who was a phenomenalist and not a phenomenologist. For more information, see “Phenomenology,” *Internet Encyclopedia of Philosophy*, <http://www.iep.utm.edu/phenom/> (accessed on August 7, 2015).
- 6 – El-Bizri (2000) has compared Avicenna's account(s) of being with that of Heidegger, drawing on the methodology of phenomenology. The present study builds on El-Bizri's useful framework, while also making use of the pioneering comparative study between Ṣadrā and Heidegger carried out by Açıkgenç (1993). One particularly useful aspect of both of these studies is their treatment of a range of problems associated with the historiography of medieval philosophy on the one hand and the methodology of comparative study on the other.
- 7 – Both Ṣadrā and Heidegger stand at the end of two traditions in the sense that in the case of the former the *mawjūd*-based (existent) ontology of Avicenna et al. nearly reached a dead end, whereas in the case of the latter the Western philosophical tradition (Plato onward) had derailed from its focus on “being” (according to Heidegger's self-proclaimed claim).
- 8 – Ṣadrā does not use the phrase *aṣālat al-wujūd* directly in his works (however, one of his short treatises is titled *Aṣālat ja'l al-wujūd*). But he employs various derivatives (*mushtaqq*) of *aṣāla* with respect to *wujūd* such as *aṣl*, *ta'aṣṣul* (being fundamental or principal), and *muta'aṣṣil*. Moreover, he makes use of a host of terms in relation to being which mean or signify “*aṣālat al-wujūd*” including

aşl kulli shay', *al-aşl fī-l-mawjūdiyya wa al-taḥaqquq*, *alta 'aṣṣul fī-l-kawn*, *bi-dhātihi mawjūd*, *al-mawjūd bi l-dhāt wa al-aşāla*, and so on. See Şadrā 1989, 1:39, 49, 334, 340; 3:257, 277; 6:14, 147; and see Şadrā 2000, pp. 4, 9, 10, 35, 52. It should be noted that *aşāla* derives from its root *a-ş-l* and can mean true/real, authentic, original, fundamental, or principal. Furthermore, Şadrā presents some thirty-five to forty arguments in favor of *aşālat* of *wujūd* and refutes all the claims of *aşālat al-māhiyya* or *i'tibāriyat al-wujūd*, which are documented and investigated in Fayyāḍī 2011.

- 9 – Heidegger 1993, pp. 310–314. To fully understand the significance of this argument, we would have to take into account the context in which Heidegger's philosophy developed, namely the evolution that took place in Europe from Descartes, Kant, and Hegel to the time of Heidegger himself, not only in philosophy but also in "science," which had exerted a great deal of influence on all subsequent philosophical thinking in Europe and, by virtue of Colonialism, abroad as well. An elaborate treatment of all these factors is beyond the scope of the present article, but it is indeed helpful to bear them in mind as we move along. For some key background discussion, see Kuhn 1985, chaps. 4 and 7; Kuhn 1996, chaps. 8, 9, and 13; Gilson 1982, pp. 176–183, 198–202, 223–237. An interpretation of this process from a Muslim perspective can be found in Nasr 1996, pp. 80–96, 126–136.
- 10 – Heidegger's *Letter on Humanism* was written with the sole purpose of responding to the queries of Jean Beaufret concerning particular aspects of Jean-Paul Sartre's well-known work *Existentialism Is a Humanism*.
- 11 – Contrary to some scholars, Asadī reckons that the thought of the "later Heidegger" does not differ significantly from that of the "earlier Heidegger." For a useful discussion on this, see Pattison 2000, pp. 1–25.
- 12 – For a solid investigation on the story of "onto-theology," see Thomson 2000.
- 13 – Although Şadrā would not deny the existence of an ultimate principle, he would balk at saying that beings are simply created by an Uncreated deity. In fact, "creation" does not play a noteworthy role in Şadrā's cosmology, which is ultimately based on the monorealist vision of being and its manifestation (*zuhūr*) (see, for e.g., Şadrā 2007, pp. 11–18).
- 14 – For more information on how the subject matter of philosophy has been adapted from the sayings of Aristotle, see the article by Maftūnī and Qarāmalikī (2003).
- 15 – I take the translation of *tashkīk* as "modulation" from Rizvi 2009.
- 16 – It should be noted that such reasoning is not uncommon in the theological and philosophical literature.
- 17 – Phenomenology was not completely absent in the philosophies of Aristotle and Aquinas, but in Husserl and Heidegger it appears as a worldview unto itself that eventually replaced the traditional paradigm.

- 18 – This is a serious claim, which is hard to understand. If there were no philosophy during the Middle Ages, would it be plausible to imagine the emergence of modern philosophy? The other thing to note is that most of the great philosophers, including Plato and Aristotle, believed in some forms of religion or ultimate reality. Would Heidegger not consider them philosophers?
- 19 – See, e.g., Heidegger 1997, p. 76, and Overgaard 2002.
- 20 – This is an interpretation peculiar to Heidegger. The implication of his words is that in order to engage in the discussion of pure ontology, the philosopher must put aside the thought of religion.
- 21 – See Aristotle, *Metaphysics* III, 4, 1001a, 21, and Thomas Aquinas, *Summa Theologica* (1947) II, 1, Qu. 94, a. 2.
- 22 – Rizvi applies the concept of “philosophy as a way of life” to Ṣadrā’s philosophical method and analyzes the nature of spiritual exercises in the Ṣadrīan context (see Rizvi 2013, pp. 133–147). For an analysis of the notion of philosophy as *ḥikma* and spiritual practices associated with it, see Yaman 2010.
- 23 – Heidegger does not pay much attention to the issue of virtue, but he does discuss ethics in general (that is, secular ethics). For a meaningful analysis, see Guignon 1993, chap. 8.
- 24 – Ṣadrā does not usually devote discussion to mystical concepts such as “the universal man” in his “philosophical” corpus, although his *Asfār* contains some allusions to them (see, e.g., Ṣadrā 1989, 2:381). But, in his more religious writings, he treats them at great length. See, in particular, Kalin 2014, *passim*, and Rustom 2012, chaps. 3–7.
- 25 – Heidegger’s translator (Heidegger 1995) explains that Heidegger first used “solitary” rather than “individuation,” but then changed his mind, settling on “individuation” instead. But it can be noted that there seems to be no real difference between his employment of either of these terms.
- 26 – On the topic of religion, the views of Heidegger are quite transparent, as has been shown in this study. Thus, when Heidegger uses the expression “god” or “gods,” he has in mind a “transformative event,” and not the God of religion. For more on this problem in his thought, see his famous last public interview, “Only a God Can Save Us” (Heidegger 1976, pp. 91–116). See also Vedder 2006, particularly the introduction and chapters 1 and 10. Vedder carries out an in-depth analysis of Heidegger’s treatment of religions, and offers an insightful interpretation of and his usage of such terms as “god,” “gods,” “God,” etc.
- 27 – For more details, see Michael Wheeler, “Heidegger,” in *Stanford Encyclopedia of Philosophy* (section 2.2) (Wheeler 2011; accessed on November 21, 2013).
- 28 – For more information on his early life and his involvement with the Society of Jesus, see Safransky 1998, pp. 8–39.

References

Primary Sources

- Āmulī, ‘Abd Allāh Jawādī. 2007. *Raḥīq-i makhtūm: Sharḥ-i ḥikmat-i muta’āliya*. 10 vols. Qum: Nashr-i Isrā’.
- Aristotle. 2002. *Metaphysics*. Translated by Joe Sachs. 2nd ed. Santa Fe, NM: Green Lion Press.
- Avicenna [Ibn Sīnā]. 2005. *The Metaphysics of The Healing*. Translated by Michael E. Marmura. Provo: Brigham Young University Press.
- Edwards, Mark, trans. 2000. *Neoplatonic Saints: The Lives of Plotinus and Proclus by their Students*. Liverpool: Liverpool University Press.
- Hā’irī Yazdī, Mehdi. 2006. *Hiram-i hastī*. Tehran: Mu’assasa-yi Pazhūhishī-yi Ḥikmat wa Falsafah-yi Īrān.
- Heidegger, Martin. 1969. *Identity and Difference*. Translated by Joan Stambaugh. New York: Harper and Row.
- . 1976. “‘Only a God Can Save Us’: *Der Spiegel*’s Interview with Martin Heidegger.” From “Nur ein Gott kann uns noch retten,” an interview made in 1966 and published in *Der Spiegel* on May 31, 1976. Translated by Maria P. Alter and John D. Caputo, in *Philosophy Today* 20, no. 4 (1976): 267–285, and reprinted in Richard Wolin, ed., *The Heidegger Controversy: A Critical Reader*, pp. 91–116. Cambridge, MA: MIT Press.
- . 1991. *Nietzsche: Volume I, The Will to Power as Art, and Volume II, The Eternal Recurrence of the Same*. Translated by David Farrell Krell. Pfullingen: G. Neske.
- . 1993. *Basic Writings*. Edited by David Farrell Krell. 2nd ed. New York: Harper San Francisco.
- . 1995. *The Fundamental Concepts of Metaphysics: World, Finitude, Solitude*. Translated by William McNeil and Nicholas Walker. Bloomington: Indiana University Press.
- . 1996. *Being and Time*. Translated by John Macquarrie and Edward Robinson. New York: Harper and Row.
- . 1997. *Kant and the Problem of Metaphysics*. 5th ed. Translated by Richard Taft. Bloomington: Indiana University Press.
- . 1999. *Contributions to Philosophy (From Enowning)*. Translated by Parvis Emad and Kenneth Maly. Bloomington: Indiana University Press.
- . 2000. *Introduction to Metaphysics*. Translated by Gregory Fried and Richard Polt. New Haven: Yale University Press.

- Lāhijī, Mullā Muḥammad Ja'far. 2007. *Sharḥ al-Mashā'ir*. Edited by S. J. Āshtiyānī. Qum: Mu'assasa-yi Būstān-i Kitāb.
- Pascal, Blaise. 1912. *Pensées et Opuscules*. Edited by M. L. Brunschvicg. Paris: Hachette.
- Plato. *Complete Works*. Edited by J. Cooper and D. S. Hutchinson. Indianapolis: Hackett.
- Sabzawārī, Mullā Hādī. 2005. *Sharḥ ghurar al-farā'id*. Tehrān: Anjūman-i Āthār wa Ma'ākhir-i Farhangī.
- Ṣadrā, Mullā. 1984. *Al-Mashā'ir*. Tehran: Kitābkhāna-yi Ṭahūrī.
- . 1987. *Tafsīr al-Qur'ān al-karīm*. Edited by M. Khwājawī. Qum: Intishārāt-i Bīdār.
- . 1989. *Al-Ḥikma al-muta'āliya fī-l asfār al-'aqliyya al-arba'a*. . . . Qum: Maktabat al-Mustafawī.
- . 2003. *Al-Shawāhid al-rubūbiyya*. Edited by S. J. Āshtiyānī. Qum: Būstān-i Kitāb.
- . 2007. *Īqāz al-nā'imīn*. Edited by Muhammad Khunsārī. Tehran: Bunyād-i Ḥikmat-i Islāmī-yi Ṣadrā.
- . 2008. *Al-Maẓāhir al-ilāhiyya*. Edited by S. J. Āshtiyānī. Qum: Būstān-i Kitāb.
- . 2011. *Al-Mabdā' wa-l-ma'ād*. Edited by M. Dhabīḥī and J. Shāhnaẓarī. Tehran: Bunyād-i Ḥikmat-i Islāmī-yi Sadrā.
- Thomas Aquinas. 1947. *Summa Theologica*. Translated by Fathers of the English Dominican Province. New York: Benziger Brothers.
- Ṭūsī, Naṣīr al-Dīn. 2012. *Sharḥ al-Ishārāt wa-l-tanbīhāt*. Edited by Ḥ. Āmulī. Qum: Mu'assasa-yi Būstān-i Kitāb.

Secondary Sources

- Açıkgenç, Alparslan. 1993. *Being and Existence in Ṣadrā and Heidegger: A Comparative Ontology*. Kuala Lumpur: International Institute of Islamic Thought and Civilization.
- Akbarian, Reza, and Amélie Neuve-Eglise. 2008. "Henry Corbin from Heidegger to Mullā Ṣadrā: Hermeneutics and the Unique Quest of Being." *Ḥikmat wa Falsafah (Wisdom and Philosophy)* 4, no. 2 : 5–30.
- Arnzen, Rudiger. 2007. "The Structure of Mulla Sadra's al-Ḥikma al-muta'āliya, fī al-asfār al-'aqliyya al-arba'a and his Concepts of First Philosophy and Divine Science: An Essay." *Medioevo* 32 : 199–240.
- Asadī, M. 2008. "Muqāyasa-yi mawḍū': Ravish wa maqṣad-i falsafah az nigāh-i Mullā Ṣadrā wa Haydigar." *Khīrad-Nāmāh-yi Ṣadrā* 53 : 52–60.

- Avigad, Jeremy, Edward Dean, and John Mumma. 2009. "A Formal System for Euclid's Elements." *The Review of Symbolic Logic* 2, no. 4: 700–768.
- Bihishtī, A. 2011. *Hastī wa 'īlal-i ān: Sharḥ-i namaṭ-i chahārum*. Qum: Mu'assasa-yi Būstān-i Kitāb.
- Corbin, Henry. 1981. "From Heidegger to Suhrawardī: An Interview with Phillipe Nemo." In *Cahier de L'Herne: Henry Corbin*, edited by Christian Jambet. Paris: L'Herne.
- Dreyfus, Hubert L., and Mark A. Wrathall, eds. 2005. *A Companion to Heidegger*. Oxford: Blackwell.
- Eichner, Heidrun. 2007. "Dissolving the Unity of Metaphysics: From Fakhr al-Dīn al-Rāzī to Mullā Ṣadrā al-Shīrāzī." *Medioevo* 32: 139–198.
- El-Bizri, Nader. 2000. *The Phenomenological Quest between Avicenna and Heidegger*. New York: Global Academic Publishers.
- Fayyāḏī, G. 2011. *Hastī wa chīstī dar maktab-i Ṣadrā'ī*. Tehran: Pazhūhishgāh-i Ḥawzah wa Dānishgā.
- Gilson, Etienne. 1982. *The Unity of Philosophical Experience*. Dublin: Four Courts Press.
- Guignon, Charles B., ed. 1993. *The Cambridge Companion to Heidegger*. 2nd ed. Cambridge: Cambridge University Press.
- Hadot, Pierre. 1995. *Philosophy as a Way of Life: Spiritual Exercises from Socrates to Foucault*. Edited by Arnold Davidson, translated by Michael Chase. Oxford: Blackwell.
- Izutsu, Toshihiku. 1971. *The Concept and Reality of Existence*. Tokyo: Keio Institute of Cultural and Linguistic Studies.
- Kalin, İbrahim. 2014. *Mullā Ṣadrā*. Karachi: Oxford University Press.
- Kamal, Muhammad. 2006. *Mulla Sadra's Transcendent Philosophy*. Aldershot, England: Ashgate.
- . 2010. *From Essence to Being: The Philosophy of Mulla Sadra and Martin Heidegger*. London: ICAS Press.
- Kuhn, Thomas S. 1985. *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought*. Cambridge, MA: Harvard University Press.
- . 1996. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Maftūnī, N., and A. Qarāmalikī. 2003. "Mawḏu'-i falsafah dar andīsha-yi Aristū, Ibn Sīnā wa Ibn Rushd." *Falsafa wa Kalām-i Islamī* 350: 56–78.
- Munfarid, M. 2005. "Barrasi-yi hastī-shināsī dar falsafah-yi Ṣadrā wa Heidegger." *Andīsha-hāyi Falsafī* 4: 155–178.

- Nasr, Seyyed Hossein. 1996. *Religion and the Order of Nature*. New York: Oxford University Press.
- Overgaard, Søren. 2002. "Heidegger's Concept of Truth Revisited." *Nordic Journal of Philosophy* 3, no. 2: 73–90.
- Pattison, George. 2000. *The Later Heidegger*. London: Routledge.
- Philipse, Herman. 1998. *Heidegger's Philosophy of Being: A Critical Interpretation*. Princeton: Princeton University Press.
- Rizvi, Saijid H. 2009. *Mullā Ṣadrā and Metaphysics: Modulation of Being*. London: Routledge.
- . 2013. "Approaching Islamic Philosophical Texts: Reading Mullā Ṣadrā Shīrāzī (d. 1635) with Pierre Hadot." In *Philosophy as a Way of Life: Ancients and Moderns: Essays in Honor of Pierre Hadot*, edited by Michael Chase, Stephen R. L. Clark, and Michael McGhee. Chichester, England: Wiley Blackwell.
- Rustom, Mohammed. 2012. *The Triumph of Mercy: Philosophy and Scripture in Mullā Ṣadrā*. Albany: State University of New York Press.
- Safransky, Rüdiger. 1998. *Martin Heidegger: Between Good and Evil*. Translated by Ewald Osers. Cambridge, MA: Harvard University Press.
- Sajjādī, S. J. 2005. *Dībācha bar Hikmat-i muta'āliya: Falsafah-yi wujūdiyyah*. Tehran: Intishārāt-i Ṭahūrī.
- Sheehan, Thomas. 2001. "A Paradigm Shift in Heidegger Research." *Continental Philosophy Review* 32, no. 2: 1–20.
- Thomson, I. 2002. "Ontotheology? Understanding Heidegger's *Destruktion* of Metaphysics." *International Journal of Philosophical Studies* 8, no. 3: 297–327.
- Vedder, Ben. 2006. *Heidegger's Philosophy of Religion: From God to the Gods*. Pittsburgh: Duquesne University Press.
- Wheeler, Michael. 2011. "Martin Heidegger." In *Stanford Encyclopedia of Philosophy*. <http://plato.stanford.edu/entries/heidegger/>.
- Yaman, Hikmet. 2010. *Prophetic Niche in the Virtuous City: The Concept of Hikmah in Early Islamic Thought*. Leiden: Brill.

Freeing Philosophy from Metaphysics: Fakhr al-Dīn al-Rāzī's Philosophical
Approach to the Study of Natural Phenomena

A thesis submitted to McGill University in partial fulfillment of the requirements of the
degree of Doctor of Philosophy

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Abstract

This dissertation examines the views of Fakhr al-Dīn al-Rāzī (d. 1210) as advanced in his two major philosophical works, *al-Mabāḥith al-Mashriqiyya* and *al-Mulakhkhaṣ fī al-Ḥikma*. It argues that Rāzī seeks to develop a philosophical programme that provides an alternative to the Aristotelian theory of scientific knowledge. The work is divided into two parts. Part I reconstructs the central components of Rāzī's logical system, including his theory of universals, his view of the role and nature of definitions in philosophical analysis, and the alternative theory of predication that he advances in place of Aristotle's theory of predication. Part I focuses on the epistemological and logical programme that, in Rāzī's view, should precede the analysis of problems in the philosophical or post-logical part of the *Mabāḥith* and *Mulakhkhaṣ* (namely, Books I to III of both works). Part I consists of four chapters and a background discussion. The background discussion examines aspects of the Aristotelian theory of demonstrative science and Avicenna's interpretation of the Aristotelian theory, focusing on the nature of *per se* predication. Chapter 1 assesses the epistemological principles and views that Rāzī sets out in logic. Rāzī's discussion underscores a number of problematic epistemological assumptions in the Aristotelian theory of definition and concept acquisition, which he believes should not encroach on the logical analysis. Chapter 2 focuses on Rāzī's critique of *per se* predication on which demonstrative science is based and the alternative theory of predication that he advances. His alternative theory is based on the notion of "structured universals" as opposed to essences and *per se* properties. Chapter 3 examines Rāzī's critique of real definitions and assesses his view of nominal definitions. Rāzī advances nominal definitions as the alternative to real definitions. Chapter 4 examines how Rāzī's epistemological and logical programme informs his restructuring of philosophical discourse. I argue that the organization and order of the *Mabāḥith* and *Mulakhkhaṣ* are based on the alternative approach that he advances, which no longer preserves the standard ordering of the Aristotelian sciences. Here, metaphysics, construed as the highest science in the Aristotelian scientific system, no longer occupies a privileged position. Foundational ontological positions – such as, form-matter analysis, the theory of the four causes, or even atomism – are no longer presumed in the analysis of the nature of sensible objects, which Rāzī takes up in the lengthy Book II of the *Mabāḥith* and *Mulakhkhaṣ*. I conclude Part I with a postscript that examines aspects of the nature of Aristotelian logic, particularly in authors preceding Avicenna.

Part II consists of two chapters, which examine his philosophical positions that follow, and are based on, his logical analysis, focusing primarily on views set out in Books I and II. Chapter 5 examines ontological problems relating to Avicenna's doctrine of the quiddity and Aristotelian form-matter analysis. It consists of a close textual analysis of a number of Rāzī's chapters in Book I of the *Mabāḥith*. I attempt to show that Rāzī read Avicenna's texts quite closely and that he sharply departs from Avicenna on central ontological questions. I argue that Rāzī's departure is informed by the philosophical programme that he advances in logic. Chapter 6 examines core elements of Rāzī's epistemology and psychology. The chapter expands on a number of epistemological problems that were only pointed out in his logical analysis, such as his

rejection of the theory of mental forms. I argue that a core motivation for Rāzī's opposition to the Avicennan theory of mental forms derives from Rāzī's views on optics. Rāzī opposes the Avicennan theory of the "impression" of sensible forms (*simulacra*) and suggests that the perception of complex sensible forms involve processes that are more mind-dependent than allowed for by Avicenna's theory.

Résumé

Cette thèse examine la pensée de Fakhr al-Dīn al-Rāzī (m. 1210) telle que déployée dans ses deux œuvres philosophiques majeures, *al-Mabāḥith al-Mashriqiyya* et *al-Mulakhkhaṣ fī al-Ḥikma*. J'y avance l'idée que Rāzī entend développer un programme philosophique offrant une alternative à la théorie aristotélicienne de la connaissance scientifique. Elle s'articule en deux parties. La première restitue les composantes centrales du système de logique de Rāzī, y compris sa théorie des universaux, ses positions sur le rôle et la nature des définitions dans l'analyse philosophique ainsi que sa propre théorie de la prédication qui se propose de remplacer son équivalent aristotélicien. Cette première partie se concentre sur les programmes épistémologique et logique qui, selon Rāzī, doivent précéder l'analyse des problèmes développés dans les parties philosophique ou post-logique des *Mabāḥith* et du *Mulakhkhaṣ* (c'est-à-dire les Livres I à III dans ces deux œuvres). Cette première partie inclut quatre chapitres précédés d'une discussion préliminaire. Le but de cette introduction est d'examiner certains aspects de la théorie aristotélicienne de la science démonstrative et son interprétation par Avicenne, particulièrement concernant la prédication *per se*. Le premier chapitre évalue les principes épistémologiques et les positions que Rāzī pose en logique. L'analyse avancée par Rāzī souligne un certain nombre de présupposés épistémologiques problématiques de la théorie aristotélicienne de la définition et de l'acquisition des concepts, qui, selon lui ne devraient pas s'immiscer dans l'analyse logique. Le second chapitre se concentre sur la critique razienne de la prédication *per se*, sur laquelle se fonde la science démonstrative, et sur la théorie de la prédication que ce dernier propose en lieu et place de cette dernière. Cette théorie alternative est fondée sur des « universaux structurés » plutôt que sur des essences et des propriétés *per se*. Le troisième chapitre examine la critique formulée par Rāzī contre les définitions réelles et analyse ses positions sur les définitions nominales qu'il propose comme alternatives aux premières. Le quatrième chapitre examine la manière dont le programme épistémologique et logique de Rāzī informe sa restructuration du discours philosophique. Je défends l'idée que l'organisation et l'ordre des *Mabāḥith* et du *Mulakhkhaṣ* s'appuient sur l'approche alternative qu'il propose qui ne conserve plus la hiérarchie habituelle des sciences que l'on trouve chez Aristote. La métaphysique n'occupe plus la position première et privilégiée qu'elle a dans le système scientifique aristotélicien. Des positions ontologiques fondamentales, telles que les formulations forme-matière, la théorie des quatre causes ou même l'atomisme ne sont plus présupposés dans l'analyse de la nature des objets sensibles à laquelle s'attaque Rāzī dans le volumineux Livre II des *Mabāḥith* et du *Mulakhkhaṣ*. Je conclus cette première partie avec une note complémentaire sur certains aspects de la nature de la logique aristotélicienne, notamment chez des auteurs antérieurs à Avicenne.

La seconde partie se subdivise en deux chapitres et examine les positions philosophiques de Rāzī qui découlent et sont fondées sur son analyse de la logique. Je m'y concentre principalement sur les positions avancées dans les livres I et II. Le premier de ces deux chapitres (chapitre 5 de la thèse), examine des problèmes ontologiques liés à la doctrine avicennienne de la quiddité et à l'analyse forme-matière chez Aristote. Il suit une analyse textuelle attentive d'un certain nombre de chapitres du Livre I des *Mabāḥith*. Je tente de montrer que Rāzī a lu le corpus avicennien de près et qu'il s'en éloigne de manière radicale par rapport à des questions ontologiques centrales. Je défends l'idée que cet éloignement est informé par le programme philosophique qu'il établit dans la logique. Le dernier chapitre examine des éléments au cœur de l'épistémologie et de la psychologie de Rāzī. Ce chapitre débouche sur un certain nombre de problèmes épistémologiques, tels que son rejet de la théorie des formes mentales, qui ne sont qu'évoquées rapidement dans son analyse de la logique. Je défends l'idée que l'une des motivations centrales de l'opposition de Rāzī à Avicenne découle de sa pensée sur l'optique. Rāzī s'oppose à la théorie avicennienne de l'« impression » des formes sensibles (*simulacra*) et avance l'idée que la perception des formes sensibles complexes implique des processus qui dépendent plus de l'esprit que ne le permet la théorie avicennienne.

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Introduction

That Ghazālī's attack on *falsafa* (i.e., Greek philosophy in Islam) dealt a decisive blow to the flourishing of philosophy and science in the following centuries is a notion that has come under intense scrutiny in recent years. Historians of philosophy and science are reassessing the once widely accepted thesis that scholarly activity declined in later Islam. An important consideration in this regard has been the significant amount of works produced in the post-classical period (i.e., roughly from 1200 to 1900 AD) that have yet to be examined.¹ These works generally fell under the rubric of "the rational sciences" (*al-ʿulūm al-ʿaqliyya*), which cover a wide range of core philosophical topics, including semantics, logic, metaphysics, natural philosophy and theology. The great bulk of these works, however, remains to be edited and critically assessed for their philosophical and scientific value. Scholarship is beginning to conduct focused and systematic research on the intense productive activity of later thinkers. One figure gaining prominence for his role in later Islamic thought is the philosopher and theologian, Fakhr al-Dīn al-Rāzī (d. 606 AH/1210 AD), who straddles the classical and post-classical periods.²

¹ See Robert Wisnovsky, "The Nature and Scope of Arabic Philosophical Commentary in Post-classical (ca. 1100-1900 AD) Islamic Intellectual History: Some Preliminary Observations," in P. Adamson, H. Baltussen and M.W.F. Stone, eds., *Philosophy, Science and Exegesis in Greek, Arabic and Latin Commentaries*, vol. 2 (London: Institute of Classical Studies, 2004), 149-191; on the history of science in Islam, see, A. I. Sabra, "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam: A Preliminary Statement," *History of Science* 25 (1987), 223-243 and his "Science and Philosophy in Medieval Islamic Theology," *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 9 (1994), 1-42. For more recent and specialized works see works cited in the following notes.

² The sources tell us that he was born in 534/1149 or 535/1150; see Frank Griffel, "On Fakhr al-Dīn al-Rāzī's Life and the Patronage He Received," *Journal of Islamic Studies*, 18 (2007), 315-16. After a sparse history of scholarship on Rāzī, there has been a burst of research within the last decade devoted to specific areas of his philosophy and theology, as represented in the following works: R. Arnaldez, *Fakhr al-Dīn al-Rāzī: commentateur du Coran et philosophe* (Paris: J. Vrin, 2002); Heidrun Eichner, "Dissolving the Unity of Metaphysics: From Fakhr al-Dīn al-Rāzī to Mullā Ṣadrā al-Shirāzī," *Medioevo* (2007), 139-197; Jules

The major works of Rāzī, however, remain largely unexplored. This includes his two most important works of philosophy, *al-Mulakhkhaṣ fī al-Ḥikma wa-l-Manṭiq* (*The Compendium in Philosophy and Logic*) and *al-Mabāḥith al-Mashriqiyya* (*Eastern Investigations*). The principal aim of this dissertation is to reconstruct the philosophical system advanced by Fakhr al-Dīn al-Rāzī in the *Mulakhkhaṣ* and the *Mabāḥith*. I argue that the two works advance an epistemological and logical programme that serves as the foundation of a unique approach to the study of natural phenomena. Scholars have assessed aspects of how the *Mulakhkhaṣ* and the *Mabāḥith* influenced the structure – and, to a lesser extent, the content – of later philosophical and theological works.³ However, no systematic attempts have been made to understand what may have philosophically motivated Rāzī in writing and structuring the two works in the way that he has. The primary aim of my dissertation is to answer this question.

Structure and Argument

The dissertation is divided into two parts. Part I assesses the epistemological and logical programme of Rāzī. I focus on Rāzī's development of a logical programme that is meant to precede the philosophical discussion that Rāzī conducts in Books I to III of the

Janssens, "Ibn Sīnā's Impact on Faḥr al-Dīn al-Rāzī's *Mabāḥith al-Mašriqiyya*, with Particular Regard to the Section Entitled *al-Ilāhiyyāt al-maḥḍa*: An Essay of Critical Evaluation," *Documenti e studi sulla tradizione filosofica medievale* 21 (2010), 259-285; A. Setia, "Fakhr al-Dīn al-Rāzī on Physics and the Nature of the Physical World: A Preliminary Statement," *Islam & Science* 2 (2004), 161-180; Ibid., "Time, Motion, Distance and Change in the *Kalām* of Fakhr al-Dīn al-Rāzī: A Preliminary Survey with Special Reference to the *Maṭālib al-ʿĀliyyah*," *Islam & Science* 6 (2008), 13-29; Ibid., "Atomism and Hylomorphism in the *Kalām* of Fakhr al-Dīn al-Rāzī: A Preliminary Survey of the *Maṭālib al-ʿĀliyyah*," *Islam & Science* 4 (2006), 113-140; Ayman Shihadeh, *The Theological Ethics of Fakhr al-Dīn al-Rāzī* (Leiden: Brill, 2006); Ibid., "From al-Ghazālī to al-Rāzī: 6th/12th Century Developments in Muslim Philosophical Theology," *Arabic Sciences and Philosophy*, 15 (2005), 141-179; Tony Street, "Faḥraddīn al-Rāzī's Critique of Avicennan Logic," in Dominik Perler and Ulrich Rudolph, eds., *Logik und Theologie: das Organon im arabischen und im lateinischen Mittelalter* (Leiden: Brill, 2005).

³ Eichner, "Dissolving the Unity of Metaphysics"; Frank Griffel, "Fakhr al-Dīn al-Rāzī", in *Encyclopedia of Medieval Philosophy: Between 500 and 1500*, ed. Henrik Lagerlund (New York: Springer, 2011), 343-344.

Mabāḥith and the *Mulakhkhaṣ*. The logical programme seeks to clarify a number of epistemological assumptions that, in his view, are central to the Aristotelian view of demonstrative knowledge and science. His clarification of epistemological problems leads him to develop an alternative theory of the methodological tools of philosophical inquiry. In particular, Rāzī proposes a view of definitions and universals that seeks to replace the Aristotelian theory of real definitions and essential predication, that is, *per se* predication on which the theory of demonstrative science is based. Rāzī’s own theory of predication, grounded in what I term a *structured universal*, is developed in light of the principles of his logical programme. That is, Rāzī wants a theory of universals that does not presume the essentialism of the Aristotelian theory.⁴ Part I thus shows that Rāzī has a methodological agenda that focuses particularly on the core assumptions of the Aristotelian theory of science. This critical agenda is to mark out a logical theory of universals and predication that is “neutral” with respect to the epistemological and ontological principles of the Aristotelian system. His methodological programme leads to the development of his own approach to philosophical and scientific inquiry, which Rāzī conducts in the sections of the *Mabāḥith* and the *Mulakhkhaṣ* that are meant to follow the logical analysis. Importantly, Rāzī’s focus in all this will be on our knowledge of sensible or natural phenomena.

Part II will examine how the logical programme informs core components of his philosophical analysis. By “philosophical”, I specifically mean his analysis in Books I to III of the *Mulakhkhaṣ* and the *Mabāḥith* that directly follows his logical analysis. Rāzī distinguishes a narrow set of epistemological and ontological problems that are relevant

⁴ What Aristotelian essentialism means here is clarified below.

to his logical discussion, and defers his fuller assessment of epistemological, psychological, and ontological problems to the domain of what he calls *ḥikma* or “philosophy proper”. As such, Part II focuses on Rāzī’s analysis of problems in philosophy proper. It focuses on reconstructing Rāzī’s positions on central problems in ontology as well as his theory of knowledge. His ontological views, particularly his critique of Aristotelian form-matter analysis, leads to an alternative approach to the study of natural phenomena. Rāzī’s theory of knowledge, I argue, is based on his philosophical views on problems in optics. The analysis of his theory of knowledge will shed light on aspects of what philosophically motivates Rāzī to develop, in the first place, his epistemological and logical programme. The primary aim of Part II is to show that Rāzī develops systematic philosophical positions, which diverge from the Aristotelian view, by following the “neutral” methodological programme that he develops in logic.

I turn now to take a closer look at the chapters of my dissertation. Part I consists of a background discussion and four chapters. The background provides an analysis of core elements of the Aristotelian theory of definition and demonstrative science. I will especially focus on the interpretation of Avicenna (d. 428/1037), who, for Rāzī, is the most important source on Aristotelian philosophy. I will also examine Rāzī’s analysis of Avicenna’s view of *per se* predication in *al-Ishārāt wa-l-Tanbīhāt* and *Kitāb al-Burhān* (*The Book of Demonstration*), the latter being Avicenna’s version of Aristotle’s *Posterior Analytics*. The section will provide a number of foundational concepts that our analysis of Rāzī’s logical programme will require.

In the following three chapters, I reconstruct the major components of Rāzī’s critique of the Aristotelian theory of demonstrative science. The focus will be on real

definitions, concept acquisition, and the primary kinds of *per se* predication, all of which are central elements of Avicenna's interpretation of demonstrative science. Rāzī believes that various epistemological assumptions encroach on the logical discussion of demonstrative knowledge and science. A number of these problems apply specifically to Avicenna's interpretations or systematizations of Aristotle's thought. This we will see is particularly the case regarding aspects of Rāzī's treatment of definition and concept acquisition.

However, Rāzī's fundamental problem centers on the very nature of Aristotelian demonstrative science. That is, he is interested in scrutinizing the relations that hold between the essences of things, as construed by the Aristotelians, and their properties. Ultimately, Rāzī finds highly problematic the Aristotelian analysis of universals as essences defined by internal or constitutive properties, which in turn (causally) explain the non-constitutive or external properties belonging to that essence, a theory which grounds the entire Aristotelian system of scientific knowledge. Rāzī understands that the necessary nature of scientific knowledge afforded by demonstrative syllogisms derives ultimately from the predicative relations that hold in immediate or "unmiddled" premises. Immediate premises are those that are grounded in real definitions and cannot be demonstrated by means of syllogistic reasoning. Here, Rāzī is specifically concerned with the immediacy and necessity of premises that apply to sensible things. Indeed, my analysis will show that Rāzī's main concern regarding the Aristotelian account of scientific knowledge relates to the nature of our knowledge of sensible phenomena. He will systematically distinguish between what he views as the phenomenal properties of a sensible thing and its essential or noumenal properties. In his view, the Aristotelians have

not established that we have access to the constitutive parts of essences (i.e., the genus and the differentia of a thing). That is, assessing the internal structure of essences is beyond the means of our logical tools. The goal of Rāzī's logical critique is to show that we cannot affirm knowledge of the essences of things and their constituent parts without committing to a number of epistemological assumptions. Rāzī believes that his arguments establish that our pre-scientific concepts cannot be rendered scientific, in the required Aristotelian sense, by real definitions. In Rāzī's view, concepts, as first principles of deductive proofs, are analytic (in a sense to be defined below) and do not provide any non-trivial cognitive content.

In Chapter 1, I examine what precisely troubles Rāzī about the epistemological foundations of Aristotelian logic. The focus in Chapter 1 will be on Rāzī's critique of the Aristotelian method of definition and Rāzī's clarification of what properly constitutes both simple and composite universals. However, in Chapter 1, I will also assess the building blocks of his logical programme, focusing on our knowledge of sensible simples. He employs, for example, the rule of what I label the *Indefinability of Sensible Terms* to oppose the Aristotelian scientific definitions for sensible qualities (e.g., heat, color, and so on). He argues that our prescientific concepts of simple qualities, as picked out by our terms in ordinary language, provide the most certain epistemological basis for a neutral logical analysis. With regard to complexes or sensible composites, Rāzī systematically distinguishes between the concepts of "named things" and the essences of sensible objects (specifically, the real genus and real differentia). Rāzī affirms that knowledge of the latter kind of universals, that is, Aristotelian essences, is beyond our grasp.

On these grounds, Rāzī departs from the Aristotelian theory of universals and attempts to build a theory that is founded on concepts identified by ordinary-language terms and nominal definitions (*al-ḥadd bi-l-ism*). In Chapter 1, I will examine a few examples from his philosophical analysis (i.e., from philosophy proper) to illustrate the application of Rāzī’s logical analysis to particular problems. Chapter 1, however, leaves a number of problems unexamined, including the nature of composite universals, his theory of predication and his notion of nominal definitions. Rāzī’s notion of composite universals and predication will be examined in Chapter 2. Chapter 3 examines his “analytic” arguments against real definitions and his alternative theory of nominal definitions.

More specifically, in Chapter 2, I examine how Rāzī problematizes the notion of universals or essences as being “constituted” by essential properties or internal parts. The chapter assesses Rāzī’s analysis of problems concerning the mereology of universals, i.e., the analysis of relations that hold between parts and wholes. In the Aristotelian view, external or non-constitutive properties are viewed as dependent on the essential or constitutive properties of an essence. For example, “rational” and “animal” are viewed as constitutive parts of the essence “man”. Properties, such as “risible” or “capable of writing”, which are external to the essence of “man”, are viewed as inhering in the constituted essence. That is, these external properties are dependent on the constitution of the essence by parts, whereas the constitutive parts are not dependent on properties that are external to, or non-constitutive of, the essence. In opposition to this view, Rāzī argues that the dependency relation can be viewed as being symmetrical, a point which leads to his development of the theory of structured universals. In doing so, Rāzī sharply departs

from the Aristotelian theory by formulating a view of universals that no longer presumes a hard distinction between a part and inhering properties. Here, Rāzī's analysis considers an element that is not envisioned in the Aristotelian theory, namely, the structuring property or principle (*al-hay'a al-ijtimā'iyya*). The structuring property accounts for the unity of complex universals so that complex universals are not simply aggregates or collections of parts and properties. Significantly, the structuring property attempts to explain unity without appealing to metaphysical principles, or the methods of division and definition, that ground the unity of Aristotelian scientific definitions. In Part II, I argue that Rāzī's notion of structured universals was formulated in light of the philosophical lessons that he derives from developments in optical theory.

As mentioned, the unity that Rāzī aims to explain in logic is not the metaphysical unity of essences or substances that is required by the Aristotelians. Rather, Rāzī requires, and refers only to, the phenomenal unity of the universals of complex sensible things. Here, Rāzī pushes the discussion of the unity of universals towards epistemology rather than ontology. He construes structured universals as primarily identifying and explaining the phenomenal properties of composite sensible things and not their noumenal properties. The analysis shows that Rāzī's theory of universals presumes an epistemological programme that is neutral with respect to essences. His analysis signals a shift from a theory of universals that presumes knowledge of essences and its constituents to one that is limited to phenomenal knowledge of sensible reality, a shift that is anticipated in Chapter 1. However, what, in the first place, motivates Rāzī to develop a theory that distinguishes sharply between noumenal and phenomenal knowledge, and

what, moreover, motivates him to advance an alternative account of the nature of phenomenal knowledge, are questions that I take up in Chapter 6 of Part II.

The analysis in Chapters 1 and 2 leads to Rāzī's *analytic* critique of real definitions in Chapter 3 and his advancement of nominal definitions in their stead. Rāzī's critique of the method of real definitions in Chapter 1 was aimed at the epistemological assumptions of viewing real definitions as a means to acquiring scientific concepts, or knowledge of essences. In Chapter 3, however, Rāzī will examine definitions as statements whose predicates are constitutive properties or parts of the definiendum. His aim here is to examine specifically how necessity might enter such statements, without taking into consideration the extra-logical or epistemological concerns that we discuss in Chapter 1. That is, he assesses whether the analysis simply of the parts and properties of a complex sensible item, *x*, without presuming a method that gives the analyst access to the essential properties of *x*, can explain the necessity required in *per se* predications. Here, we find that Rāzī distinguishes between the *de re* necessity, which is said to hold in the immediate premises used in syllogistic demonstrations, and *de dicto* necessity. In brief, a predicate is said to hold of subject with *de re* necessity, if the necessity derives directly from the nature of the subject of the statement. As will be clarified, this is the relevant sense of *de re* necessity that will preoccupy Rāzī. Rāzī seems to be one of the first philosophers to make this distinction in the context of criticizing the Aristotelian theory. He argues against the possibility that definitions provide knowledge of *de re* necessity. This constitutes the final component of Rāzī's theory of predication that I examine. That is, Chapter 3 establishes that, according to Rāzī, the necessity of immediate propositions (i.e., those that are not proven by deductive proof) can only derive from our pre-scientific

or “analytic” concepts, as provided by nominal definitions. As such, real definitions have no role in Rāzī’s approach to scientific inquiry. This also completes our analysis of Rāzī’s critique of the Aristotelian theory of demonstration. The two kinds of *per se* predication (i.e., *e1*-predication and *e2*-predication discussed below), on which the theory of demonstrative science is based, can no longer be viewed as holding in terms of a *de re* necessity. As such, Rāzī will need to establish an alternative approach to the analysis of natural phenomena. Here, it should be noted that, in Chapter 3, I shall also attempt to show how Rāzī distinguishes nominal definitions, as a tool for scientific inquiry, from lexical or conventional definitions based on his theory of predication outlined in Chapter 2.

Chapter 4 examines how Rāzī’s logical programme, as established in the previous sections, leads to his restructuring of philosophy in the *Mulakhkhaṣ* and the *Mabāḥith*. The focus will be on Book II of Rāzī’s *Mabāḥith* and *Mulakhkhaṣ*, which aims to study the phenomenal objects of sensible reality. Chapter 4 will examine Rāzī’s view of the Aristotelian categories and how it relates to his division and analysis of topics in Book II of the *Mabāḥith* and the *Mulakhkhaṣ*. Further, I will show that the *Mabāḥith* and the *Mulakhkhaṣ*, as philosophical works, follow the same philosophical programme and are united by the epistemological programme he advances. That is, because Rāzī departs from the theory of science established in the *Posterior Analytics*, the very notion and ordering of the Aristotelian sciences as autonomous and hierarchically related disciplines no longer holds. The Aristotelian theory, as discussed in Chapter 4, is based on the view that the subject-matter of a science designates a particular ontological domain. Real definitions provide us access to the essential character of the subjects or members of each

ontological domain and their properties. As such, the tools of Aristotelian logic ensure the correspondence of the subject-matter of each science to an ontological domain. Rāzī, however, rejects the tools and concepts that help mark out the proper metaphysical domains. In this light, the new structure he gives to his philosophical works is marked by an epistemological turn. Chapter 4 will examine the exact nature of the epistemological turn that Rāzī envisions in the *Mabāḥith* and the *Mulakhkhaṣ*.

It should be noted here that my discussion, particularly in Part I, proceeds in stages. That is, I begin by scrutinizing the primary building blocks of Rāzī's system, without fully introducing the higher-level concepts that Rāzī will use to resolve problems raised by his preliminary analysis. As such, the reader will find that a good number of problems will be deferred to a later discussion in the same, or a subsequent, chapter. For this reason, I have provided the above outline of my argument so that the reader can keep track of the major problems and where they will be addressed.

There are several questions that the above summary may raise, most of which I hope will be resolved in the course of my analysis. However, the following addresses some of the more basic issues. In the above discussion I have referred to the “neutrality” of logic that is demanded by Rāzī. Here I consider two levels of neutrality. The first is the relatively strong level of neutrality that Rāzī aims for in his introductory or cautionary remarks in logic. My analysis will underscore a distinction between his logical approach to certain questions, such as real definitions and structured universals (as discussed in Chapters 2 and 3), and his “extra-logical” or epistemological discussion (as discussed in Chapter 1). His extra-logical analysis is conducted in his logic section of the relevant works but assesses specific epistemological problems that relate to the Aristotelian view

of universals and definitions. Rāzī's primary aim, as noted above, is to clarify and mark out the epistemological assumptions that he refuses to include in his own logical system. As my analysis shows, Rāzī's logical or "analytic" critique of real definitions and his analysis of universals presumes that those epistemological problems have been clarified.

The second level of neutrality that Rāzī demands is weaker than the first and concerns primarily ontological commitments that seem to intrude on logic. This applies particularly in the context of the interpretation of Aristotle's *Organon* by Avicenna and his predecessors. Here, two important questions regarding the logical nature of the *Organon* concern us: the role and status of its first book, the *Categories*, and the place of form-matter analysis in discussions of definition and demonstration. In the Postscript to Part I, I provide some historical background to these problems. As we will see, Rāzī's stronger claims regarding neutrality exclude *a fortiori* form-matter analysis. In the Postscript, I will simply raise what I think are some central questions that remain to be assessed specifically regarding the history of the relation of logic to philosophy.

Rāzī provides a more elaborate assessment of form-matter analysis in his philosophical discussion, which is taken up in Chapter 5 of Part II. The chapter is a close textual analysis of parts of his ontological discussion of universals and will attempt to show how closely Rāzī read Avicenna's texts. The chapters in Part I focus on philosophical problems rather than tracing textual sources, though the analysis will show, in a more indirect manner, that Rāzī knew, and directly addresses, Avicenna's positions and works, particularly those in logic. Part I seeks to establish that Rāzī had a firm grasp of the central philosophical problems raised especially by Avicenna's theory of knowledge in *Demonstration*. Chapter 6 will examine Rāzī's elaboration of a systematic

epistemology in his philosophical discussion, which is rooted in the epistemological and logical programme. I will focus specifically on Rāzī's theory of perception and his philosophical analysis of positions in optics.

Here, an important point can be made regarding my method and approach to the sources. The above discussion may suggest that my analysis moves from the views of Aristotle directly to Avicenna and Rāzī. This would ignore the rich and long philosophical tradition that intervenes between Aristotle and Avicenna, particularly the works of the late-antique Greek commentators of Aristotle. This is especially problematic given how recent studies have shown how important that history is to understanding Avicenna.⁵ My analysis will attempt to point out important background questions involved in both Avicenna's and Rāzī's discussions. However, in general, I will not engage the deeper history of those problems.

Two considerations, I believe, justify my approach. First, our discussion will necessarily go into the details of Rāzī's interpretations of the Avicennan and Aristotelian positions, but, with few exceptions, he will be operating primarily as a critic and not as a commentator. As such, my analysis will suggest that Rāzī provides an accurate or plausible interpretation of Avicenna's position on most of the major problems. This, I argue, can be done because Rāzī engages so closely with Avicenna's text. Indeed, showing that Rāzī does so is a primary aim of this study, as noted above. However, Rāzī's alternative view is not a species of Aristotelianism and so the commentarial background will not bear directly on my interpretation of Rāzī.

⁵ See, in this regard, the seminal work of Robert Wisnovsky, *Avicenna's Metaphysics in Context* (Ithaca, N.Y.: Cornell University Press, 2003).

However, Rāzī's views do certainly have roots in the intellectual traditions of Islam. Here, I examine elements of the *kalām* and scientific tradition that explain some aspects of how Rāzī might have developed such a unique philosophical approach. Admittedly, my analysis of the historical background is partial and preliminary. My reason for this is that Rāzī's philosophical views are sufficiently complex and detailed that a focused analysis of his views is justified, particularly as they are expounded in the seminal works of the *Mabāḥith* and the *Mulakhkhaṣ*. I hope that my analysis of Rāzī's philosophical approach will satisfy the reader in this regard.

It should be noted here that I will postpone my analysis of scholarship on Rāzī's philosophical views to Chapter 4. Here, it can simply be noted that previous views of Rāzī consider him primarily as a theologian or as a philosopher in the Aristotelian line, sometimes with strong elements of Platonism. Moreover, it has been argued that in the *Mabāḥith* and the *Mulakhkhaṣ* Rāzī is influenced to a great extent by the *falāsifa* who follow, or come after, Avicenna. My analysis in Chapter 4 will address these views and suggest an interpretation of why Rāzī has come to be viewed in such terms. I argue that Rāzī's views are in some sense an extension of previous developments in *kalām*, but also represent a significant theoretical leap, which largely derives from his deep engagement with Avicenna and the Aristotelian theory of demonstrative science. I believe here that my analysis will leave a historical gap that will require scholarly investigation.

This brings us to our final point, which concerns the precise species of Aristotelianism and demonstrative science that is at issue in our analysis. I have suggested that though aspects of Rāzī's critique apply to Avicenna's systematization of Aristotle – particularly in matters relating to definition, conception acquisition, and his

analysis of the Porphyrian predicables – his overarching project strikes at the root of Aristotle’s theory of demonstration. There is, of course, much debate about what that precisely is. One particular issue that is relevant to our discussion concerns the nature of immediate premises afforded by real definitions. Rāzī’s argument presumes the (standard) interpretation that the immediate premises in demonstrations explaining natural phenomena are grounded in real definitions. On this view, the method and role of real definitions is central to the theory of demonstrative science.⁶ My analysis however

⁶ The standard view of the role of real definitions within the Aristotelian system is that they are extra-linguistic (that is, they are not simply analytic or nominal definitions) and that real definitions, or at least a certain subset of them which are indemonstrable, supply the basic principles of a science. See for example, Richard Sorabji, “Definitions: Why Necessary and in What Way?” in *Aristotle on Science: The Posterior Analytics*, ed. E. Berti (Padua: Editrice Antenore, 1981), 208-244; Bas C. van Fraassen, “A Re-examination of Aristotle’s Philosophy of Science,” *Dialogue* 1 (1980), 20-45; Marguerite Deslauriers, in *Aristotle on Definition* (Leiden: Brill, 2007). Deslauriers argues that distinguishing between what she labels “immediate definitions”, which are extra-linguistic and indemonstrable, and other kinds of definitions (e.g., nominal definitions and definitions displayable in demonstrations) is crucial to understanding Aristotle’s general theory of demonstrative knowledge. An immediate definition, which takes as its object a simple item that has a cause “not other than itself”, plays the central role in Aristotle’s theory. Moreover, on this view, the method of division is indispensable to securing immediate, real definitions, since such definitions cannot be acquired through demonstration. I suggest below that Avicenna’s approach to real definitions (sing. *al-hadd al-haqīqī*) parallels Deslauriers’ interpretation in some important details. Rāzī’s problem with real definitions is that they require an epistemic means to identifying ontologically basic or “simple” objects. The *method* of division and definition in his view does not ensure simplicity in the required sense. Rather, to him, they are complexes that may or may not have some noumenal unity beyond the grasp of our senses and beyond the tools of logic. Rāzī thus departs from the constituent ontology of Aristotelianism, which assigns specific ontological roles to the universals discovered *via* the method of division, such as the genus and differentia. His project is to rebuild an alternative system of universals that does not presume the Aristotelian ontology.

It is important to note that the relevant interpretation here of Aristotle’s view of real definitions presumes a specific *method*, one that cannot be supplemented by or reduced to demonstrations (see van Fraassen, “A Re-examination,” 34-38). David Charles makes a sustained case *for* the role of real definitions in philosophical discourse in *Aristotle on Meaning and Essence* (Oxford: Clarendon Press, 2000). Charles argues that what distinguishes Aristotle from Platonists and modern essentialists (who are in fact conventionalists of a kind) is that the method of definition and demonstration is meant to afford a level of intelligibility not given in our ordinary pre-scientific conceptions, which is consistent with the view above. However, Charles does not – on strong textual and philosophical grounds – fundamentally distinguish between definitions that are immediate and definitions that are displayable or proven in demonstrations. As such, Charles does not need to defend the Aristotelian method of division and its application to sensible phenomena.

assesses Rāzī's positions primarily within the immediate interpretive context of Avicenna's works.⁷

Broadly put, this interpretation of Aristotle's theory of demonstrative science has been the standard view in the late antique and medieval periods, as well as in modern scholarship. More recent interpretations, however, have attempted to provide alternative readings of Aristotle's demonstrative principles, including the view that the empirical principles of demonstration are relative or relational in a certain sense.⁸ No alternative accounts have found currency. In my background discussion I will examine the standard interpretation in detail. Here, I briefly examine an example that will relate the standard view to recent views of Aristotelian demonstrative science advanced in Aristotelian studies. The discussion, here, will presume some familiarity with the material. However, my analysis in the background discussion will not presume any familiarity with interpretations of Aristotle. In the background, throughout my analysis of the Aristotelian view, I will draw primarily on works that parallel or come close to the standard view.

The work of Michael Ferejohn provides an example of a contemporary interpretation that both parallels, and contrasts with, the standard view.⁹ Ferejohn, for example, expands the role of "type 4" *per se* predications mentioned at *Post. An.* 73b10. Ferejohn includes in this category predications that apply "for the most part" (ἐπὶ τὸ

⁷ As indicated, a primary concern for me is to establish how closely Rāzī read Avicenna. This is my aim in Chapter 6.

⁸ For a summary of views and an analysis of problems particularly with the relational view, see Michael Ferejohn, "Empiricism and Aristotelian Science," in *A Companion to Aristotle*, ed. G. Anagnostopoulos (Chichester, UK: Wiley-Blackwell, 2009), 51-65. Recent works that are closer to the standard view include: Michael Ferejohn, *The Origins of Aristotelian Science* (New Haven: Yale University Press, 1991); Owen Goldin, *Explaining an Eclipse: Aristotle's Posterior Analytics 2.1-10* (Ann Arbor: University of Michigan Press, 1996).

⁹ My reference to Aristotelian scholarship is somewhat selective. That is, rather than providing a thorough documentation of Aristotelian scholarship on a particular problem, I select those that pertain to specific interpretations or philosophical problems that arise in the works of Avicenna and Rāzī.

πολλύ) as well as *per se* “incidental” predication (καθ’ αὐτὰ ἴδια).¹⁰ Ferejohn’s account diverges from the standard view in two fundamental ways. First, on the standard account, *per se* incidentals fall under the second category of *per se* predications that Aristotle defines at *Post. An.* 73a36-37. This latter view, that *per se* incidentals correspond to the type-2 category of *per se* predication, is one that is held by Avicenna in *Kitāb al-Burhān* (*The Book of Demonstration*), as discussed in the following section. This leads to a number of fundamental differences in the two approaches. Ferejohn, for example, includes the differentia in type-2 predications, which, on the standard view, apply only in type-1 *per se* predication. The significance of such distinctions will become more apparent in our analysis of Avicenna’s interpretations in the next section. As we will see, Rāzī’s critique focuses on the first two categories of *per se* predications, i.e., types 1 and 2.¹¹

¹⁰ Ferejohn does so in order to rescue demonstrations from the charge of triviality.

¹¹ See the commentary on the four kinds of predication by Jonathan Barnes in *Aristotle’s Posterior Analytics*, 2nd ed. (Oxford: Clarendon Press, 1994), 112-117.

Part I: Logic & Methodology

Background: Aristotelian Science and Demonstrative Knowledge

Rāzī's epistemological and logical programme, the topic of the following four chapters of Part I, addresses foundational problems confronting the Aristotelian theory of scientific knowledge and demonstrative proof. Rāzī scrutinizes various principles and distinctions that are central to the Aristotelian theory of predication and demonstration. His development of an alternative theory of knowledge and approach to philosophical discourse is conducted in light of his clarifications of the central problems that confront the Aristotelian theory.¹² In this section, I examine core aspects of that theory, particularly as expounded by Avicenna, who was a lens through which Rāzī accessed and

¹² Rāzī's attempt to distance himself from the methods and tools of Aristotelian science – particularly in the *Mabāḥith* and *Mulakhkhaṣ* – is a point that I seek to underscore in the following analysis. In Chapter 4, I argue that Rāzī's restructuring of philosophical discourse in these two works not only departs from the Aristotelian theory of science but represents a significant leap from previous *kalām* approaches. Indeed, Rāzī objects, not infrequently, to *kalām* positions on both methodological and substantive grounds, as discussed below. However, in his two major philosophical works, he places an unequal emphasis on clarifying and correcting problems in the Aristotelian theory. My working hypothesis, as clarified in Chapter 4, is that Rāzī's aim in the *Mabāḥith* and *Mulakhkhaṣ* is quite ambitious. That is, the two works seek to set out a new approach to assessing problems in ontology and natural philosophy. Rāzī proceeds as though the only philosophical system worthy of his attention is that of the *falāsifa*. This can be explained by reference to the scope of the *Mabāḥith* and the *Mulakhkhaṣ*. That is, the two works examine a wide range of problems that surpasses previous *kalām* treatments. For example, Book II of both works assesses problems that are taken up in Aristotle's *Physics*, *De Caelo*, *Generation and Corruption*, and *De Anima*, as well as problems in astronomy and optics. That is, Book II spans an extensive range of scientific topics that the Aristotelians treat in natural philosophy. Importantly, unlike post-classical works of *kalām*, *kalām* works preceding Rāzī did not investigate such problems. The scope of inquiry in *kalām* seems to have been much more limited. This, I believe, is one important explanation for Rāzī's focus on the Aristotelian theory of science. That is, unlike *kalām*, Aristotelian science presents itself as *the* universal and systematic theory of scientific human knowledge.

interpreted the philosophical tradition. With regard to our analysis of Rāzī's epistemological concerns in Chapter 1, two central notions in Avicenna's system are the focus of Rāzī's attention: the method of scientific or "real" definitions (*al-ḥadd al-ḥaqīqī*) and the nature of conceptions (sing.: *taṣawwur*) or concept acquisition. Rāzī argues against the possibility of obtaining the real definitions of things, and he takes a related position that there are no "acquired" conceptions of things (*al-taṣawwurāt ghayr muktasaba*). These two positions are aimed at opposing the foundational principles of Avicenna's theory of definition as set out in *Kitāb al-Burhān* (*The Book of Demonstration*) of *al-Shifā'*. Rāzī's logical analysis discussed in Chapter 2 and Chapter 3 focuses on the Aristotelian theory of essential or *per se* predication. In particular, he assesses the nature of the relation that holds between constitutive parts of an essence and its non-constitutive or external properties. Rāzī's logical analysis centers on how necessity attaches to the parts and properties of essences in *per se* predication. I begin by examining Avicenna's discussion of scientific definitions and concept acquisition.

In I.1 of *Demonstration*, Avicenna discusses knowledge and knowledge acquisition, focusing particularly on the nature and division of "acquired" knowledge (*al-ʿilm al-muktasab*).¹³ Acquired knowledge, in his view, divides first into assent/judgment

¹³ As noted by Jon McGinnis and Riccardo Strobino, it is surprising how little attention has been paid to Avicenna's interpretation of Aristotle's theory in *Demonstration*. No comprehensive study of the work has been undertaken. Some important recent studies on specific topics discussed in *Demonstration* include: Jon McGinnis, "Logic and Science: The Role of Genus and Difference in Avicenna's Logic, Science, and Natural Philosophy," *Documenti e studi sulla tradizione filosofica medievale*, 18 (2007), 165-186; Id., "Scientific Methodologies in Medieval Islam," *Journal of the History of Philosophy*, 41 (2003), 307-327; Id., "Avicenna's Naturalized Epistemology and Scientific Method," in *Unity of Science in the Arabic Tradition: Science, Logic, Epistemology and Their Interactions*, ed. S. Rahman, T. Street, and H. Tahiri (Dordrecht: Springer, 2008), 129-152; Id., *Avicenna* (Oxford: Oxford University Press, 2010), 37-52; Riccardo Strobino, "Avicenna on the Indemonstrability of Definition," *Documenti e studi sulla tradizione filosofica medievale*, 21 (2010), 113-163; M. E. Marmura, "The Fortuna of the *Posterior Analytics* in the Arabic Middle Ages," in *Knowledge and the Sciences in Medieval Philosophy: Proceedings of the Eighth International Congress of Medieval Philosophy*, ed. M. Asztalso, J. Murdoch, and I. Miiniluoto, vol. 1

(*taṣḍīq*) and conception (*taṣawwur*); the former, he states, is acquired by a certain kind of syllogism (*bi-qiyāsⁱⁿ mā*) and the latter by a certain kind of definition (*bi-ḥaddⁱⁿ mā*).¹⁴ He then divides and ranks judgments and conceptions according to an epistemic hierarchy. Judgments are categorized according to the level (*marātib*) of certainty that attaches to their propositional content and conceptions based on how closely they correspond to an object, i.e., the definiendum.¹⁵ To each level of judgment and conception, moreover, a specific kind of syllogism and definition is assigned. Avicenna states that it is by means of the assigned type of syllogism or definition that a specific level of knowledge is acquired with regard to a judgment or concept.

The highest kind of knowledge of judgments is that which is engendered with certainty (*yaqīn*). Avicenna's definition of certainty here is particularly significant and distinctive. Judgments based on certainty, he states, are constituted by (i) the basic belief

(Helsinki, 1990), 89-98. Some other sources, relevant to our discussion, that touch upon doctrines in *Demonstration* include: Peter Adamson, "On Knowledge of Particulars," *Proceedings of the Aristotelian Society*, 105 (2004), 257-278; M. E. Marmura, "Ghazālī and Demonstrative Science," *Journal of the History of Philosophy*, 3 (1965), 183-204; Marwan Rashed, "Ibn ʿAdī et Avicenne: sur les types d'existants", in *Aristote e i suoi esegeti neoplatonici. Logica e ontologia nelle interpretazioni greche e arabe* (Atti del convegno internazionale, Roma, 19-20 ottobre 2001), ed. V. Celluprica & C. D'Ancona (Napoli: Bibliopolis, 2004), 107-171 (see especially pp. 151-154, where the relation between mathematics/geometry and science is briefly discussed). The philosophical problems that will preoccupy this dissertation, central aspects of which are discussed in this section – namely, Avicenna's theory of demonstrative knowledge, definitions and *per se* predication – also require study. My analysis focuses on aspects of Avicenna's theory that concern Rāzī's approach to philosophical and scientific knowledge. For important background developments to Avicenna's theory, specifically in al-Fārābī, see Deborah Black, "Knowledge (ʿIlm) and Certitude (Yaqīn) in al-Fārābī's Epistemology," *Arabic Sciences and Philosophy*, 16 (2006), 11-45.

¹⁴ Avicenna, *al-Shifāʾ*, *Kitāb al-Burhān*, ed. Abū al-ʿAlā ʿAfīfī (Cairo: al-Maṭbaʿa al-Amīriyya, 1956), 51 (hereon referred to as *Demonstration*). The indefiniteness of *taṣawwur* and *taṣḍīq* is meant to indicate that there are corresponding kinds of syllogisms and definitions, as shown below. It should be noted that Avicenna's theory of acquired knowledge is very different from the notion of acquired knowledge in *kalām*. Both however use the same term *al-ʿilm al-muktasab*. Avicenna's use of the term applies specifically to his interpretation of Aristotle's theory of scientific knowledge. In *kalām*, *al-ʿilm al-muktasab* is the kind of knowledge that results primarily from *kalām* forms of deductions (*naẓar*). See, for example, Marie Bernand, *Le problème de la connaissance d'après le Muḡnī du Cadī ʿAbd al-Ġabbār* (Algiers: 1982), 226-261. Dhanani, *The Physical Theory of Kalām: Atoms, Space and Void in Basrian Muʿtazilī Cosmology* (Leiden: E.J. Brill, 1994), 22-23.

¹⁵ By "propositional content" I simply mean the object of belief or content corresponding to a judgment, which he terms *muṣaddaq bihi*, as discussed below. Note, however, that *muṣaddaq bihi* is distinguished from conceptions, which include non-propositional conceptions of judgments.

in a proposition (*muṣaddaq bihi*), *X*, to which (ii) a “second belief” (*i‘tiqād thānī*) is attached. He defines the second belief as the belief that *X* cannot be otherwise than it is, if it is not possible for the (second) belief to be removed from the first.¹⁶ His definition of the highest kind of judgments invokes, of course, Aristotle’s words regarding scientific knowledge in the *Posterior Analytics*.¹⁷ Aristotle calls this kind of knowledge “knowledge *simpliciter*” (*epistēmē haplōs*), and defines it in 1.2 of *Posterior Analytics* as knowledge (a) of *why* things are as they are and (b) that they cannot be otherwise than they are.¹⁸ Avicenna’s definition parallels Aristotle’s, specifically in stipulating the necessity condition, (b), that *X* cannot be otherwise than it is.¹⁹ Avicenna seems to omit (b), or the “reason why”, which is the requirement that scientific knowledge involves the (causal) explanation of *X*. However, Avicenna subsequently clarifies the nature of the necessity in judgments by reference to the nature and structure of causal explanations, in I.4 (which corresponds generally to A.2 of the *Posterior Analytics*) and I.8 of

¹⁶ See n. 19.

¹⁷ I will use “science” or “scientific knowledge” to refer to the kind of knowledge defined by Aristotle in the *Posterior Analytics*. Cf. Myles Burnyeat, “Aristotle on Understanding Knowledge,” in *Aristotle on Science: The Posterior Analytics*, ed. E. Berti (Padua: Editrice Antenore, 1981), 97-139.

¹⁸ Jonathan Barnes, *Aristotle, Posterior Analytics*, 2. Unless specific translations are cited, I will generally refer to the translations of Aristotle in *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. J. Barnes, 2 vols. (Princeton: Princeton University Press, 1984). I will primarily cite Bekker numbers for references from the latter.

¹⁹ Even more, the if-clause in Avicenna’s definition suggests a particular interpretation of the necessity condition in Aristotle’s definition of science. Barnes has noted the ambiguity between “*a* has scientific knowledge of *X* if *X* cannot be otherwise” and “*a* has scientific knowledge of *X* if *a* knows that *X* cannot be otherwise”. Like Barnes, Avicenna seems to opt for the latter, since his if-clause seems to attach the necessity of the belief to the fact that “*X* cannot be otherwise”. However, Avicenna’s phrasing in the if-clause is ambiguous since the “not possible” seems to apply to the necessary belief’s not ceasing or being removed, i.e., that it is not possible for the belief in (the necessity of) *X* to cease. Thus, it is unclear whether he means *a* knows that *X* cannot be otherwise or whether *a*’s knowledge is the kind of knowledge that cannot possibly be removed. I think Avicenna means the latter because he does not treat the reason *why* condition, (a), independently of the necessity condition, (b), as does Barnes. Indeed, the subsequent discussion suggests that, to Avicenna’s mind, the necessity condition ought to be explained by the nature of (causal) explanations. What Avicenna precisely means here is not central to the subsequent discussion but his theory requires further study. Avicenna’s phrasing describing the second belief is: “*anna l-muṣaddaq bihi lā yumkinu an lā yakūna ‘alā mā huwa ‘alayhi idhā kāna lā yumkinu zawāl hādha l-i‘tiqād fīhi*”. See Barnes’ comments in *Posterior Analytics*, 89-91.

Demonstration.²⁰ In I.8, Avicenna begins by discussing predication (*ḥaml*) and states, “The predicate and subject themselves (*dhāt al-maḥmūl wa-l-mawḍūʿ*) do not possess, without that cause [i.e., the explanatory cause; *ʿilla*], a relation [of predication] with necessity (*bi-l-wujūb*), but rather [only] with contingency (*bi-l-imkān*).”²¹ That is, predications hold necessarily of the subject and predicate only if the proper explanatory relations are taken into account. Avicenna provides examples of inferences in demonstrations that might mistakenly be taken as necessary but yield only contingent knowledge. Taking “human” and the properties “rational” and “laughing” to illustrate his point, he provides the following spurious demonstration:

All humans are risible

All risible [things] are rational

∴ All humans are rational²²

This deduction does not yield necessary and certain knowledge because we have not “safeguarded” (*murāʿa*) the order of causal relations that holds between the subjects and

²⁰ In I.4, which is entitled “On enumerating the principles of syllogisms in a general manner”, he attempts to separate “superficial” necessity (*ḍarūra ṣāhiriyya*), afforded by perception and experience, from “deep” necessity (*ḍarūra bāṭiniyya*) given by one of the higher faculties like the intellect or estimation. He then moves to distinguish estimative necessity (*ḍarūra wahmiyya*), which is misleading, from real necessity (*ḍarūra ḥaqīqiyya*). Here he is especially concerned with sensible things, and states that “the principles of demonstrations which are of the kind of these [principles] involving perceptible objects (*min jins al-mudrakāt*) are necessarily from among those [things] that are perceived and believed with real, not estimative, necessity.” (p. 65) Then, in I.5, Avicenna discusses the scientific questions, including the question *why* (*ṭalab al-lima; to dioti*) but does not discuss necessity. After considering specific problems regarding knowledge of non-existents and pre-existent knowledge in I.6, Avicenna in I.7 discusses the differences between demonstrations showing *that* it is the case (*burhān al-inn*; in medieval Latin philosophy *quia*) and those showing *why* it is the case (*burhān al-lima*; in medieval Latin philosophy, *propter quid*). Finally, in I.8, entitled “That certain knowledge of everything that has a causal reason [is known certainly] through that causal reason, and safeguarding the relations of such terms in demonstration”, he returns to the question of necessity and more precisely ties the discussions of causal explanation with necessary knowledge. He concludes: “It is clear that a thing or state/event (*ḥāl*), if it has a causal reason (*sabab*), it is not known with certainty except through its causal reason.” I.8 notably has no corresponding section in the *Posterior Analytics*.

²¹ Avicenna, *Demonstration*, 85.

²² *Ibid.*, 85-86.

predicates, specifically in this case because risibility or the power (*quwwa*) to laugh is causally explained (*ma‘lūla*) by the power of rationality. Avicenna states, “Insofar as one does not know that the *necessity* of the power of rationality [applies] first to humans and that the power of laughter *necessarily* follows (*wujūb ittibā‘*) from the power of rationality, it is *not necessary* that one is [scientifically] certain that it is not possible that there exists a person who does not possess the power of laughter – except [if] that [belief obtains] by sense perception (*fī al-ḥiss*), but sense perception does not prevent [belief in] the contrary (*al-khilāf*) of that which has not been perceived by the senses or that which is gained by experience (*bi-l-tajriba*).”²³ More will be said about the nature of casual explanations and necessary predications as our analysis proceeds. I return, now, to Avicenna’s theory of concept acquisition and definition. It may be noted here that Rāzī will oppose this Aristotelian view of scientific knowledge: that knowledge of necessary predicative relations (particularly as applied to sensible reality) can be established by means of real definitions or causal explanations, i.e., demonstrations.

It was noted that Avicenna divides conceptions according to a hierarchy that parallels his division of judgments according to a hierarchy of certainty.²⁴ With regard to judgments, below the highest level of certainty, which corresponds to necessary scientific judgments, we find quasi-certain judgments (*shabīh bi-l-yaqīn*) which do not possess the

²³ The variant *yu’khadh* (apprehended) provided in the apparatus of the cited edition for *yūjad* (exists) seems to make more sense here. See *Demonstration*, 86.

²⁴ I will generally use “concept” to refer specifically to that which is signified by a singular term, like, “man” (i.e., our pre-scientific concept). I use “conception” to refer to a concept that is not simply picked out by a singular term but is acquired by a real definition. That is, the relevant epistemological principles are required for conceptions, as they lead to the correct acquisition of such a concept. Concept is the more general term, and so I will use it as the default when I need not underscore or clarify that we are discussing knowledge of essences. “Concept acquisition” is the means to acquiring conceptions, which includes scientific definitions as well as the method of division through which one acquires definitions, as discussed below. There is a second notion of concept acquisition that is touched upon in the context of Rāzī’s view in the subsequent chapters. That is, even our pre-scientific concepts are acquired in a certain way. Aspects of this second view of concept acquisition will be discussed in Chapter 6.

“second belief” that X holds necessarily, though the possibility of *actually* denying X does not obtain in this case. Below this, there are persuasive or probable judgments (*iqnā^cī ḡannī*), which also contain a second belief, though here it is the belief that the denial of X is possible. To these judgments, Avicenna provides the corresponding syllogisms by means of which the judgments are acquired: demonstration (*al-burhān*, which engender certainty), dialectic or sophistical syllogism (*al-qiyās al-jadalī* or *al-sūfiṣṭā^oī*, which engender quasi-certainty), and rhetorical syllogism (*al-qiyās al-khiṭābī*, which engender probable belief).

In a similar manner, “acquired conceptions” (*al-taṣawwur al-muktasab*) have levels (*marātib*) that correspond to kinds of definition. As mentioned, his division of conceptions is determined by the nature of their correspondence to an item (*al-shay^o*), call it x . His primary division distinguishes between two kinds of properties through which one obtains a conception of x , i.e. “accidental properties” (*al-ma^cānī ^caraḍiyya*) and “essential properties” (*al-ma^cānī al-dhātiyya*).²⁵ The two then are subdivided according to the nature of their extension; that is, accidental properties may be (2a) specific (*takhuṣṣ*) to x or common to (2b) x and to things other than x (*ya^cummuhu wa-ghayruhu*). The same applies to essential properties. This then gives us conceptions divided according to the properties of x that are (1a) specific and essential, (1b) common and essential, (2a) specific and accidental, and (2b) common and accidental. He then subdivides (1a), comprising the specific essential properties of x , according to their “completeness” (*kamāl*) so that, on the one hand, it comprises (1a^a) the complete essence of x ’s existence such that “the [conception] is an *intelligible form* corresponding to its

²⁵ What Avicenna means by “accidental properties” in this context will be clarified below. The term acquires a precise meaning in subsequent chapters of *Demonstration*.

[i.e., x 's] existent form" ("ḥattā yakūna ṣūrat^{an} ma^cqūlat^{an} muwāziyat^{an} li-ṣūratihī al-mawjūda").²⁶ This is the case, he adds, if the conception does not exclude any of its essential properties, i.e., it is the complete conception of its essence. On the other hand, the conception may only comprise (1a^o) a part (*shaṭr*) of the essence of x so that it is not a complete conception of all its essential properties.

Avicenna assigns a type of definition for the acquisition of each kind of conception: (Ia) complete definition (*ḥadd tāmm*) for (1a); (Ib) incomplete definition (*ḥadd nāqis*) for (1b), (IIa) complete description (*rasm tāmm*) for (2a), and (IIb) incomplete description for (2b). The division of definitions is dictated by how the definition distinguishes (*tamyīz*) the definiendum from other things, and specifically whether it distinguishes x with reference to a part (*al-ba^cd*) or the whole (*al-kull*) of what is other than x . That is, the definition or description may have an extension of only x or a wider extension including things other than x .²⁷ Avicenna's analysis of definitions here is

²⁶ As discussed below, Rāzī argues against the notion of mental forms in his philosophical discussions and indicates his opposition to the view in logic.

²⁷ Avicenna's aim here seems to be to distinguish the definition, say, of "human" as "rational animal", which is complete (Ia), from the definition "two-legged animal", which is incomplete (Ib). In the case of descriptions, the examples would be something like "risible animal" (IIa) and "medium-statured animal" (IIb) for "human". (Ib) is incomplete in this sense, since the differentia "two-legged" applies to things other than man, say, chickens and apes, so that it does not differentiate man from all other animals (though it still identifies some of its essential or constitutive properties). "Rational" in (Ia) does completely differentiate man. However there is an ambiguity here with regard to his use of "whole" and "part". His initial discussion of definitions occurs in I.8 of the *Introduction (al-Madkhal)*, where he refers to *Demonstration* for the full discussion. The example he provides of a complete description of "human" is: "wide-nailed, medium-statured, having visible skin (i.e., not covered by hair or fur; i.e. *bādi' al-bishra*), risible animal". He states that one could omit "animal" and it would still be a description. Though Avicenna does not say, this seems to be considered an incomplete description. The difference between completeness and incompleteness in such partial definitions and descriptions is that the completeness concerns the parts internal to the definiendum (or necessarily holding of it) rather than the extension of the differentia or proprium. In *Demonstration* his phrasing is sufficiently ambiguous to allow for both readings. He simply states for example, "*tamyīz 'an ba^cd dūn ba^cd*" or "*tamyīzuhu 'an al-kull*". But Avicenna's subdivision of (Ia), discussed in the following paragraph, strongly suggests the distinction concerns the *extension* of the differentia or proprium because the subdivision concerns the completeness of the (constitutive) parts of x , indicating that the primary distinction between (Ia) and (Ib) is not of the parts of x but the extension of its differentia. At any rate, this problem will ultimately prove inconsequential since what is really at issue in the rest of *Demonstration* is the relation between the internal constituent essential properties of x versus its

introductory and the details of his approach, particularly in later chapters of *Demonstration*, will be elucidated further in the subsequent analysis of Part I. But I note here a number of central points that are underscored regarding definitions, focusing specifically on (Ia).

Avicenna states that if the definition simply distinguishes x by its essential properties (*al-dhātiyyāt*) from all other things (*‘an al-kull*), the literal-minded logicians (*al-zāhiriyyūn*) consider it a complete definition. To the astute (*al-muḥaṣṣilūn*), however, a complete definition obtains only if the definition “encompasses all the essential properties such that none are left out” (*ishtamala ‘alā jamī‘ al-dhātiyyāt ishtimāl^{an} lā yashidhdhu minhā shay’*). If any essential property is left out, the definition is not a complete definition because, as he states, the object of defining (*gharaḍ al-taḥdīd*) is not simply to distinguish (*tamyīz*) a thing by essential properties. Here, he provides the example of rendering the definition of “human” as “a corporeal, rational, mortal [thing]”. The definition distinguishes man from all other things but omits intermediary properties, such as “animal”, which is subordinate to “corporeal” but superordinate to “rational”.²⁸ The definition as such is incomplete and is not a “real definition” (*al-ḥadd al-ḥaqīqī*), since it does not account for all the essential properties of the definiendum. Here, Avicenna cites Aristotle’s description of definition in the *Topics* that “the definition is a phrase signifying the essence” (*al-ḥadd qawl dāll ‘alā al-māhiyya*) and adds, “by essence he means the perfection [or completeness] of the inner reality of a thing (*kamāl ḥaqīqat*

external or proper properties, as clarified below. Avicenna here provides an introductory account as indicated by the fact that he does not even define what he means by “accidental properties”, which is a crucial concept later on in the work. As such, the account seems to be intended to remain somewhat imprecise.

²⁸ The relations holding between various classes of properties, specifically with regard to super-ordination and subordination, will be discussed shortly.

al-shayʿ) by which it is what it is and by which it is itself completely produced (*yatimmu ḥuṣūlu dhātihi*).”²⁹

Before turning to Chapter 1, a few points need to be noted regarding terminology. I have been using “definitions” quite loosely so that, at times, it includes descriptions and at others it refers to definitions *stricto sensu*, specifically (Ia) and (Ib). Avicenna’s general term for definitions, which includes not just definitions and descriptions, but nominal definitions and analogies as well, is *qawl shāriḥ* (“a clarifying phrase”) or *qawl mufaṣṣal* (“an expanded phrase”).³⁰ His division of definitions in *Demonstration* does not concern this broader category. Rather, his division concerns scientific definitions that are employed in demonstration and acquired by a certain method, as indicated previously. I will refer to the broad category of definitions and descriptions that this includes as “informative definitions”. More will be said in subsequent chapters about the nature of informative definitions, particularly as they contrast with other kinds of definitions such as nominal definitions. Avicenna uses the more specific term *ḥadd ḥaqīqī* or “real definition” to refer to the subtype of (Ia) that accounts for all the essential properties of a thing (which can he refers to as Ia^a). He seems to disregard its counterpart that simply distinguishes the essence by some of its essential properties. As we will see, Rāzī will also use the term *ḥadd ḥaqīqī* to refer to that which includes all the constituents or

²⁹ Avicenna, *Demonstration*, 52. See Aristotle, *Manṭiq Aristū*, ed. °A.R. Badawī (Cairo: Maṭbaʿat Dār al-Kutub al-Miṣriyya, 1952), 484. Cf. *Topics*, 102a1.

³⁰ The latter is the term he uses in *Demonstration*, and the former is used for example in the *Najāt* and *Ishārāt*. In *al-Madkhal* of *al-Shifāʿ*, Avicenna notes that there is no term or name that broadly covers all these types of definitions. Presumably, he uses these terms to fill the void. See, Avicenna, *al-Shifāʿ*, *al-Madkhal*, ed. I. Madkūr (Cairo: al-Maṭbaʿa al-Amīriyya, 1952), 18; Ibid., *al-Najāt*, ed. °A.R. al-°Umayra (Beirut: Dār al-Jīl, 1992), I, 109; Fakhr al-Dīn al-Rāzī (& Avicenna), *Sharḥ al-Ishārāt wa-l-Tanbīhāt*, ed. °Alī Rizā Najafzāde, (Tehran: Anjumān-e Āthār va Mafākhir-e Farhangī, 1384 [2005 or 2006]), I, 23. Any references to Avicenna’s *Ishārāt* will be from this edition of his text, which is accompanied by Rāzī’s commentary.

“internal” parts of *x*. In the following, the context will usually clarify my use of the term “definition”. I will use “definition”, as a translation for the term *ḥadd*, which usually includes (Ia) and excludes descriptions. (Ib) will not figure prominently in the discussion. I will often use “real definition” to refer specifically to, and underscore, the technical sense of a complete essential definition (i.e., Ia^e) which Avicenna refers to in *Demonstration* and elsewhere. Rāzī will provide his own “analytic” division of definitions and descriptions, which, in Chapter 2, will be compared with Avicenna’s division.

It is clear that Avicenna views definitions as a means of acquiring conceptions, but how might one acquire a definition? That is, if definitions are supposed to locate the essential properties of things, particularly of sensible things (i.e., rather than, say, simply finding the linguistic meaning of terms), one might expect some rules on how to go about defining a thing.³¹ Here, Avicenna, like Aristotle, prescribes the method (*tarīq*) of division (*al-tarkīb*) as a means to the acquisition (*al-iktisāb*) of definitions.³² The precise nature of Aristotelian division will not be important to the subsequent analysis for reasons discussed below. However, Aristotle inherits the method of division from Plato and a brief look at the modifications that Aristotle applies to Plato’s method will bring to light some important philosophical concerns, particularly regarding the Aristotelian approach to universals and predication. Indeed, a number of epistemic principles assumed

³¹ Avicenna states, “[T]hat by means of which conception is acquired is definition (*alladhī yuktasabū bihi al-taṣawwur huwa al-ḥadd*).” *Al-Najāt*, I, 77. He also calls definitions that which leads to (*mūṣil*) or brings about (*mūqi*) a conception. See *Sharḥ al-Ishārāt*, I, 23. We will return to the question of nominal definitions in Avicenna below.

³² Avicenna, *Demonstration*, 306-311. Like Aristotle, Avicenna distinguishes between the method of division (*al-qisma*), taken generally without certain rules prescribed by Aristotle, and the proper method of definition which takes into account a number of those rules, as clarified shortly below. Avicenna labels the latter *tarkīb*. Aristotle, as we will see, uses the term “division” to apply to both kinds.

in Aristotle's theory will be found, in Chapter 1, to motivate Rāzī's analysis of the *method* of definition.

Plato, just as much as Aristotle, saw that the proper aim of division is not simply to classify objects or to distinguish one item from others, but to reveal the properties that account for the essence of a thing, i.e., what kind of thing the definiendum fundamentally is. Aristotle demanded that division follow systematic rules to ensure that the method yielded non-arbitrary and "natural" divisions. The natural-ness of division to both thinkers was a matter of locating the essential rather than accidental kinds that classify things. However, as we will see, Aristotle's approach will differ radically with regard to the details of how universal kinds are categorized and ordered. Two requirements that Aristotle stipulates are of interest here: (i) that division follows "successive differentiation" and (ii) that the division sets out the *differentiae* simultaneously rather than one at a time.³³ Aristotle's rules for division are informed by his more overarching theory of predication and universals, which sought to treat systematically the relations that hold between the essence, the parts of the essence, and properties that are external to the essence. Aristotle thus distinguishes between various kinds of universals: genus, *differentia*, species, *proprium*, and accident. In the commentarial tradition, these universals came to be known as the five Porphyrian predicables, which were discussed by Porphyry (d. 305? CE) in his highly influential *Isagoge*. The *Isagoge* served as an introduction to Aristotle's works of logic, i.e., the *Organon*. However, the role of Porphyrian predicables in the logic of the commentators differs in important ways from how Aristotle had treated predicables in the original works of the *Organon*, particularly

³³ See D.M. Balme, "Aristotle's Use of Division and *Differentiae*," in *Philosophical Issues in Aristotle's Biology*, ed. A. Gotthelf and J.G. Lennox (Cambridge: Cambridge University Press, 1987), 69-89.

in the *Categories* and the *Topics*. The following discussion of Aristotle's theory of predication will bring to light some of those differences.

Before moving on, however, it should be noted that Aristotle's criticism of Plato's view of division was also related to the problem of the indemonstrability of definitions. Though it is not clear that Plato made any claims to the contrary, Aristotle argues that division is simply a means to *acquiring* definitions not a means to proving them.³⁴ Our discussion will not focus on this question but, as stated above, the notion that definitions are indemonstrable, which Aristotle considers a fundamental principle for scientific knowledge, will play a role in Rāzī's argument against real definitions and demonstrative knowledge.³⁵

Aristotle's amendments to Plato's method of division are guided by his more fundamental differences with the latter on the (ontological) status of universals and their role in predication. Aristotle, as is well known, criticizes Plato's theory of eternal and subsisting forms. However, the relation between Plato's forms and universals (i.e., "that which is predicated of many") as construed by Aristotle is somewhat complicated. Aristotle believes that Platonic forms posit the existence of universals separate from individuals. That is, universals are themselves individual entities or substances and thus exist independently of their individual instances. On Plato's view, then, every meaningful universal term corresponds to a "universal substance". Aristotle, however, argues that

³⁴ Aristotle, like Plato, uses the term "to hunt" or "to run down" (*thēreuein*) to refer to locating or acquiring definitions (*Post. An.*, B,13, 96a21).

³⁵ There seems to be two aspects to Aristotle's criticism. One is that Plato's division does not *establish* definitions of the kind required by Aristotle in demonstration, i.e., necessary and unique as discussed below. Another point, which seems to be implicit, is that division, or any other method for that matter, cannot *prove* definitions. Division does not do so for the same reasons that Aristotle objects to the demonstration of definitions, i.e., any proof for a definition is in some way involved in a *petitio principii*. Avicenna's analysis of division makes this particularly clear; see Strobino, "Avicenna on the Indemonstrability of Definition," 113-163.

universals are not individuals or substances that exist independently of individual sensible objects. Aristotle's dispute with Plato is not over the existence of universals *simpliciter*. In fact, as we will see, Aristotle does not deny the existence of universals but only their existence as "primary substances", i.e., as the ontologically basic entities of the system. In the *Metaphysics*, Aristotle attempts to work out a view that takes the forms of sensible things as the primary substances. His approach there, based on his analysis of form and matter first introduced in the *Physics*, views form as a kind of particular or, as he terms it, a "some this" (*tode ti*), which presumably opposes a (separate) universal.³⁶ In his logical works, Aristotle develops a theory of universals that takes sensible particulars as primary substances.

In logic Aristotle's focus is to elaborate a system of universals that classifies sensible phenomena within his larger theory of predication. Plato's theory fell short on this count as he did not systematically distinguish the various ways in which universals of sensible particulars might be interrelated and interdependent. That is, Plato's forms were mutually independent entities that did not include or classify other universal forms. Sensible particulars were explained simply by the conjunction of independent forms; for example, "rational", "biped", and "animal" refer to independent forms that combine to constitute "man".³⁷ In contrast to Aristotle's universals, as we will see, Platonic forms were not categorized according to kinds that fulfill an explanatory function or possess an

³⁶ Whether forms, specifically substantial forms, are particular or universal is perhaps the most disputed problem in modern scholarship on Aristotle. For a critical assessment of the debate, see Galluzzo's chapter 4 in Gabriele Galluzzo and Mauro Mariani (eds.), *Aristotle's Metaphysics Book Z: The Contemporary Debate* (Pisa: Edizioni della Normale, 2006), 167-211. For one influential interpretation of the universality versus particularity of forms, see Michael V. Wedin, *Aristotle's Theory of Substance: The Categories and Metaphysics Zeta* (Oxford: Oxford University Press, 2002).

³⁷ From the perspective of individuals, a particular man simply participates in the form of "humanity".

ontological status, a point evidenced in his somewhat indiscriminate use of terms such as form (*eidos*), genus (*genos*), and part (*meros*).

Aristotle carefully distinguishes between the kinds of universals that explain sensible objects. He begins by analyzing the patterns of our basic predicative statements, which he believes will reveal the ontological status and structure of the items occupying the subject and predicate places of sentences. Aristotle ultimately finds that universal predicables fall into distinct categories, signified, for example, by terms such as “species” (*eidos*), “genus”, and “differentia”, which become technical terms in his logical vocabulary.³⁸ Aristotle’s system seeks to distinguish those universals corresponding to the essential characteristics of a sensible item from those that simply picked out their accidental properties. Moreover, by analyzing objects into more general and specific classes, Aristotle seeks to better understand the internal structure of sensible things. Thus, in contrast to Plato, “animal”, “biped”, and “rational” constitute “man”, not simply by combination but by identifying the more general and specific “parts” (*meros*) of man (i.e., respectively the genus “animal” and differentia “rational”). In the following, I discuss some aspects of Aristotle’s development of a theory of predication before returning to his amendments to the method of division. As explained below, a number of foundational distinctions that Aristotle makes in logic to develop a systematic theory will carry

³⁸ Note that *eidos* in the *Metaphysics* corresponds to “form” as opposed to matter, whereas, in his logical works, *eidos* signifies the “species” as opposed to “genus” and “differentia”. Moreover, the species of the *Categories*, such as “man” and “horse”, which are simple substances, are viewed as composites of form and matter in the *Metaphysics*. The relation between the two approaches – specifically, whether they are consistent in some way or represent inconsistent phases in the development of Aristotle’s thought – is a matter of debate. On the “logical” nature of works of the *Organon*, see Miles Burnyeat, *A Map of Metaphysics Zeta* (Pittsburgh: Mathesis Publication, 2001), 87-125. See also my discussion in the “Postscript” below.

important consequences for the subsequent analysis, specifically with regard to Rāzī's critique of Aristotelian essentialism.

In the *Categories*, Aristotle begins with a basic classification of predicative relations, often referred to as the “fourfold division”. The linguistic analysis however carries important ontological consequences. Aristotle divides *entities* into:

(S1) primary substances (e.g., Socrates);

(S2) secondary substances (i.e., *kinds* of primary substances, e.g., “man”);

(P1) something *in* a primary substance (e.g., an instance of whiteness in Socrates);

(P2) *kinds* of things that are *in* a primary substance (e.g., “whiteness”).³⁹

Items that belong to S1 and S2 are *substances*, which are, in one way or other, the ontologically basic entities of the system, as opposed to items in P1 and P2, which we will call *properties*. Items in S1 and P1 are particulars, whereas those in S2 and P2 are universals. Primary substances occupy the prime place in this division, as they are those concrete individuals on which all items in the other categories ontologically depend. Secondary substances are ontologically dependent on primary substances since they are simply the universals that classify sensible particulars. Aristotle, as mentioned, rejects the view that universals exist separately from individuals. Here, the ontological primacy of

³⁹ This presumes the traditional interpretation that items in P1 (i.e., things that are “*in* a subject but are *not said of* any subject”) are non-substantial *particulars*, that is, non-repeatable instances of a property. But, as explained below, the analysis will not depend on this particular reading of non-substantial particulars. What is central to the discussion however is the more general assumption in Aristotle's view that the dependency relation between substances and properties is asymmetrical, as will be discussed shortly. For an overview of the debate, see Gareth B. Matthews, “Aristotelian Categories,” in *A Companion to Aristotle*, 144-154. See also Daniel T. Devereux, “Inherence and Primary Substance in Aristotle's *Categories*,” *Ancient Philosophy* 12 (1992), 113-31. Devereux's account is developmental but comes closer to the views of Aristotelians like Avicenna than other contemporary interpreters. Devereux, for example, notes that a particular accident like a color applies to individual humans insofar as it applies *primarily* to “body”. But in contrast to the view of M. Frede, a particular accident in a particular individual cannot exist apart from the individual just as much as it cannot exist apart from “body”. See M. Frede, “Individuals in Aristotle,” in *Essays in Ancient Philosophy* (Minneapolis: University of Minnesota Press, 1987), 49-71.

primary substances over secondary substances, or more generally of particulars over universals, is explained by the linguistic fact that “things that are individual and numerically one are, without exception, not *said of* any subject”.⁴⁰ That is, particulars are the ultimate subjects of predication, which to Aristotle is an indication that they are ontologically basic. The universal properties in P2 can in a similar manner be said to be dependent on particulars, specifically items in P1, since the items in P1 are, like primary substances, not predicated of anything.⁴¹ So much for the dependency of universals on particulars; but how are we to understand the ontological priority of substances over properties?

The precise relation that holds between substances and properties is trickier to pin down. While universals and particulars are distinguished by whether or not they are “*said of*” other things, substances and properties are distinguished by whether or not they are present “*in*” other things, a term which Aristotle uses to signify a relation of “inherence”. That is, items in P1 and P2 are properties that inhere in, but do not constitute a *part* of, a subject.⁴² “Inherence” here means that they cannot exist apart from that in which they exist or are instantiated. Substances, on the other hand, are those items that are not *in* anything and so are, in this sense, ontologically independent. Aristotle’s

⁴⁰ Aristotle, however, does provide several other points about the nature of substances. See Chapter 5 of *Categories*.

⁴¹ The parallel between the primary/secondary substance division and the primary/secondary property division presumes the traditional interpretation of properties in P1. See n. 39.

⁴² As mentioned in the above notes, there is an important controversy regarding the nature of items in P1 and precisely what such properties inhere in. The traditional view adopted in the analysis above that primary properties are *in* primary substances sees such properties as being particulars or non-repeatable instances of properties that occur in individuals, rather than, say, properties that apply *only* to kinds (so that color is *in* body but not *in* Socrates) or as determinable accidents that *primarily* apply to kinds (so that color can exist separately of Socrates but not body). On the view that primary accidents are non-repeatable or particular instances, primary substances may be viewed as dependent in a certain way on primary accidents as well. That is, they depend on accidents in certain categories to exist but not any particular instance of an accident. But particular accidents cannot exist without that particular substance.

position implies that the properties in P1 and P2 ultimately inhere in and are dependent on substances but not the reverse. That is, inherence posits an asymmetrical dependency of properties on substances so that properties are dependent for their existence on substances whereas substances do not depend (absolutely) on properties. This will be a core assumption in the Aristotelian theory of predication that Rāzī will question. That is, Rāzī sees no reason why the relation cannot be viewed as being symmetrical, a problem that moves him to develop his alternative theory of *structured universals*, as discussed in Chapter 2.

As we have it, it would seem that all things are either substances or properties and all properties ultimately inhere in substances. This, however, would omit perhaps the most important class of properties, *differentiae*, which do not inhere in a subject. As stated, properties of the first kind, i.e., inhering properties, were those that were *in* a subject but *not as parts*. *Differentiae*, by contrast, *are* parts or constituent properties of the subject and as such are not *in* a subject. The inherence relation, signified by *in*, excludes the notion of being a constituent or part, as clarified further shortly below. To distinguish the two kinds of properties, we will loosely call inhering properties “accidents”. The crucial distinction here is that *differentiae* are parts that constitute the subject, whereas accidents presume the existence of a subject. The role of constituent or “internal” (*dākhil*) properties that are the parts (sing.: *juzʿ*) of the essence will be central to Rāzī’s assessment of definitions and universals in Chapter 3.

Subsequent to setting out his fourfold division, Aristotle defines more precisely the *said-of* and *present-in* distinction in the following terms: if F is *said of* G, then the definition of F is predicated of G, whereas if F is *in* G, the definition of F is not

predicated of G. Both things that are *said-of* and those that are *present-in* comprise, in their own ways, the ontologically dependent items in the division, but the two are distinguished primarily with regard to their role in the definition of a subject.

Here, Aristotle makes a number of important distinctions. We have, on the one hand, genus, species, and differentia as comprising the universals that are *said-of* and, on the other, inhering properties or accidents that are *present-in*. Beginning with the *said-of* predication, genus and species are, in Aristotle's view, the universals that classify primary substances *fundamentally*, that is, as belonging essentially to ontologically basic entities. He states, "For only they [i.e., species and genera], of things predicated, *reveal* the primary substances. For if one is to say of the individual man *what he is*, it will be in place to give the species or the genus (though more informative to give man than animal); but to give any of the other things would be out of place—for example, to say white or runs or anything like that."⁴³ Aristotle's main examples of substance-classes are natural (biological) kinds, such as "man" and "animal". The genus is less informative because it is more general than the species and so it includes other species. Here species refer to the lowest natural kinds (*infima species*), though as we will see it can be viewed as a relative universal as well. As opposed to the genus, the infima species comprise individuals that can only be further divided into *accidental* classes rather than *natural* kinds (e.g., the breeds "dachshund" and "Chihuahua" are not species of "dog" but are ontologically arbitrary classes defined by properties accidental to an essential kind). Genus, here, is the class most proximate to the species of the individual, but the genus may fall under numerous superordinate genera (e.g., body → sublunary → living → animal → *human*).

⁴³ Aristotle, *Categories*, 2b30-35.

The line of genera moves from the most general to the most specific until it reaches the species, as in the given example. Genera appearing in one line cannot occur in another, i.e., genera form unique lines of superordinate and subordinate classes.

With regard to the differentia, Aristotle stipulates that those belonging to different genera (i.e., those in independent genera-lines) differ in kind. So, for example, “rational”, which is the differentia constituting the species “man”, occurs only in the genus “animal” and cannot occur in an independent genus, such as “knowledge”.⁴⁴ However, in the same line of subordinate and subordinate genera, the differentiae of the superordinate genera apply to the subordinate genera (i.e., “corruptible”, the differentia of “sublunary” in the above example, is predicated of “living”, “animal”, and “human”). These points, which are expanded or amended in other works, are crucial to Aristotle’s approach to universals and predication. Unlike Plato, Aristotle builds a hierarchy of classes and properties within which the *said-of* predication operates.⁴⁵ These remarks are also important for assessing his amendments to division, to which we now return.

Aristotle’s reforms with regard to the method of division, particularly as introduced in the *Topics* and *Posterior Analytics*, are formulated in the context of the above view of universals and predication, though the latter works add important clarifications or amendments to the *Categories*. With the first requirement, namely that of (i) successive differentiation, Aristotle seeks to achieve two primary ends of definition: to avoid arbitrary divisions and to ensure the unity of the object of definition. The former

⁴⁴ Knowledge is a kind of accident (for Aristotle, a “relative”) but even genera in the category of substance, say, “superlunary body”, and genera falling under it cannot (in the relevant sense) have “rational” as differentia.

⁴⁵ It might be noted here that Aristotle establishes a number of transitivity rules for the *said-of* predication so that “everything said of what is predicated will be said of the subject also”—e.g., the definition of the species and genus is said of the individual; that of the differentia is said of the species and the individual; but that of the species (and differentia) is not said of the genus.

concern was one that he shared with Plato, though Plato did not prescribe any specific rules regarding it. Successive differentiation would avoid arbitrary divisions by ensuring that a subordinate class properly succeeds the superordinate one. In a proper division of a class, the superordinate class can be predicated of the subordinate classes, whereas the subordinate class cannot be predicated of the superordinate class. Any division that violates this rule is invalid. For example, “gregarious” can immediately be ruled out as a division of “footed” since it *can* be predicated of the latter, whereas “biped” and “quadruped”, which are proper divisions of “footed”, cannot be predicated of “footed”.⁴⁶ This, of course, presumes Aristotle’s view of independent lines of genera and differentiae, as mentioned above.

Aristotle’s second concern, namely, ensuring the unity of the object of definition, was one that he did not share with Plato. To Plato, the object of definition need not form ontological unities; indeed, the definiendum was generally viewed as a conglomerate of forms. By contrast, Aristotle constructed his system precisely to ensure that successive differentiation leads to unities, that is, specifically, the natural kinds or species referred to above. Recall that differentiae occur in unique lines of genera and that the differentiae of superordinate genera apply to subordinate genera.⁴⁷ Given the hierarchy, if one divides successively, one will arrive at the final differentia (*differentia specifica*) that belongs to a species. But given that the differentiae of superordinate classes are predicated of the subordinate, the differentia specifica will entail all the preceding differentiae. Aristotle

⁴⁶ Note that the requirement provides a guideline in that it rules out improper divisions but it does not provide any reason to believe that those that are not ruled out *are* non-arbitrary or natural classes belonging to a higher class.

⁴⁷ Aristotle amends this point slightly; see *Topics*, VI, 144b12-30. For example, ‘biped’ can occur on the two independent genera ‘terrestrial animal’ and ‘winged animal’, so Aristotle adds the condition “if they do not both fall under the same genus”. That is, both are subordinate to ‘animal’.

adds here that intermediate differentiae are indeterminate and have no existence in nature without the final determination of the differentia specifica. Thus, though numerous differentiae belong to an object of definition (e.g., the forms “mobile”, “two-legged”, “sentient”, and so on), its unity is ensured by the fact that only the differentia specifica, which entails them all, is determinate.

The (real) definition of a thing thus contains two terms: the genus and the differentia specifica. The genus too, however, is viewed as indeterminate. As Aristotle states in the *Categories*, “[A]s the primary substances stand to the other things [i.e., of the fourfold division], so the species stands to genus.”⁴⁸ That is, the genus is a determinate thing only insofar as the differentia specifica determines its species.⁴⁹ In this way, Aristotle maintains the unity of the definiendum all the way up, so to speak; that is, from the individuals of a species back up the ontological ladder of genera and differentiae until all the essential properties of the essence are captured in a single statement of the definition. This concern for preserving the unity of the definiendum will be relevant to our subsequent analysis. In particular, Rāzī does not require that composite universals identify ontological unities. Though sensible essences that are “composite” (*murakkab*) may have a metaphysical unity, Rāzī doubts that we have epistemic access to the properties that constitute its unitary essence. Essences that are unities or “simples” (sing.: *basīṭ*) are thus limited to immediate sensibles or sensibilia (*maḥsūsāt*). Complex sensibles are viewed by Rāzī as phenomenal rather than metaphysical unities.

The second condition, that all the differentiae are set out simultaneously rather than one at a time, is also designed to avoid arbitrary divisions, but specifically insofar as

⁴⁸ Aristotle, *Categories*, 2b19-20.

⁴⁹ The dependency relation between species and genus is somewhat more complicated but, for the present, this characterization will do.

it secures a complete definition of a simple object. As such, definitions should not arbitrarily exclude essential properties, specifically differentiae, nor should they arbitrarily collect differentiae from independent lines of division. Aristotle believes that a primary problem here lies in the practice of “dichotomous” division, by which he specifically means dividing a genus one differentia at a time rather than dividing or composing *after* setting out all its differentiae. Aristotle lists a number of problems with dichotomous divisions, including that it entails only one final differentia. That is, dichotomous divisions do not lead to the successive line of differentiae we saw above that ensures the unity of the definiendum.⁵⁰ He states, “The very continuity of a series of successive differentiae in a division is intended to show that the whole is a unity. But one is misled by the usages of language into imagining that it is merely the final term of the series that constitutes the whole differentia.”⁵¹

Let us turn now from the universals that apply to the *said-of* relation of predication to those that apply to the *present-in* predication. Following his fourfold division in the *Categories*, Aristotle divides non-substances or accidents into nine *kinds*, which together with substance constitute the ten Aristotelian categories (i.e., substance, quantity, quality, relative, place, time, position, action, and passion). The categories were viewed, particularly by the late antique and medieval commentators, as a division of *things that are said (ta legomena)*, i.e., words or linguistic items, insofar as they are related to objects in the world. As such, they were viewed as constituting the highest genera of things. As discussed below, the ontological status of the categories (*al-maqūlāt*) will be questioned by Rāzī. Most importantly, perhaps, Rāzī is not convinced that they

⁵⁰ For more on the problems Aristotle raises against dichotomous division, particularly in his *Parts of Animals*, see Balme, “Aristotle’s Use of Division”, 74-78.

⁵¹ Aristotle, *Parts of Animals*, 643b34-37.

divide into essential kinds or, more specifically, into the *infima species* that serve as the foundation of the Aristotelian hierarchy of universals.

Aristotle divides accidents in another way, as kinds of predicables that occur in accidental predication, which is based on his more elaborate theory of predication in subsequent works of logic. Here, I will spend some time addressing Aristotle's theory of predication in the *Posterior Analytics* and the *Topics*. As noted above, his theory of *per se* predication, particularly as set out in *Posterior Analytics*, differs in significant ways from the *said-of/present-in* distinction in the *Categories*. Given the emphasis on sensible substances in the *Categories*, the fourfold division is primarily suited to address primitive predications that have substances or particulars as subjects (e.g., Socrates is man, Man is animal, Socrates is white). However, it is not so well suited to address predications whose subjects are universal accidents, as found in the sentence, "White is a color". The sentence should yield an essential predication, since color classifies white fundamentally, i.e., as its genus. Color is thus a part of the definition and essence of white. But if "color" is construed here as being *in a subject*, since it is a non-substance, then the subject in which it inheres would be an accident, namely "white", and the *Categories* suggests that only substances have things inhere in them. Even if we were to allow the inherence of an accident in an accident, we would still fail to obtain the desired predicative relation. That is, "color" would then be both *said of* and *in* "white", which would make it an accidental predication. On the other hand, if we say that "color" in this sentence is *said of* "white" but is *not in a subject*, then "color" would be a secondary substance, since secondary

substances are precisely those things that are *said of* but are *not in a subject*.⁵² It seems that, in the fourfold division, the predicative relations are fixed according to a prior division of terms into substance terms and accident terms. Thus, essential predication or the predication of the parts of a definition, namely the genus and differentia, apply only to subjects that are substance terms.

In the *Posterior Analytics* and *Topics*, sentences such as “White is a color” are construed as asserting an essential predication since predicates are viewed there as kinds of terms that obtain in kinds of essential and accidental predication. Importantly, the relevant kinds of terms or “predicables” are not determined according to whether the term signifies a substance or accident. Rather, a predicable is defined according to its relation to the *definition* of the subject. In the *Posterior Analytics*, Aristotle discusses four kinds of *per se* or essential predication, only two of which will concern us here.⁵³ In the first type, when *F* is predicated essentially of *G*, *F* is part of the definition of *G*; in the second type, when *F* is predicated essentially of *G*, *G* is part of the definition of *F*.⁵⁴ We shall refer to the first type as *e1*-predication and the second as *e2*-predication.

As such, “White is color” is an instance of *e1*-predication, since color is the genus, or part of the definition, of white. And so, irrespective of the subject’s categorial status, genus and differentia constitute essential or constituent properties of the subject.⁵⁵ On the other hand, *e2*-predication seems to introduce a new kind of predicate, which was

⁵² For a number of other problems with viewing the fourfold classification as corresponding directly to essential/accidental predication, see J.M.C Moravcsik, “Aristotle on Predication”, *The Philosophical Review*, 76 (1967), 80-96.

⁵³ Aristotle in fact discusses four kinds of *per se* prediction, but the other two kinds will not be relevant to our analysis.

⁵⁴ Aristotle, *Posterior Analytics*, 73a28-73b16.

⁵⁵ There is some debate over whether the differentia falls into *e1*-predication or *e2*-predication or both. Most commentators, including Avicenna, consider differentia an *e1*-predicate. See sources cited in Barnes’ commentary in *Posterior Analytics*, 114.

identified, particularly by the commentators, as “*per se* incidentals” or, as I will term it, *per se* accidents (since, as we will see, it stays closer to the Arabic terminology). Such predicates do not constitute the parts of the essence of a subject but are said to hold, in some way, essentially of the subject. What precisely Aristotle intends to include in this category, and how it constitutes necessary predication, is a matter of much debate in modern scholarship. Here, I will focus on one interpretation advanced by the later commentators, specifically focusing on Avicenna.

One final note on Aristotle: *E2*-predications introduce a necessary and essential kind of predication whose predicates are not constituent properties of the subject, a notion that is not accommodated by the fourfold division. In the *Topics* I.4, Aristotle attempts to show that predicates divide exhaustively into the following: genus (or differentia), definition, proprium (proper accident), and accident (common accident). Though the differentia is initially omitted, he attempts to slip it back into the list under genus.⁵⁶ It has been argued that Aristotle’s trouble in accommodating differentia was due to the criteria he followed in his division of predicables.⁵⁷ Following a different logic of division in his *Isagoge*, Porphyry classifies the predicables into the following: genus, species, differentia, proper accident and common accident.⁵⁸ Differentia, in Porphyry’s division,

⁵⁶ See Robin Smith, *Aristotle, Topics, Books I and VIII, Translated with a Commentary* (Oxford: Clarendon Press, 1997), 72-74.

⁵⁷ See, C. Evangelou, “Aristotle’s Doctrine of Predicables and Porphyry’s *Isagoge*,” *Journal of the History of Philosophy* 23 (1985), 15-34.

⁵⁸ As Evangelou has noted, Porphyry in his *Isagoge* approaches predicables in a general manner that attempts to address varying approaches to and interpretations of definition and predication (e.g., he distinguishes at least three senses of differentia). That is, his aim is not limited to the interpretation of Aristotle’s *Topics* or *Categories*. This is an important point in our context, as later commentators seem to have inherited this approach and it seems to be evident in Avicenna’s treatment, as the following will make clear. In the *Madkhal*, Avicenna attempts to weed out varying notions and problems involved in definition and predication that go beyond the interpretation of specific Aristotelian texts. See Evangelou, “Aristotle’s Doctrine”. See Avicenna’s approach to dividing predicables in I.8 of the *Madkhal*, which seems to follow Porphyry’s rationale that Evangelou outlines schematically (*Madkhal*, 41).

is included as a predicate distinct from genus and together they seem to replace “definition” in Aristotle’s list. Moreover, Porphyry includes “species” which is omitted by Aristotle.⁵⁹ These three predicates, which we have already encountered in the *Categories*, constitute the essential predicates or parts of the subjects.⁶⁰

Notably, however, Aristotle makes a distinction here not found in his fourfold division between types of accidental or non-essential properties (viz., proper and common accidents).⁶¹ This derives from his approach to classifying kinds of predicables in the *Topics*. Aristotle divides properties into those that “counterpredicate” with the subject and those that do not. Counterpredication amounts to the following relation: X counterpredicates with Y if everything X applies to Y applies to *and* everything that Y applies to X applies to. Properties that do not counterpredicate are either parts of the definition of the subject (i.e., genus and differentia) or not definitional parts (i.e., common accident).⁶² Definitions, on the other hand, counterpredicate. But not all predicates that counterpredicate are definitions; for example, ‘risible’ applies to all and only humans but is not the definition of the latter nor a part of its definition. Like the common accident “white”, “risible” is predicated of “human” accidentally. But unlike white, which applies to human as well as other kinds, risible applies only to human.

⁵⁹ Porphyry has been much maligned for including species because, as his critics claim, Aristotle took species, not individuals, to be the subject of predication in the *Topics*. Evangeliou suggests that the criticism does not hold on a number of counts. For one, accidents cannot be interpreted as having the same species as the subjects, i.e., accidents do not generally inhere in accidents; rather, the subjects in such cases must be the individuals of a species.

⁶⁰ The three can be further subdivided. The genus and species signify *what* the subject is (i.e., its essence), whereas differentia is said to signify *what sort* of thing the subject is (i.e., its quality). For Avicenna’s defense of this subdivision, see *Madkhal*, 44-45. Avicenna distinguishes between two kinds of predication (one in *Demonstration* and another in the *Madkhal*), which will allow differentia to be included in predications of *what a thing is*, specifically in *per se* predications in demonstrations. On the underdetermination of Aristotle’s text on this, see Smith, *Topics*, 74-75.

⁶¹ Accident I will use generally to refer to any property that is not essential or a constituent part of the subject.

⁶² Note the problem he encounters here with differentia, which in the strict sense does counterpredicate.

Aristotle's proper accident would seem to make a welcome addition, particularly given the above dilemma regarding *e2*-predication. That is, the proper accident seems to make a good candidate for the role of the *e2*-predicate or *per se* accident, as we have called it. Indeed, this is the view that has often been attributed to the commentators but, as we will see, the matter is somewhat more complicated.⁶³

Returning to Avicenna, our discussion will take a general look at some important developments in logic regarding the nature of the predicables. But a particularly important matter that we will attempt to sort out, at least to some extent, is Avicenna's approach to *per se* predication, and especially the problem of interpreting *e2*-predicates. In *Demonstration* II.2, Avicenna divides *per se* predications (*al-ḥaml al-dhātī*) into the two discussed above, viz., *e1*-predication and *e2*-predication, which he views as "the two recognized [kinds of predication] in the *Book of Demonstration*".⁶⁴ The term "*dhātī*" derives, as Avicenna states, from *bi-dhātihi*, which corresponds to Aristotle's use of *kath' hauto*, that is, *per se* or in itself, in the *Posterior Analytics*.⁶⁵ Avicenna states that the *dhātī* in the context of demonstration is equivalent to what is predicated "by way of the 'what-is-it'" (*maqūl min ṭarīq mā huwa*). As we will see, predications in relation to the "what-is-it" (*mā huwa*), i.e., the essence of a thing, can be taken in two distinct ways: "by way of" (*min ṭarīq*) or "as the answer to" (*fī jawābi*). The former sort of predication is relevant to the science of demonstration, whereas the latter applies to the division of

⁶³ Barnes, *Aristotle, Posterior Analytics*, 113-114.

⁶⁴ Avicenna, *Demonstration*, 125. In the *Najāt*, he states: "Essential predication is said in two ways: either the predicate is taken in the definition of the subject, like "animal" in the definition of "man". Or, the subject is taken in the definition of the predicate or [is taken as] the genus [of the subject], like "snub-nosed" in whose definition "nose" is included and "triangle" in whose definition "plane" is included." *Najāt*, I, 86.

⁶⁵ "*bi-dhātihi*" is used to translate *kath' hauto* in Abū Bishr Mattā's rendition of *Posterior Analytics*. See *Maṭīq Aristū*, II, 322-23.

predicables in the Isagoge tradition.⁶⁶ Here, Avicenna clarifies by stating that the *dhātī* in the context of demonstration corresponds to what enters into the definition of a thing, which includes its genus, the genus of the genus, its differentia, the differentia of its genus, its definition, and every constituent part of the essence of a thing (*kull muqawwimⁱⁿ li-dhāti al-shay^ʿ*).⁶⁷ The distinction between different sorts of predication, and the corresponding senses of *dhātī*, will be clarified shortly. It might be noted that Avicenna here points to the problem indicated above regarding the place of the differentia amongst the predicables. He states, “We must be certain from this that differentiae are suitable (*ṣāliha*) to be included *as the answer to the what-is-it* in the manner that genus is suitable.”⁶⁸ Avicenna is troubled by the fact that, in the Porphyrian division of the five predicables, the differentia is not predicated of the *what-is-it* (i.e., *al-māhiyya*) but of the *what-sort-of-thing-it-is* (i.e., *ayyu shay^{ʿin} huwa*), a view that can be misleading especially in the context of demonstrations where differentiae are included in essential predications.⁶⁹

⁶⁶ See the important points raised regarding the background of the scientific questions in the recent edition of the text and translation of Yaḥyā b. ʿAdī’s treatise on the scientific question by Stephen Menn and Robert Wisnovsky, “Yaḥyā Ibn ʿAdī’s Essay on the Four Scientific Questions regarding the Three Categories of Existence: Divine, Natural and Logical. Editio princeps and English translation”, *Mélanges de l’Institut dominicain d’études orientales du Caire (MIDEO)* 29 (2012), 73-96.

⁶⁷ Avicenna, *Demonstration*, 125.

⁶⁸ Ibid.

⁶⁹ Here, I summarize a few points in advance: Avicenna already discusses the problem in I.7 of the *Madkhal*. In chapters 6, 7, and 8 of Book I, he examines differing definitions of *dhātī*, definitions of “that which signifies the essence” (*al-dāll ʿalā al-māhiyya*), and the relation between the two. The discussion is preliminary to the principles involved in the “Porphyrian” division of predicables in chapter 8. Importantly, Avicenna points out that “what signifies the essence”, here, is a specific technical sense (*al-taʿaruf al-khāṣṣ*) used by the logicians to derive the five predicables. In this sense, what signifies the essence is *only* that which signifies it completely (*yadullu ʿalā ḥaqīqati dhāti al-shayʿ bi-kamāliḥā*). Thus the genus and species signify the essence but the differentia does not. Note, however, the genus signifies the essence *only* when it applies to the *what-is-it* of items differing in species (e.g., “animal” signifies the complete *common* essence of “horse”, “man”, and “cow”, but of “man” alone it signifies a part). In this “technical” sense, there is a *dhātī* term that does *not* signify the essence, namely the differentia. In the common usage of “what signifies the essence”, the phrase is equivalent to *dhātī*, so that all *dhātī* terms, however they signify, signify the essence, in which case the differentia would be included. Avicenna criticizes those who take the common usage but still claim that the differentia does not signify the essence. All this has a long and

In *Demonstration*, Avicenna introduces the notion of “essential” or “*per se* accidents” (*al-a^crād al-dhātīyya*), which, at least in name, corresponds to the *per se* accidents or in itself incidentals we discussed above in the context of *e2*-predications.⁷⁰ But before examining the details of *dhātī* accidents in *Demonstration*, let us turn to his initial discussion of *dhātī* predicates in logic, which can be found in the *Madkhal*. It should be noted in advance that we find no clear treatment of the category of *per se* accidents in the *Madkhal*, though there are some hints.⁷¹ Indeed, far from putting the two, seemingly paradoxical, terms together, Avicenna in the *Madkhal* makes a watertight distinction between *dhātī* terms and *‘araḍī* or accidental terms. Here, his discussion of *dhātī* and “that which signifies the essence” (*al-dāll ‘alā al-māhiyya*), specifically in chapters 5 to 7 of Book I, is aimed specifically at introducing the division and definition of the Porphyrian predicables in chapter 8.⁷² He begins by dividing terms according to

complex history, which concerns particularly the commentarial tradition of the *Isagoge*. This history is evidenced in Avicenna’s repeated reference to predecessors and divergent views in his discussion of the predicables in the *Madkhal* and elsewhere. An assessment of the history is well beyond the scope of this discussion, and it will not in any case be directly relevant to our subsequent analysis. See Evangeliou, “Aristotle’s Doctrine”; See also Jonathan Barnes, *Porphyry, Isagoge, Translated with an Introduction and Commentary* (Oxford: Clarendon Press, 2003), 8-10.

⁷⁰ Though he refers to *al-a^crād al-dhātīyya*, or closely related terms, prior to II.2 of *Demonstration*, this chapter provides his most thorough treatment of the subject. The closely related terms he uses to signify *per se* accidents before II.2 include: *al-ma^cānī al-dhātīyya*, *al-a^crād al-lāzima*, and *lawāzim*. See, for example, *Demonstration*, 88, 93, 94, 122.

⁷¹ Unlike Porphyry, who delves immediately into the predicables in the *Isagoge*, Avicenna provides a number of introductory chapters. Chapters 6, 7 and 8 of Book I discuss the division of terms into essential (*dhātī*) and accidental (*‘araḍī*). These sections however do not discuss the sense of “*dhātī*” used in *Demonstration* to qualify accidental properties, which however is noted in the *Isagoge* section of the logic of *al-Ishārāt*, as mentioned below. In addition to understanding the problems addressed in the division of predicables, a study of the *Madkhal* can address the important question of what precisely the role of logic is for Avicenna *qua* an Aristotelian, a question that has drawn the attention of scholarship with regard to the late antique commentators. See, for example, Riccardo Chiaradonna, “What Is Porphyry’s *Isagoge*?”, *Documenti e studi sulla tradizione filosofica medievale* 19 (2008), 1-30. In the following, I will use “*Isagoge*” (in italics) to refer to the original work by Porphyry, and “Isagoge” (without italics) to refer to the tradition of works inspired by the *Isagoge* which were written in Late Antiquity and in the Middle Ages.

⁷² Avicenna’s analysis of the predicables proceeds in a general fashion that considers varying definitions, which supports Evangeliou’s point that the *Isagoge* is not simply an introduction to the *Categories* or the *Topics*. This, however, is not to say that Avicenna does not have an Aristotelian agenda. Indeed, he sorts

whether they are the constitutive parts of a thing or not. *Dhātī*, he states, refers to the constitutive parts of a thing that combine (*taʿtalimu*) to constitute the essence, (e.g., body, mobile, sensible and so on are all *dhātī* attributes of man).⁷³ Accidental properties, by contrast, presume the existence of the essence. Avicenna then distinguishes accidents that, like *dhātī* properties, are “inseparable” (*lāzim*) of the subject from those that are separable (*mufāriq*). Inseparable properties (*lawāzim*) however are not *dhātī*, because “the essence [must] first be constituted, then the [*lāzim*] follows upon the [essence]” (*al-māhiyya takūnu mutaqarrirat^{an} awwal^{an}, thumma yalzamuhā hiya*).⁷⁴ That is, a *dhātī* here is strictly construed as a constitutive part, which more specifically is a property that *precedes* the conception of the essence.⁷⁵ In distinguishing between constitutive and inseparable properties, Avicenna draws on his tripartite distinction of the essence into

through diverging definitions in a manner that suggests precisely that. Note also that Avicenna wrestles with the principles of Porphyry’s division; for example, in exploring differing interpretations of whether the species in the primary sense here is the lowest kind or the *infima species* (*naw^c al-anwā^c*) or the relative species (*al-naw^c al-idāfi*). Significantly, he notes here how Aristotle observed the division so that real differentiae are preserved unlike later logicians whose division applies only to differentiae that are predicated of many species. See *Madkhal*, 56-59.

⁷³ By *dhātī*, Avicenna states that he specifically means any property whose removal (*raf^c*) necessitates the removal of the essence. There is a subtlety I shall gloss over here that arises from a problem Avicenna considers. That is, it might be said that *dhātī* properly refers to the constitutive part of an essence and not a more general class that includes the constitutive parts as well as those that signify the whole essence (e. g., “animal” and “rational” would then be *dhātī* to “man” but “man” would not be *dhātī* of itself or even of individual men). In this case, *dhātī* terms will always be distinct from what signifies the essence. Avicenna however provides the logicians’ terminology for *dhātī*, which includes terms that signify the complete essence. He states, “The universal term, if it signifies a concept (*ma^c nā*), its [i.e., the term’s] relation to the particulars which occur to its concept is a relation that if conceived (*tuwuhhimat*) as not existing, it is necessary that the essence (*dhāt*) of that individual thing is not existent.” That is, the removal (*raf^c*) of the *dhātī* necessitates the removal or non-existence of the individuals that possess the essence, whether or not it is the essence of the individual itself or a part that constitutes its essence. This at least is what he says (see *Madkhal*, 31-32). I will return to Avicenna’s more precise notion of *dhātī* in Chapter 2, where Rāzī will contrast it with his own notion of structured universals.

⁷⁴ Ibid., 34.

⁷⁵ By constitutive part, Avicenna here means the following: for any essence x and any y that is a constitutive part of x, the conception of x is dependent on the prior conception of y, and the conception of the non-existence of y necessitates the conception of the non-existence of x. See *Madkhal*, 34. There are several important questions lurking here that will be addressed in the following chapters, specifically questions centering on mereological relations (i.e., the ontological relations between the wholes and parts of universals). The manner in which the parts of an essence are prior in conception to the essence will also be discussed.

essence in itself, essence in individuals (referred to in the following as *in re*), and in the mind or intellect (referred to as *in intellectu*). Constitutive properties concern the quiddity in itself, whereas inseparable accidents follow the quiddity in one of its two modes of existence; that is, it “is not of that which realizes the essence” (*laysat mimmā yuḥaqqiqu al-māhiyya*).⁷⁶ For reasons made clear in the following chapters, I will call inseparable accidents or *lawāzim concomitant properties* or simply *concomitants*.

Importantly, Avicenna notes that there are *lawāzim* that may occur to the essence *in virtue of* the essence itself (*min ḥaythu al-māhiyya*) and not in virtue of one of the two modes of its existence (*al-wujūdāyn*).⁷⁷ The point is partially clarified when, a few paragraphs later, Avicenna subdivides *lawāzim* into those that can be called “immediate” and those that are not.⁷⁸ Immediate *lawāzim* are primary (*awwalī*) and distinctly conceived without an intermediary property (*bayyin laysa bi-waṣīṭat ʿarīḍⁱⁿ ākhar*). More specifically, it is “impossible” to negate such properties of the essence *after* the quiddity is (conceptually) constituted.⁷⁹ Examples that he provides of such *lawāzim* include the fact that the sum of the angles of a triangle equals the sum of two right angles, and the risibility of man.⁸⁰

⁷⁶ *Madkhal*, 35.

⁷⁷ *Ibid.*

⁷⁸ He states: “Of accidents, there are those that accompany (*yalzam*) the essence in a primary immediate manner without another accident as an intermediary (*luzūm^{an} awwalīyy^{an} bayyin^{an} laysa bi-waṣīṭati ʿarīḍⁱⁿ ākhar*). *Ibid.*

⁷⁹ *Ibid.* Avicenna states in the *Ishārāt*: “Such kinds [of *lawāzim*], if their concomitance is not by an intermediary, are known [with a] necessary concomitance (*kānat maʿlūmat^{an} wājibata l-luzūmi*) and so are impossible to be removed in estimation (*fī al-wahm*), though they are not constitutive [of the essence]” (*Sharḥ al-Ishārāt*, I, 64). Avicenna here makes a few distinctions concerning what he means by conception (*taṣawwur* or *taʿaqqul*), which will be discussed subsequently in the context of definitions.

⁸⁰ Avicenna notes here that without this primary kind of *lawāzim*, it would not be possible to affirm the kinds of *lawāzim*, namely, the second(ary) kind of *lawāzim* (*al-qism al-thānī*) which are not immediately known to occur with the essence but rather through an intermediary. The argument he provides for this is that if there are no immediate *lawāzim*, an infinite regress of mediate *lawāzim* will ensue. That is, in effect, no attribute will ground *lawāzim* in the essence. See also *Sharḥ al-Ishārāt*, I, 64.

The discussion provides some clarification of the epistemological status of *lawāzim*, which will come in handy in the subsequent chapters. What we need, however, is a clarification of the precise causal or modal relation between *lawāzim* and essences to evaluate whether they, like *per se* predicates, are necessary and causally explanatory. This will allow us to assess whether *lawāzim* might figure into the predication theory of *Demonstration*. In the *Madkhal*, *lawāzim* crop up incidentally in a number of places.⁸¹ Avicenna refers to *lawāzim* in a subsequent chapter on differentia, where he assesses the various senses of differentia employed by the logicians. He divides the first sense into three: general (*‘āmm*), proper (*khāṣṣ*), and most proper (*khāṣṣ al-khāṣṣ*).⁸² The first two senses of differentia in fact signify accidental properties (*‘araḍī*).⁸³ The last sense specifies the constitutive differentia of the species (*al-faṣl al-muqawwim li-l-naw‘*), which is an essential or *dhātī* property.⁸⁴ Avicenna identifies the first sense with any accident that might *distinguish* x from y, even if the property might at another time apply to y to distinguish y from x. He identifies the second sense, i.e., *khāṣṣ*, with *lawāzim*.⁸⁵ *Lawāzim* are further divided into those that apply to one species always and those that apply to one species but can possibly apply to another.⁸⁶ The former he identifies with the proprium or proper accident (*al-khāṣṣa*). The proprium, he states, does not distinguish

⁸¹ He discusses *lawāzim* again in his chapter on the differentia, where like Porphyry he assesses various senses of differentia used by the logicians.

⁸² Avicenna, *Madkhal*, 74.

⁸³ Note that this is contrary to his initial division of the predicables. But, as mentioned, the discussion proceeds in a manner that takes up diverging views.

⁸⁴ The *khāṣṣ al-khāṣṣ* is the *differentia specifica* which “if conjoined with the nature of the genus, constitutes of it a species, after which whatever is concomitant to it [i.e., the species] occurs to it concomitantly and whatever is accidental to it occurs to it accidentally (*wa ba‘da dhālika yalzamuhu mā yalzamuhu wa-ya‘riḍu lahu mā ya‘riḍu lahu*).

⁸⁵ He states, “*wa-ammā al-faṣl al-khāṣṣ fa-dhākila huwa al-maḥmūl al-lāzim min al-‘araḍiyyāt*”. *Madkhal*, 73.

⁸⁶ The example of the former is the property of having (visible) skin which differentiates man from horse. The example of the latter is dark skin which differentiates the Abyssinian from lighter skinned peoples. He states both the first and second senses of the proper differentia are separable from the individuals of a kind, and so the difference between them seems to be that the latter does not separate in actuality.

individuals of a species from other individuals of that species “because it is a concomitant (*lāzim*) of the nature of the species (*ṭabīʿat al-nawʿ*)”.⁸⁷ The discussion indicates that propria, unlike other accidental properties, hold necessarily of the species, but Avicenna does not elaborate much further on this.

In the following chapter, on the proprium, Avicenna once again begins by considering the various senses that the term acquires in the received logical corpus. The second sense is that which belongs properly to the species in itself and does not apply to other species. This category is further divided into properties that are specific to each individual of the species always (*fī kull zamān*) and those that are not. Avicenna states that the latter is what properly constitutes one of the five predicables, but that the former is more properly the proprium, which he terms the “real proprium” (*al-khāṣṣa al-ḥaqīqiyya*).⁸⁸ The real proprium is a “perpetual concomitant” (*al-lāzima al-mudāwima*) that holds always of all individuals of the species. Again, however, Avicenna fails to elaborate further on the nature of this category of *lawāzim*, which seems to correspond to the type of propria he refers to in his discussion of differentia. There, however, he described the relation of the propria and species temporally and modally; here the relation is qualified only temporally.

Following his discussion of the predicables, Avicenna examines the similarities and differences (*al-mushārakāt wa-l-mubāyanāt*) that hold between the predicables,

⁸⁷ This again goes against his initial division where the proprium, as mentioned above, is one of the predicables distinct from the differentia. But, as noted, Avicenna is attempting to address logical terminology in a general manner.

⁸⁸ Avicenna seems to consider the sense of propria proper to the five predicables that includes the real propria. He divides the general sense of propria into four: (i) propria proper to more than one species (e.g., “two-legged”, which distinguishes man from horse); propria proper to one species, which divides into three: (ii) propria that does not hold of all the individuals (e.g., the skill of farming); (iii) propria holding of all individuals always (e.g., “risibile”); and (iv) propria holding of all individuals of the species but not always (e.g., “young”). Avicenna suggests that this sense of propria applies only to the lowest species.

beginning with the genus and differentia.⁸⁹ Avicenna clarifies, in this discussion, the distinction noted above between predication *by way of* and predication *as answer to*. He notes in the “second similarity” that the similarity holds if “what is meant by predication *by way of* (*al-ḥaml min ṭarīq mā huwa*) is other than what is meant by predication *as the answer to* (*al-ḥaml fī jawāb mā huwa*), as we will clarify shortly.”⁹⁰

The similarity at issue is that everything predicated of the genus or the differentia is predicated of the species falling under the genus or differentia. Recall that this is the transitive relation discussed above in the context of the *Categories* which is related to the unity of definitions. In any case, in his discussion of the “fourth difference”, Avicenna asserts the distinction in predication between the genus and the differentia, which, as discussed above, concerns the division of the predicables in the Isagoge; that is, the genus is predicated of the *what-is-it*, whereas the differentia is predicated of the *what-sort-of-thing-is-it* (*ayyu shayⁱⁿ huwa*). Avicenna, as discussed, maintains the distinction insofar as it concerns the division of predicables in the Isagoge. However, he raises the following objection: “But one could say: ‘You have stated clearly on various occasions that the differentia can also be predicated *by way of* the *what-is-it*, especially in *Demonstration* (*Kitāb al-Burhān*).”⁹¹ Avicenna responds thus: “There is a distinction between our saying that a thing is predicated *as answer to* the *what-is-it* and between our saying that it is predicated *by way of* the *what-is-it*, just as there is a difference between our saying ‘essence’ and ‘that which is internal to the essence’ (*al-dākhil fī al-māhiyya*). And so, that which is predicated *by way of* is everything that enters into the definition of the essence and is in that way (*wa-yakūnu fī dākhila al-ṭarīq*), even if it does not by itself signify the

⁸⁹ Cf. Porphyry, *Isagoge*, 12-19

⁹⁰ Avicenna, *Madkhal*, 92.

⁹¹ Avicenna, *Madkhal*, 95.

essence (*dāll ʿalā al-māhiyya*). And that which is predicated *as answer to* is that which by itself is the answer when one is asked of the *what-is-it*. So the differentia is internal to the essence and is predicate *by way of*, since it is a part (*juzʿ*) of the thing which is the answer to the *what-is-it*, though it is not by itself predicated *as answer to* the *what-is-it*.⁹² Given our previous discussion, Avicenna’s distinction makes quite a bit of sense. That is, the distinction between the two kinds of predication stems from the fact that the *Isagoge* deals with predication in a different manner than how it is dealt with in the *Posterior Analytics*. The *Isagoge* tradition deals more broadly with problems/questions and responses. This seems to be rooted in Aristotle’s approach to the predicables in the *Topics*, which is aimed at addressing the “problem” (*problēma*) and the “premise” (*protasis*), though the nature and history of the *Isagoge* tradition will go beyond the scope of this chapter.⁹³ By contrast, in the *Posterior Analytics*, predication focuses specifically on the relations that hold between subjects and predicates in the premises of a demonstration, particularly as they constitute necessary and causal explanations.

Returning to *lawāzim*, there is not much else to be found in the *Madkhal* on such kinds of accidents that is particularly illuminating with regard to causal and necessary explanations. In the *Isagoge* section of the logic of the *Ishārāt*, following the discussion of *dhātī* (specifically, *al-dhātī al-muqawwim*), Avicenna does devote a separate section to *lawāzim* or, more specifically, *al-ʿaraḍī al-lāzim al-ghayr al-muqawwim*” (the non-constitutive concomitant accident).⁹⁴ But again there is not much on the precise causal or modal relation between *lawāzim* and essences. The focus is on the epistemological question of immediate and intermediary *lawāzim*. In his commentary, Rāzī underscores

⁹² Ibid., 95-96.

⁹³ Smith, *Aristotle, Topics*, 56-57.

⁹⁴ *Sharḥ al-Ishārāt*, I, 64.

the ambiguity in Avicenna's notion of *lawāzim*. That is, Avicenna defines *lawāzim* here as “that which accompanies (*yaṣḥubu*) the essence but is not a part (*juzʿ*) of it.”⁹⁵ Rāzī suggests that we should interpret “accompany” as “perpetually accompanying” to distinguish *lawāzim* from separable accidents (*al-ʿaraḍī al-mufāriq*). But this still raises a problem. That is, Rāzī argues that even if we take *lāzim* to be that which necessarily applies to a thing (*wājib al-thubūt*), this would not exclude properties that are accidental or, as he states, coincidental (*ittifāq^{an}*). For example, that man is rational is a fact that is “inseparable” from the fact that donkeys bray, but Avicenna, Rāzī states, seems to make neither one a *lāzim* of the other. That is, Avicenna seems, in Rāzī's reading, to have something more specific in mind, and Rāzī will attempt to spell it out: the *lāzim* is that which is inseparable from a thing *because of* some thing that “reverts to” the essence (*li-amr ʿāʾidⁱⁿ ilayhi*) and is not a part of the essence.⁹⁶ Rāzī explains that he has formulated the definition (specifically, with the vague phrasing of “reverts to” or, more literally, “returns to”) to include *lawāzim* of the essence as well as existence, a distinction we noted above.⁹⁷ Rāzī's point is interesting because, in forcing Avicenna's hand, Rāzī in effect wants Avicenna to make explicit whether a *de re* or *de dicto* reading of necessity is at issue here. That is, do *lawāzim* identify properties that apply necessarily to the thing (i.e., the subject as an entity) or does the necessity in such cases of predication apply to the statement(s)? As we will see in Chapter 3, Rāzī will apply this problem to the notion of constituent parts as well, arguing that only *de re* necessity applies to the immediate *per*

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ He includes non-immediate *lawāzim* as well in this definition. Rāzī says that this is why he uses the somewhat ambiguous phrase “*li-amr ʿāʾidⁱⁿ ilayhi*” here. However, if one intends only *lawāzim* of the essence, the definition of *lāzim* would simply be “that which is inseparable from the essence *in virtue of itself* (*li-naḥsihā*)”, i.e., in virtue of the essence.

se premises that are acquired by real definitions. However, he invokes there his epistemological principles, discussed in Chapter 1, that knowledge of such constitutive properties are beyond our grasp and that, accordingly, *per se* predication is ultimately problematic.

In any case, however much Rāzī might want to sharpen the use of the term *lawāzim*, Avicenna himself is not particularly concerned and, perhaps, for good reason. That is, Avicenna seems to use the term as a catchall, which he subdivides in varying ways to clarify how various kinds of properties might share some significant characteristics. But as a category of a predicable it never seems to have a distinct status in his theory of predication, a point we will clarify further with regard to his views in *Demonstration*. He certainly does not identify *lawāzim* directly as the category of *e2*-predicates, even if ultimately the latter are a kind of *lawāzim*, as we shall see.

However, following his discussion of *lawāzim*, Avicenna in the *Ishārāt* devotes a section to *per se* accidents under the Pointer (*ishāra*) on the “*dhātī* in another sense”.⁹⁸ We will return to this discussion in the *Ishārāt*, which (apparently) diverges from the treatment of *per se* predication in *Demonstration*. But, for now, it can simply be noted that the section of the *Ishārāt*, which corresponds to the topics treated in the Isagoge tradition, does, at least, point out how *dhātī* might apply to non-constitutive or accidental properties, whereas, in the *Madkhal*, a strict distinction was maintained between *dhātī* and *‘araḍī*. This, as Avicenna will clarify in *Demonstration*, is because, in the Isagoge, *dhātī* or essential properties are construed strictly as those that are constitutive of the essence, a point already indicated in the above analysis.

⁹⁸ *Sharḥ al-Ishārāt*, I, 75.

Indeed, in II.2 of *Demonstration*, Avicenna states, “Some have deviated to such an extent from the right path (*al-maḥajja*) on this matter by their misapprehension that they believed that the predicates in demonstrations are composed only and absolutely of constitutive parts (*muqawwimāt*). [This is] because when they called the constitutive part *dhātī* in accordance with the customary way of their studying the *Isagoge*, and understood there that the *dhātī* is simply the constitutive part, they thought that the *dhātī* in the ‘Book of Demonstration’ is precisely that and is the [explanatory] cause (*‘illa*).”⁹⁹ Prior to this, in II.2, Avicenna focuses on clarifying terminology primarily in order to ensure that *e2*-predicates, or *per se* accidents (*al-awāriḍ al-dhātiyya*) as he specifically labels them here, are not excluded from the science of demonstration. He thus examines various senses of *dhātī* and excludes those that play no role in demonstration.¹⁰⁰ The two senses of *dhātī* that do fall within the science of demonstration are the two senses mentioned above: (1) constitutive properties (i.e., parts of the definition) and (2) *per se* accidents.

Avicenna spends much of the chapter clarifying the status and nature of *per se* accidents, specifically with regard to how they constitute necessary and causal explanations. It is quite obvious from this analysis that Avicenna found many interpreters of the *Posterior Analytics* to be less than able philosophers. Here, it can be noted that his discussion of *per se* accidents in *Demonstration* explains, in part, his reluctance in the

⁹⁹ He states, “*wa-qad balagha min ‘udūli ba‘ḍi al-nās ‘an al-maḥajja fī hādhā al-bāb li-sū’ fahmihi an [sic] ḡann ann al-maḥmūlāt fī al-barāhīn lā takūnu al-batta illā min al-muqawwimāt, li’annahu lammā jarat al-‘āda ‘alayhi fī ta’ammulihi li-kitābi Īsāghūjī bi-an yusammū al-muqawwim dhātiyyan wa-lā yafahama hunāka min al-dhātī illā al-muqawwim, ḡann ann al-dhātī fī Kitāb al-Burhān dhālīka bi-‘aynihi wa-huwa al-‘illa’*” (*Demonstration*, 128).

¹⁰⁰ It can be noted that two senses that he excludes are: (1) the sense of *dhātī* corresponding to the fourth type of *per se* predication that Aristotle mentions at *Posterior Analytics* 73b10; (2) immediate or primary accidents which correspond to (some of) the immediate *lawāzīm* discussed above. See *Demonstration*, 127–28.

Madkhal to elucidate the modal relation between certain kinds of accidental properties (e.g., *lawāzim* and *propria*) and the essence. That is, the discussion in the *Madkhal* approaches universals in a manner that does not directly concern the problems of the science of demonstration. Again, regarding the misleading role of the *Isagoge*, he states, “They did not know that there are no ‘*dhātī*’, ‘necessary’ (*al-darūrī*) or ‘universal’ [properties mentioned] in this book [i.e., *Demonstration*] that are mentioned in [any] book before it.”¹⁰¹ Here, the distinction between predication *by way of* and predication *as answer to* comes into play.

In his discussion of *per se* accidents, it is clear that Avicenna is assessing a problem with a long and complex history of interpretation of Aristotle’s *Posterior Analytics*, one that reaches back to the late antique commentators.¹⁰² A full appreciation of Avicenna’s analysis should take into consideration this rich commentarial history, specifically regarding the interpretation of what precisely Aristotle means when he defines *per se* accidents as those in whose definition the subject is included. Avicenna, as mentioned, cites Aristotle’s definition but adds, right at the outset, a number of ways in which this definition can be viewed as holding, specifically regarding what is to be included in the definition of the predicate.¹⁰³ As the discussion proceeds, Avicenna adds

¹⁰¹ By “before”, Avicenna is of course referring to the order of the books in the *Organon*. That Avicenna distinguishes the necessity in *Demonstration* from the necessity in the preceding books, especially *Qiyās*, is significant for the study of his syllogistic. Cf. Tony Street, “An Outline of Avicenna’s Syllogistic,” *Archiv für Geschichte der Philosophie* 84 (2000), 129-160; Paul Thom, *Medieval Modal Systems: Problems and Concepts* (Aldershot: Ashgate, 2003), 65-80; Id., “Logic and Metaphysics in Avicenna’s Modal Syllogistic,” in *Unity of Science in the Arabic Tradition: Science, Logic, Epistemology and Their Interactions*, ed. S. Rahman, T. Street, and H. Tahiri (Dordrecht: Springer, 2008), 283-295.

¹⁰² This is evidenced by his repeated reference to predecessors.

¹⁰³ Avicenna’s first division of what can be included in the definition of the predicate is: (1) the subject of predication or substrate (*maʿrūd lahu*); (2) the substance-substrate of the subject (*mawdūʿ al-maʿrūd lahu*); (3) the genus of the substance (*jins al-mawdūʿ*). Importantly, (3) raises the question of limiting the genus here to not being more general than the subject-matter of the science at hand. Avicenna suggests that this is

further nuances, even at times calling on the *Metaphysics*.¹⁰⁴ He ultimately seems to whittle it down to the following: “These [predicates] are called *per se* accidents (*a^crād^{an}* *dhātiyyat^{an}*) because they are proper to the essence of a thing (*khāṣṣa bi-dhāt al-shay^ʿ*) or the genus of the essence of the thing.”¹⁰⁵ How his analysis in *Demonstration* of *per se* predication fits into the broader history of the reception of the *Posterior Analytics* awaits a focused study. However, the exact interpretive context that informs Avicenna’s own interpretation of e2-predication will not bear directly on the subsequent discussion, for reasons that will become clear in the following chapters. Here, it should simply be noted that Rāzī’s analysis questions the very distinction between constitutive or internal parts of an essence and its external properties, be they accidental or concomitant attributes. As noted above, Rāzī refuses to take for granted the asymmetry of the dependency relation between constitutive parts and “external” parts. But it is precisely this dependency relation that grounds the necessity and explanatory force of *per se* predications. In the following chapters, details will be added to the above overview of Avicenna’s notion of *lawāzim* and *per se* accidents. In the following paragraphs, however, I quickly present Rāzī’s comments on *per se* predication in the *Ishārāt*, primarily to show that Rāzī is intimately familiar with Avicenna’s corpus and that he attempts to deal with a number of

what Aristotle holds, even if the latter does not make this explicit (*wa-in lam yaḥṣaḥ bihi*). For examples of each category, see *Demonstration*, 126.

¹⁰⁴ He summarizes the previous division and then adds “perhaps it might be said in a more specific sense which is a stronger interpretation (*fī ma^cnā akhaṣṣ wa-ashadd taḥqīq^{an}*), and means by it *that which occurs to a thing (ya^cariḍu) or is predicated of it in itself and in virtue of what it is (limā huwa huwa), not in virtue of something more general and not in virtue of something more specific.*” Avicenna states that the latter sense is used in *Metaphysics*, and he seems to suggest that it is for this reason that it possesses the character of immediacy (*awwaliyya*). It is not clear to me why this is the case. *Demonstration*, 128.

¹⁰⁵ *Demonstration*, 131. Avicenna adds the further qualification that the essence or its genus are not separable of (*lā yakhlū^can*) *per se* predicates in two ways: (1) absolutely (e.g., the three angles of a triangle equal two right angles); (2) such that the subject is never separable of a predicate or its contrary (e.g., number must be either even or odd). In the latter, Avicenna is suggesting that disjunctive predications are included. Notably, this is one interpretation that Barnes offers; see *Posterior Analytics*, 113.

interpretative problems in Avicenna. We will leave some of the details to the subsequent discussion.

In the chapter of the *Ishārāt* on the alternative sense of *dhātī* mentioned above (i.e., alternative specifically to the sense of *dhātī* in the Isagoge), Avicenna discusses how the term might be viewed as inclusive of the specific class of properties that he calls *al-a^crād al-dhātiyya*.¹⁰⁶ Avicenna defines *dhātī* as: “the predicate which is a concomitant of the subject in virtue of the substance of the subject and its essence (*huwa l-mahmūl alladhī yalḥaqu al-mawḍū^c min jawhari l-mawḍū^c wa-māhiyyatihi*).”¹⁰⁷ The definition seems to only apply to *per se* accidents.¹⁰⁸ Rāzī begins his commentary with the definitions of both *e1*-predication and *e2*-predication, which Avicenna provided at the beginning of II.2 of *Demonstration*. It should be noted that Avicenna’s definition of *dhātī* here in the *Ishārāt*, as applied to *e2*-predications, differs from that stated at the beginning of *Demonstration*, II.2. Recall that the definition in *Demonstration* centered on the relations between the definitions of the subject and predicate. With regard to *e2*-predications, the definition of the subject was said to be included in the definition of the predicate. In the *Ishārāt*, however, the definition focuses on the concomitance of the predicate with the substance or essence of the subject. Like Avicenna, Rāzī lists a number of ways in which the subject term can be included in the definition of the predicate in *e2*-predications.¹⁰⁹ And, again, like Avicenna, he reduces the definition to, “Every predicate

¹⁰⁶ He states: *wa-hādihā al-qabīl min al-dhātiyyāt yakhuṣṣu bi-ism l-a^crād al-dhātiyya*”.

¹⁰⁷ *Sharḥ al-Ishārāt*, I, 75.

¹⁰⁸ This is indicated by his stating subsequently that “it is possible to define *dhātī* with a description that combines both senses (*al-wajhayn*) together”, that is, which includes *per se* accidents as well as constitutive parts. This, at least, is how Rāzī reads it.

¹⁰⁹ Rāzī initially lists four ways the subject can be included: (1) as the subject of predication itself (*al-mawḍū^c*); (2) as the substrate of the predicate (*ma^crūd al-mawḍū^c*); (3) the genus of the substrate of the subject (*jins dhālīka l-ma^crūd*); and (4) the subject of the genus of the substrate (*mawḍū^c jins al-ma^crūd*). The last I have not found in Avicenna though it may have been added for completeness. Examples of each

that includes in its definition either the subject (*al-mawḍūʿ*) or its constitutive parts (*al-muqawwimāt*), as we have enumerated, is called a *per se* accident (*ʿaraḍ dhātī*) in the *Book of Demonstration*.¹¹⁰ Avicenna’s definition above parallels Rāzī’s and, indeed, a very similar phrasing can be found in II.2 of *Demonstration*: “Every demonstrative predicate is either included in the definition of the subject or the subject and what constitutes it (*mā yuqawwimu*) is included in the definition of it [i.e., the predicate].”¹¹¹ (Of course, Avicenna’s definition here includes *el*-predicates.) Rāzī, however, mentions a more specific sense of *per se* accident that Avicenna points to in *Demonstration*. In this narrower sense, *per se* accident excludes any class whose extension is broader than that of the essence of the subject.¹¹² That is, in this sense, the genus of the subject, or its substrate, is excluded. Rāzī clarifies that this specific sense is what Avicenna intends in the *Ishārāt*, a point which seems to accord with Avicenna’s definition, as stated above. We shall return to the claim shortly.

Rāzī moves on to clarify that Avicenna’s definition, that the predicate is a concomitant of the subject in virtue of its substance (*jawhar*) or essence, does not exclude properties that entail intermediary properties that are causes between it and the essence, with the condition that those properties are co-extensive with the essence. The example

are: (1) nose in the definition of snub-nosed (i.e., in “The nose is snub-nosed”); (2) “White is that which captures sight (*mufarriq li-l-baṣar*)”, where the subject is “white” and its substrate is “body”, which is part of the definition of the subject (presumably since it is the body that acts on sight); (3) “The triangle has a ninety-degree angle”, where the subject is triangle and its genus is “plane” which is included in the definition of being ninety degrees; (4) the example Rāzī provides is somewhat obscure: predicating something even of another thing that is even. In any case, (4) is not particularly important to the discussion. It might be noted that Rāzī’s initial division seems to switch Avicenna’s use of *mawḍūʿ* and *maʿrūd*; that is, Rāzī seems to stick to the original meaning of the terms, using the former to mean “subject” and the latter for “substrate”. It may also be noted that Rāzī discusses the domain restriction of the genus to the subject-matter of the science under investigation, as did Avicenna.

¹¹⁰ *Sharḥ al-Ishārāt*, I, 88.

¹¹¹ Avicenna, *Demonstration*, 128.

¹¹² *Sharḥ al-Ishārāt*, I, 89.

he provides here is risibility, whose immediate cause is the capacity for surprise or amazement (*taʿajjub*), which is an intermediate property between risibility and humanity. That is, humanity is the explanatory cause of wonder, which, in turn, is the explanatory cause of risibility. Here, risibility can be predicated *per se* of humanity only because the intermediary cause, wonder, is co-extensive (or counterpredicates) with humanity. Intermediary properties that are more general or specific than the subject are excluded if *e2*-predication is taken in this sense. It can be noted here that Rāzī recognizes that the necessity of the relation in *e2*-predications derives precisely from the relations between constituent properties and concomitant or intermediary properties. As such, he states that *per se* accidents concern properties that are necessarily inseparable from the subject, and not those that are possibly separable. This accords with Avicenna’s discussion in II.2 of *Demonstration* where he rebukes those who include both necessary and non-necessary properties as *per se* accidents.¹¹³ As discussed above, the Aristotelian will in general need necessary premises for demonstrations. Thus, Avicenna states in II.1, “The premises of a demonstration provide knowledge that does not change and it is not *possible* for the object of that knowledge (*maʿlūm dhālika al-ʿilm*) to be in any other way than that by which it is known. So it is also necessary for the premises of a demonstration to not possibly change from the way they are (*ʿan mā huwa ʿalayhi*). This sense [of necessity] is one of the senses which are called ‘necessary’.”¹¹⁴ Notably, the necessity in such premises derives from the fact that the subject term classifies the individuals of a kind necessarily (i.e., it is a *de re* necessity) and this, as was discussed above, is based on the

¹¹³ The examples he quotes them as stating includes the non-necessary property of laughing *in actuality* in contrast to the necessary property of being capable of laughing. See *Demonstration*, 128.

¹¹⁴ Avicenna, *Demonstration*, 120.

role of real definitions.¹¹⁵ As such, essential definitions ground both *e1* and *e2* predications of demonstrations.

Rāzī's discussion does not make clear whether he believes that Avicenna's interpretation of *e2*-predication in the *Ishārāt* diverges from Avicenna's position in *Demonstration* or whether it is primarily a matter of phrasing. However, Rāzī notes the following: "Know that the predecessors (*al-mutaqaddimūn*) used to say that the *per se* accident is that in whose definition the subject is included or [in whose definition] the constitutive parts of the definition is included, such as 'snub-nosed' in relation to 'nose'. And the Shaykh cites this view with this phrasing in the *Shifā'* and some uncritical followers (*muqallida*) of those from later times (*al-muta'akhhirūn*) have followed him on this. But Avicenna in *al-Hikma al-Mashriqiyya* clarifies that that is false (*bāṭil*) because the subject is distinguished in essence and existence from the essence and existence of the accident and so how can it [i.e., the subject] be included in its definition...because of this distinction, he moves away from that phrasing (*tilka al-'ibāra*) to the statement of his in this book that 'It is that which is concomitant of the subject in virtue of its substance.'"¹¹⁶ The part of the *Shifā'* Rāzī refers to is most certainly *Demonstration*. There are several points he raises in his discussion here which we shall return to in the following chapters (e.g., the domain restriction to predicates that

¹¹⁵ In distinguishing the necessity in demonstration from that discussed in the previous book, i.e., the *Prior Analytics* (*Kitāb al-Qiyās*), Avicenna states, "As for in this book, if we say 'Every *a* is *b* necessarily (*bi-ḍarūra*)', we mean that each thing that is described necessarily as *a* is described as *b*; no, rather, [we intend] a meaning broader than this, which is that everything that is described as *a*, as long as it is described as being *a*, is described as *b*, even if the essence does not persist, because the necessary predicates (*al-mahmūlāt al-ḍarūriyyāt*) here are the genera, differentiae and concomitant *per se* accidents (*al-'awāriḍ al-dhātīyya al-lāzima*)." That is, this is the case even if the individuals are not always described as such. As Avicenna clarifies, for example, the individual man loses the differentia, 'rational', when he perishes. Differentiae thus often cease to be, in contrast to genera. For example, some of the genera of the individual man, like 'body', continue to exist after the individual perishes. See *Demonstration*, 122.

¹¹⁶ *Sharḥ al-Ishārāt*, I, 79. Cf. Avicenna, *Manṭiq al-Mashriqiyyīn* (Qum: Maktabat Āyat Allāh al-ʿUzmā al-Marʿashī al-Najafī, 1984), 28.

are co-extensive with the class of the subject of the science). I will not, however, attempt to resolve the interpretive problem in the Avicennan corpus that Rāzī attempts to engage here, specifically whether Avicenna might have changed his views and what the alleged misreading amounts to. As stated, an analysis of Avicenna's precise view in the context of the interpretive tradition of the *Posterior Analytics* will not bear directly on the central concern in the following analysis.¹¹⁷ It seems likely that Avicenna's adjustments to the definition of *per se* accidents focus on specific interpretations of Aristotle's definition in the commentarial tradition of the *Posterior Analytics*, which in his view are erroneous. The misinterpretations, this time in the view of Rāzī *qua* Aristotelian commentator, seem to have persisted among the adherents of Peripatetic philosophy even after Avicenna. As suggested in his phrasing above – i.e., he states that Avicenna “*cites* this view with this phrasing” (*awrada hādha al-kalām bi-hādhihi al-‘ibāra*) – Rāzī does not seem to hold Avicenna to the misreading even in *Demonstration*.¹¹⁸

¹¹⁷ It should be noted, however, that determining Avicenna's precise interpretation is important to understanding how Rāzī read the former. This question will be partly addressed in the following analysis.

¹¹⁸ Avicenna's discussion in *Demonstration*, as discussed above, seems to suggest he is aware of the misreading. Here, the example of “snub-nosed” seems to have been misleading since it suggests that the “nose”, if taken as a substance, is literally *in* the definition of the former. As such, Avicenna states in the *Ishārāt* that “they for instance provide the example of snub-nosed in relation to nose...”, suggesting that he distances himself from the example. In *Demonstration*, he provides the example at the outset, perhaps following the commentarial tradition, but then limits the discussion to examples that take more standard essences as the subject, i.e., ‘equaling two right angles’ to ‘triangle’. Snub-nosed is perhaps less an example than an illustration.

Chapter 1

Noumena versus Phenomena: Rāzī's Epistemological Programme

In the preceding section, we looked at core components of the Aristotelian theory of scientific knowledge and Avicenna's interpretation of specific aspects of that theory. The analysis focused on knowledge of sensible reality because, as we shall see below, Rāzī is particularly concerned with how the Aristotelian theory explains sensible phenomena. I will quickly review a number of points established in the previous section that will bear directly on the analysis in this chapter.

Definitions, we saw, played a central role in the theory of scientific knowledge, and in *Demonstration* Avicenna provided a systematized classification of definitions. His categorization of definitions was of a special overarching kind of definition that is central to the theory of demonstration, which we labeled “informative” or scientific definitions. As opposed to linguistic or nominal definitions, informative definitions played a crucial epistemological function; namely, they were the means to the “acquisition” (*iktisāb*) of the conception of *things* or essences.¹¹⁹ Avicenna thus categorizes definitions, taken as such, according to the “completeness” of their cognitive content. Real definitions (*al-ḥadd al-ḥaqīqī*) occupied the prime place in Avicenna's epistemological hierarchy since, construed in the strict sense, real definitions contain all the essential properties of the object of definition and are thus considered “complete”. The essential properties here are

¹¹⁹ As discussed below, informative definitions do not exclude the role of linguistic or nominal definitions in the theory of scientific knowledge; but nominal or pre-scientific definitions play a supplementary role in the acquisition of real or, more broadly, scientific definitions.

the constitutive parts (*muqawwimāt*) of the essence. Lowest in the epistemological hierarchy were incomplete descriptions, which contain properties proper to the essence but external to its definition. The kind of proof required for scientific knowledge, i.e., demonstrations, rests on real definitions because they supply the “immediate” premises by which necessary scientific deductions can be made. It was noted that the necessity in demonstrations, as set out in the theory of *per se* predication, derives from the necessity of definitional properties, which includes both constitutive parts and “*per se* accidents” (*al-aʿrāḍ al-dhātiyya*).

Scientific definitions thus provide systematic knowledge of the properties that fundamentally characterize extra-mental or extra-linguistic objects. With regard to sensible reality, we saw that Aristotle’s theory of definition considered the definiens of (complex) sensible items as constituting a kind of unity. Sensible complexes, for example, are not simply bundles of observable properties, or even the conjunction of forms. Both Aristotle and Plato sought to ensure that scientific definitions were essential or “natural”. But Aristotle developed a theory of universals and predication that would ensure the unity of the definiens. Indeed, as we will see in more detail in Avicenna, the definiens of a real definition (unlike a nominal definition) ought to preserve the natural unity of complex sensible things. The genus and differentia in a definition were interpreted in such a way as to ensure this unity. More specifically, the genus and differentia identify a set of properties that were “causally” explanatory of a unitary essence of sensible things or a natural kind. As such, “rational”, “risible”, and “animal”, which identify the differentia, proprium and genus respectively of “man”, were viewed as properties that were ordered in terms of their explanatory and causal priority. Thus,

“rational” which divides the genus “animal”, constitutes the species “man”, and causally explains “risible” as a proprium or *per se* accident of “man”. Moreover, the differentia “rational” (in the relevant sense) was a property that applied only to man and only in the genera-line that constitutes the species “man”. In other words, it is not possible for rational to appear in a different genera-line that constitutes something other than man.

Aristotelian scientific definitions as interpreted by Avicenna are not meant to be trivial, as are nominal definitions, or analytic in the Kantian sense. That is, defining an essence is not simply a matter of looking up the linguistic definition of terms or assessing the relations that merely hold between concepts.¹²⁰ Indeed, we have examined how Aristotle was particularly careful in modifying and systematizing the method of division as a means of obtaining the definitions of the essences of sensible composite entities. That is, unlike nominal definitions, real definitions require a systematic approach to universals and properties. In the *Posterior Analytics*, Aristotle views scientific definitions as being sought out following our pre-scientific conceptions of things. Our pre-scientific conception is provided by our everyday use of terms or names. That is, the names given in ordinary language signify sensible objects and serve as a pre-scientific way of distinguishing sensible objects. Obtaining a nominal definition is a trivial matter since it simply requires one to find the meaning assigned to a word in a language. Moreover, knowing the name does not presume knowledge of the essences or even existence of

¹²⁰ This agrees with a number of modern interpretations of Aristotle’s theory of definition. See, for example, Richard Sorabji, “Definitions: Why Necessary and in What Way?”, 208-244; Charles, *Aristotle on Meaning and Essence*; Deslauriers, *Aristotle on Definition*. Kant’s definition of “analytic” is, of course, highly problematic and he seems to change his views. His initial rendering of analytic as the “containment” of concepts in the concept of the subject may be interpreted as being consistent with the Aristotelian view. In any case, Kant’s aim was to separate analytic claims from those that apply primarily to empirical facts or the sensible world, i.e., synthetic claims. Aristotelian scientific definitions are meant to apply to the essences of sensible entities in a manner not given in nominal definitions, as we shall see below.

things. Whether Aristotle in fact views the relation of nominal definitions to scientific definitions in this way is a matter of some dispute. But what will be relevant to our analysis is Avicenna's view. Before turning to Rāzī, I will look briefly at some aspects of Avicenna's discussion of nominal definitions in *Demonstration*.

In I.5 of *Demonstration*, Avicenna discusses the kinds of scientific questions, or objects of inquiry, which Aristotle distinguishes at B.1 of the *Posterior Analytics*. These are: (i) the *what-is-it* (τί ἔστιν); (ii) the *that-it-is* (εἰ ἔστι); (iii) the reason why (τὸ διότι). Avicenna calls these the inquiry (*maṭlab*) of “*mā*”, “*hal*”, and “*limā*”, respectively, and subdivides each into two subtypes.¹²¹ I will focus on the point he makes regarding the *what-is-it* or simply the *what* and, incidentally, the *that-it-is* or *that*. In Avicenna's view, the question of *that* divides into the “simple *that*” (*hal al-basīṭ*) and the “complex *that*” (*hal al-murakkab*); the former is a one-place question about the existence of an object, i.e., “Does X exist?”. “Exist” here is the predicate (*maḥmūl*). In the complex *that*, “exist” or “is” is construed as the copula, so that we have a two-place question, e.g., “Is man an animal?” With regard to the *what*, Avicenna states:

“The inquiry of *what* (*maṭlabu mā*) divides into two: one is that in which the meaning of the name (*maʿnā al-ism*) is sought, such as our asking, “What is the void?” or “What is a phoenix?”. The second is that in which the reality of the essence (*ḥaqīqat al-dhāt*) is sought, such as our asking, “What is motion?” or “What is place?”...so the inquiry of *what* which is in respect of the *name* (*bi-ḥasb al-ism*) precedes all

¹²¹ See the points raised in the introductory remarks regarding the historical background of the scientific questions in Menn & Wisnovsky, “Yahyā Ibn ʿAdī's Essay on the Four Scientific Questions”. Menn and Wisnovsky note that there are two opposing camps in approaching the scientific questions: one reaching back to Kindī and another to Fārābī. Yahyā follows Kindī, while Avicenna seems to be more in agreement with Fārābī.

[other] inquiries (*mutaqaddim^{um} ʿalā kulli maṭlabⁱⁿ*). As for the inquiry of *what* which is in respect to the thing as it exists in itself (*taḥaqquq al-amr fi nafsīhi*), it comes after the inquiry of *that*, because whoever asks, “What is the essence of motion? (*mā dhāt al-ḥaraka*)” or “What is time?” seeks the quiddity (*māhiyya*) of some thing *existent* to him. As for when one asks, “Does motion – or the void or God – exist?”, it is necessary for one to have understood first what these names refer to, because it is possible to know what a name signifies but not know *that* this signified object is existent or non-existent, even if a definition in reality is of the existent...It is necessary to know that the difference between that which is understood by a name in a general manner (*bi-l-jumla*) and that which is understood by a definition in detail (*bi-l-tafṣīl*) is not small, since everyone who is addressed with a name understands to some extent and grasps (*yaqifu ʿalayhi*) that thing which the name signifies if they know the language. However, the definition is only grasped by one practiced (*al-murtād*) in the art of logic. Thus, one of the two [ways of knowing] is [plain] knowing (*maʿrifa*) and the second is [scientific] knowledge (*ʿilm*), just as sense perception is knowing (*maʿrifa*) and the intellect is [scientific] knowledge (*ʿilm*).”¹²²

There are several points raised here that will be addressed below and in later chapters. For example, we will encounter the terms *bi-l-jumla* and *bi-l-tafṣīl* in Chapter 3, where Rāzī employs them in the context of his own notion of nominal definitions. But what this passage makes clear is that, far from being trivial, scientific definitions require special attention and skill. More importantly, Avicenna underscores the point that real definitions

¹²² *Demonstration*, 68-69.

provide a kind of knowledge that goes beyond our ordinary or pre-scientific grasp of things, a notion that Rāzī will find particularly problematic.¹²³

In Book IV, Avicenna revisits the analysis of scientific questions and kinds of definitions. In IV.4, Avicenna divides the kinds of definitions relevant to scientific inquiry into four.¹²⁴ I will focus here on two: the nominal definition and the (non-syllogistic) real definition. The latter type he seems to qualify with the phrase *bi-ḥasb al-dhāt* (“according to the essence”) to distinguish it from real definitions that can be displayed in demonstration (which divide into the two other types of definitions). I will call non-syllogistic real definitions simply real definitions. Significantly, Avicenna states

¹²³ Avicenna here provides the analogy of the relation of sense perception to intellectual knowledge. Aspects of this will be discussed in the subsequent chapter on epistemology. But it can be noted now that the contrast between knowledge given by sense perception and rational or intellectual knowledge is raised in various places in *Demonstration*; see especially III.5 and V.10. The discussion involves the widely disputed points, particularly regarding concept formation, that Aristotle raises in B.19 of *Posterior Analytics*.

¹²⁴ Avicenna’s division of definitions parallels in some important respects M. Deslauriers’ interpretation of Aristotle’s division of definitions in *Posterior Analytics* B.10. Deslauriers argues that Aristotle distinguishes between four kinds of definitions: (1) a nominal definition; (2) an account in the “form” of a demonstration; (3) the conclusion of such a demonstration; (4) an immediate definition. Further, she attempts to show that immediate definitions constitute the basic kind of definition for Aristotle’s theory of demonstration in that they supply the first principles of demonstration. This is because they include the “immediate” explanatory causes of the objects of definition. Indeed, the fundamental difference between immediate definitions and the two kinds she labels “syllogistic definitions”, i.e., (2) and (3), lies in that fact that the cause of the object of definition in immediate definitions is not *other than* itself, but rather is its formal cause. As for syllogistic definitions, the cause of the object of definition, which is displayed in the demonstration, is other than itself. A corollary of this is that the objects of immediate definitions are simple while the objects of syllogistic definitions are complex. Importantly, simplicity does not require the definiendum to be partless, but they require unity in the ontological sense discussed above. In IV.4 of *Demonstration*, which loosely corresponds to the themes of *Post. An.* 2.10, Avicenna makes a four-fold division of definitions which divide into: (a) nominal definitions; (b) (real) definitions (*bi-ḥasb al-dhāt*); (c) definitions that provide the cause of the existence of the definiendum (serving as the middle term or principle of a demonstration); (d) definitions that are conclusions of demonstrations. Avicenna’s type (b) seems to correspond to Deslauriers’s immediate definitions, i.e., type (4), specifically in that it is clearly distinguished from syllogistic definitions (namely c and d) and paired with nominal definitions. Avicenna later states that Aristotle does not mention (c) but only mentions the complete definition that is the combination of the principle and conclusion of a demonstration, which seems to correspond better to Deslauriers’s (2). However, Avicenna states here that the fourth should be complete definitions of those things that have no causes for their own existence. The kind described here seems to correspond to (b) and it is not clear whether Avicenna means to say that this is Aristotle’s fourth kind, which would nicely correspond to Deslauriers’s immediate definition. But then what to do with (b)? Avicenna’s discussion is quite complex and diverges significantly from Deslauriers’s. My comparison should not suggest that they are in fact similar systems. I have simply referred to Deslauriers’s work because unfortunately no study has been done on Avicenna’s theory and the comparison, I felt, would provide some context.

that nominal definitions are only definitions in a metaphorical sense (*ḥadd majāzī*) and that real definitions (construed broadly) are in fact only the three other kinds. He notes that nominal definitions do not signify the existence of the object of definition nor its cause. If they do, they only do so accidentally.

Avicenna underscores a distinction here between the natures of the objects of the two kinds of definitions. The objects of nominal definitions are not real or “natural” unities; rather, they are unities only insofar as they are conjunctions of parts held together by ties or connections (*muttaṣil al-ajzāʾ bi-arbiṭa al-jāmiʿa*). That is, they are not unities “in essence” or “in reality” (*bi-l-ḥaqīqa*).¹²⁵ The example he provides is the unity of Homer’s poem or a book. We will return to the examples shortly. The objects of real definitions, on the other hand, are one in reality and are natural unities (*wāḥid bi-l-ḥaqīqa bi-l-waḥda al-ṭabīʿiyya*); indeed he calls the unity required in a real definition “substantial natural unity” (*ittiḥād ṭabīʿī jawharī*). Although objects of nominal definitions might exhibit a certain unity (even a fictional unity in the imagination, like, “flying man”), in real definitions “the parts of [the definition] become one thing in the soul signifying one thing in existence” (*ajzāʾahu yaṣīru shayʿ^{an} wāḥid^{an} fī al-naḥs yadullu ʿalā shayʿⁱⁿ wāḥidⁱⁿ fī al-wujūd*).¹²⁶ Given our discussion in the previous section of the nature of the parts of the definition, and the importance placed on unity by Aristotle, Avicenna’s distinctions do not come as a surprise. In this chapter, we will see that Rāzī questions the nature of the metaphysical unity of the composites that are the objects of real definitions, particularly as they apply to complex sensible entities. In Chapter 2, I

¹²⁵ Avicenna, *Demonstration*, 289.

¹²⁶ Ibid.

will examine how Rāzī's notion of structured universals attempts to account for the phenomenal rather than metaphysical unity of composite universals.

Before turning to Rāzī, a few brief points on Avicenna's notion of nominal definitions are in order. Avicenna provides the example of Homer's poem to illustrate what might be called "nominal unity". He refers to a previous discussion in IV.3 where he argues that definitions are distinct from syllogistic deductions. He adds there that the distinction between real definitions and nominal definitions (*al-qawl al-mu^carrif li-māhiyyat al-ism*) is even more obvious since the latter is simply a matter of stating, "I mean by [this term] such and such," which cannot be a matter of dispute.¹²⁷ He argues that if nominal definitions were in fact definitions of some kind, then all of our speech and discourse would be definitions. One could simply assign a name to any composite utterance and it would, Avicenna asserts, be a definition. Thus, Homer's *Iliad* (*Īlyās*) or the name of a village would be a definition, since they are a plurality of parts signified by a term. Avicenna states that what nominal definitions do here is simply expand or provide details of the plurality of parts (*tafṣīl al-jumla*). A name, or nominal definition, signifies a plurality of parts and not a unitary essence and so knowledge of the definiendum is simply a matter of detailed or precise knowledge of its parts. Significantly, Avicenna uses a phrase to describe nominal definitions that will turn up in Rāzī, namely, "making precise what the name signifies" (*tafṣīlu mā dalla ^calayhi al-ism*). Rāzī normally adds *bi-l-jumla* giving us: "making precise what the name signifies in a general manner". However, Rāzī's notion of nominal definition will differ from Avicenna's. That is, Avicenna does not seem to fundamentally distinguish between a lexical and nominal

¹²⁷ Avicenna, *Demonstration*, 283.

definition. As the above suggests, nominal definitions are, for Avicenna, entirely trivial, as they are simply a matter of convention, i.e., one cannot dispute the nominal definition, as he states. Rāzī, as we will see in this chapter, wants to distinguish nominal definitions from lexical definitions. In chapter 3, drawing on the previous analysis of Rāzī's epistemic and logical programme, I will attempt to sort out how Rāzī might more precisely view nominal definitions.¹²⁸

In the logic of the *Mulakhkhaṣ*, Rāzī devotes a chapter to the “acquisition” of the five predicables (entitled *fī kayfiyyat iqtināṣ al-khamsa*), which focuses specifically on the means to acquiring the parts of a definition.¹²⁹ The chapter is found at the end of a larger section entitled, “On the manner of acquiring conceptions” (*fī kayfiyyat iqtināṣ al-taṣawwūrāt*). The preceding chapters of the section are devoted to the analysis of various kinds of universals and predicables (i.e., genus, differentia, species, proprium, and accident). As shown in the following analysis, his discussion of predicables and universals in this section departs in many ways from the approach taken in the Isagoge tradition. The chapter sums up a number of points raised throughout the preceding analysis and begins with the following:

T 1

Investigation (*baḥṭh*) applies either to the genus of **named things** (*musammayāt*) and their differentia or to the genus of **quiddities that exist in themselves** (*al-māhiyyāt al-thābita fī anfusiḥā*) and their differentia. The first is extremely simple, because if a person posits (*waḍaʿa*) a name for a collection (*jumla*) of things that he conceives, the complete

¹²⁸ Cf. Rāzī's commentary on Avicenna's discussion of nominal and real definitions in *Sharḥ al-Ishārāt*, I, 24-30.

¹²⁹ The chapter is found in a larger section entitled, “On the manner of acquiring conceptions” (*fī kayfiyyat iqtināṣ al-taṣawwūrāt*).

distinguishing factor (*tamām al-qadar al-mumayyiz*) is the differentia and the complete common factor (*tamām al-qadar al-mushtarak*) between the conceived things is the genus.

As for the latter [kind of genus], it is extremely difficult, because if [for example] our sight locates a particular existent, we know that, as a whole, there is a self-subsisting entity (*dhāt^{an} qā'im^{an} bi-nafsihā*), and we know that there are attributes (*ṣifāt*) that obtain in that entity. But if we want to know of [that] entity what [kind of] things it is (*ayyu shay'ⁱⁿ hiya*), and the attributes (*ṣifāt*) what [kind of] things they are and how many they are, knowledge of that becomes very difficult for us. Moreover, if we know two things that share in certain aspects (*min ba'ḍi l-wujūh*) and differ in [some] other aspect (*min wajhⁱⁿ ākhara*), it is not possible to know of the complete common factor (*tamām al-qadar al-mushtarak*) what [kind of] thing it is and how it is, and of the complete differentiating factor (*tamām al-qadar al-mumayyiz*) what [kind of] thing it is and how it is. If that is difficult, then acquiring differentia and genus in the manner of verification (*al-tahqīq*) is of utmost difficulty.¹³⁰

Rāzī clearly means to raise in this passage an epistemological concern that relates to the “acquisition” of the genus and differentia in Aristotelian definitions. A precise understanding of how Rāzī frames the problem will be made clearer after discussing Rāzī’s epistemological programme. But a few central points can be noted. By “in the manner of *tahqīq*”, we will see that Rāzī intends to mean the acquisition of concepts through scientific or real definitions. And in Chapter 3, definitions in the manner of *tahqīq* will be contrasted with nominal definitions.

¹³⁰ Fakhr al-Dīn al-Rāzī, *Manṭiq al-Mulakhkhaṣ*, ed. A. F. Qarāmalikī & A. Aṣgharīnizhād (Tehran: Dānishgāh-e Imām Ṣādiq, 1381 [2002 or 2003]), 89-90 (hereon referred to as *Manṭiq al-Mulakhkhaṣ*). *Mulakhkhaṣ*, Berlin Staatsbibliothek Ms. Or. Oct. 629, fol. 9a (hereon cited as *Mulakhkhaṣ*). It should be noted that the Berlin manuscript contains many errors and is generally unreliable if used alone.

Regardless of what background assumptions may lurk here, the passage raises some important questions *prima facie*, particularly in the context of our previous discussion of the Aristotelian definitions. It will be recalled that, in the Aristotelian view, not only is knowledge of the essence of a thing (i.e., the *what-is-it*) obtained through scientific definitions, but definitions themselves are obtained by following a particular method with guiding rules. Avicenna calls the former the acquisition (*al-iktisāb*) of a conception (*taṣawwur*) by means of real definitions and the latter the acquisition of a definition, which occurs by means of the proper method of division.¹³¹ In several works, Rāzī claims that conceptions are *not* acquired whatsoever. Indeed, this is a position he states as a slogan in a number of his more accessible works and a position that he became uniquely identified with in the later tradition.¹³² The following analysis shows what philosophically motivates Rāzī's position. In **T1**, Rāzī seems to raise an overarching question regarding essential knowledge or the obtaining (*iqtinās*) of the essential properties of things or kinds that are the objects of definition. Otherwise put, Rāzī is concerned with a "meta-definitional" question related to acquiring definitions or, more accurately, the definiens, rather than simply addressing definition as a statement of properties. Although the section is entitled "On the manner in which the five predicables are acquired", Rāzī is specifically interested in the methods of acquiring definitions as evidenced by the fact that subsequent to the above passage he states, "Of the considered

¹³¹ Avicenna for example entitles his chapter on the proper method of division, "On indicating that the acquisition of a [real] definition is by means of division (*tarkīb*).” See *Demonstration*, 306.

¹³² The following are some of his works that state this point explicitly: Fakhr al-Dīn al-Rāzī, *Muḥaṣṣal Afkār al-Mutaqaddimīn wa-l-Mut’akḥḥirīn min al-‘Ulamā’ wa-l-Ḥukamā’ wa-l-Mutakallimīn*, ed. Ṭ. R. Sa’d (Cairo: Maktabat al-Kulliyāt al-Azhariyya, n.d.), 16-18; *ibid.*, *al-Risāla al-Kamāliyya fī al-Ḥaqā’iq al-Ilāhiyya*, ed. °A. Muḥyuddīn (Beirut: Dār al-Kutub al-°Ilmiyya, 2002), 19-20; Fakhr al-Dīn al-Rāzī, *Sharḥ °Uyūn al-Ḥikma*, ed. A. Ḥ. A. al-Saqqā (Cairo: Maktabat al-Anjlū al-Miṣriyya, 1986), I, 44-45 (hereon *Sharḥ al-°Uyūn*); Ibn Abī al-Ḥaddād, *Sharḥ al-Āyāt al-Bayyināt* (Beirut: Dār Ṣādir, 1996), 115 (this includes Rāzī’s text on logic entitled *al-Āyāt al-Bayyināt*).

methods (*al-ṭuruq al-muʿtabara*) of [acquiring] it [i.e., essential conceptions] is [the method of] division (*al-qisma*).”¹³³ The “in it” refers to the acquisition of the differentia and genus as parts of a definition.¹³⁴ He provides a brief and general overview of division taken generally (i.e., not only the proper kind prescribed by the Aristotelians), at the end of which he states, “its details are for you [to investigate], but in general division is a method of analyzing (*tahlīl*) composites into simples and once the simples obtain, the generic part (*al-juzʿ al-jinsī*) is distinguished from the differentiating [part] (*al-faṣlī*), and is that not the simplest thing (*a-yakūnu dhālika aṣḥal*)?” As Rāzī suggests, the method of division affords knowledge of the “simply” or trivially acquired universals, i.e., the “differentiating” universals rather than the essential ones. Given his bleak outlook on the possibility of grasping essences of a thing, which he described as being of “utmost difficulty”, Rāzī is perhaps recommending a more deflationary view of division, in which case he would be speaking specifically to the Aristotelians. Indeed, one might speculate that this is a jab at the detailed elaboration of rules for the “proper” method of division, which was advanced by the Aristotelians, as was discussed above. And as we have suggested in the previous section, Rāzī seems to have closely read *Demonstration*, so he would have been familiar with Avicenna’s extensive discussions of the method.¹³⁵

Still, this is largely speculative. What is certain is that Rāzī doubts that real definitions, or informative definitions in general, can play any major role in philosophical discourse. As we shall see, this strong doubt will be reinforced and phrased in logical, or

¹³³ *Manṭiq al-Mulakhkhaṣ*, 90.

¹³⁴ The title is somewhat misleading as Rāzī is only interested in the section on the proper parts of real definitions. But this will make more sense when we see, in Chapter 3, that, to Rāzī, if the genus and differentia are not real, but only nominal, then the Porphyrian division breaks down.

¹³⁵ Avicenna devotes quite a bit of space in *Demonstration* (about three chapters, mainly chapters 2, 3 and 5 of Book IV) arguing against improper notions of division and elaborating the proper rules.

“analytic” terms as discussed above, particularly in the context of his systematic arguments against “real definitions” (*al-ḥadd al-ḥaqīqī*) in Chapter 3 of this dissertation. It should be noted here, however, that in **T1** (and implicitly in the preceding quote), Rāzī makes an important contrast between simply “distinguishing” objects of definitions and knowing fundamentally what *kind* of things they are. Recall that Avicenna, in his classification, was emphatic that real definitions do not simply distinguish items but include all the constitutive properties of an essence. Rāzī will argue that the most we can expect from definitions is differentiation (*imtiyāz* or *tamyīz*), which does not require the assessment of the nature or completeness of our knowledge of essences. Rāzī will, in fact, argue, in a number of places, that there should remain no distinction between a definition and a description. That is, he believes the entire categorization provided in *Demonstration* is problematic.

The fundamental distinction in **T1** is that made between the kinds of “things” that are being investigated: (i) named things and (ii) (real) quiddities in themselves. Here, I turn to a text of Rāzī that aptly summarizes a number of points that Rāzī sets out in the logic of the *Mulakhkhaṣ* and other works. But before assessing the details of Rāzī’s text, I will anticipate the analysis in this chapter and provide an overview of Rāzī’s epistemological programme. I will, however, have to gloss over a number of details which will be clarified subsequently in this chapter and the next. The core intuition behind Rāzī’s epistemic programme, maintained in all the works assessed here, can be illustrated with the cases of “heat” and “man”. For the sake of clarity, I shall follow these conventions (though they will be omitted where the terminology is clear):

1. ‘heat’ refers to the word, or the *linguistic type*, that refers to heat.

2. {heat} will refer to the concept signified by 'heat'.
3. <heat> will refer to the extra-mental object or instantiation of {heat}.

'Heat' for Rāzī signifies a simple concept, {heat}, which is the object of one of the five senses and it is thus acquired without definition. <heat> is some entity or event that gives rise to the sensation that we refer to by 'heat'; that is, it is the concept picked out by our general terms used in ordinary or pre-scientific language. Rāzī asserts, as a foundational principle, that any attempt to further define heat must be considered to take as its object something other than {heat}, which is the primary referent of our everyday use of 'heat'. This rule I will refer to as the *Indefinability of Sensible Terms*, which he will call a *qānūn* ("law"). Included in this rule are all the direct objects of sense perception or *sensibilia* (which I will simply refer to as *sensibles*). Given this rule, a scientific or essential definition of 'heat' cannot provide more accurate or deeper knowledge of the nature of the experience-based heat that we refer to when we use the term 'heat' pre-scientifically.

Moreover, Rāzī distinguishes between sensible terms and simple concepts, on the one hand, and complex quiddities, on the other. The former are the only quiddities that are truly simple, which means not only that they are indefinable and immediately known, but also that they are the foundational and most complete kinds of concepts that we have access to with regard to sensible reality. 'Man', for example, signifies a composite concept that picks out concrete objects made up of sensible simples (i.e., colors, shapes, smells and so forth) plus, perhaps, some noumenal properties that constitute the essential nature of the composite sensible item or kind.¹³⁶ Rāzī here distinguishes between two

¹³⁶ This is a simplification, as we shall see. There are a number of complications including Rāzī's definition of structured universals, which includes a kind of non-sensible property, called the structuring property, which will be discussed in the subsequent chapter. Moreover, in Chapter 6, I will examine how, from a

ways of taking our concept of the composite object <man>: (1) as referring to a thing primarily composed of sensible qualities (i.e., experience-based or phenomenal {man}); or (2) as referring to a composite essence or substance definable by essential parts (i.e., the natural kind or essential {man}). This corresponds roughly to the distinction Rāzī made in **T1** between the objects of definition, viz., between named things and real quiddities. Knowledge of (1) he will call accidental and incomplete (*al-‘ilm al-‘araḍī al-nāqis*) which is contrasted with knowledge of (2) which is complete essential knowledge (*al-‘ilm al-ḥaqīqī al-tāmm*). As such, the definition of {man} either concerns the linguistic term signifying (1) the sense-based or phenomenal {man} or (2) the essential-kind {man}. Definitions of (2) is what Rāzī means in **T1** when he states that the genus and differentia are obtained “in the manner of *taḥqīq*.” In fact, Rāzī’s theory of complex universals, which we have called *structured universals*, will complicate the naïve empiricist view that has been outlined here.

It is important to emphasize that Rāzī will assess from a number of angles the question of the possibility of obtaining or asserting real or scientific definitions. In this chapter, we examine the “empiricist” epistemological programme that he outlines specifically in logic, and which aims to problematize knowledge of noumenal properties. Here, Rāzī can be viewed as tackling a meta-definitional problem (or the semantics of definitions). In Chapter 3 of this dissertation, I will examine Rāzī’s arguments against real definitions that fall into his analytic analysis. In Chapter 3, in contrast to the meta-definitional analysis here, we will see that Rāzī examines definitions in an internal manner, by presuming that the semantics of the system is sorted out (or, at least, that the

psychological perspective, complex quiddities are not mental forms but mind-dependent constructions of a certain kind.

epistemological assumptions grounding informative definitions have been clarified). As such, his analytic argument does not assess scientific definitions as a method that involves a number of meta-definitional epistemological assumptions. Rather, Rāzī assesses definitions as assertions or statements of parts and properties of a definiendum. He will attempt to show that, in contrast to the view of scientific demonstrations, there are no non-circular and non-deductive means of viewing such definitions. He concludes there that no distinction can be maintained between definitions and descriptions and that only nominal definitions ought to be employed in logic. It is important to note that, in Part I, we are focusing on the epistemological problems relevant to logic. His broader systematic theory of knowledge, at the core of which lies the logical programme, involves a systematic analysis of various philosophical problems, such as the status of (abstract) mental forms, form-matter analysis and optical theory. As already stated, Chapter 5 will assess the ontological questions and Chapter 6 the psychological. However, as we will see, he will point towards these problems in various places in logic itself, but he will defer the full discussion to philosophy proper, which he refers to as *al-ḥikma*.

The epistemological programme, then, which will be discussed below, is one that Rāzī outlines specifically in logic to address the epistemological assumptions that he believes encroaches on the logical discussion. To that end, Rāzī sets out a set of rules that he believes needs to be observed in logic. Our primary focus will be on the *Mulakhkhaṣ* and the *Nihāya*, where the rules are set forth in various places of his analysis of universals and definitions. We turn first, however, to a summary of the major points made in the *Mulakhkhaṣ* and *Nihāya*, which is found in Rāzī's commentary on the introductory part to the *Organon* section of Avicenna's *ʿUyūn al-Ḥikma*. Rāzī's analysis in his *Sharḥ al-*

^c*Uyūn* is a commentary on the following lemma from Avicenna's text: "The universal predicated in the answer to 'What is it?' is that which signifies the complete essence of that whose quiddity is asked about (*kamāl ḥaqīqati mā yus'alu 'an māhiyyatihi*), as in saying, in response to 'What is a man?', 'It is a living rational mortal [thing].'"¹³⁷ As we shall see, Rāzī usually presents his rules in the *Mulakhkhaṣ* and the *Nihāya* as cautionary remarks. Here he also begins with a warning:

T 2

[I have inserted lowercase Greek letters to identify segments in the passages I shall refer to in the subsequent discussion.]

The First Problem (al-Mas'ala al-Ūlā):

Know that before delving into the problem [i.e., "What is it?"], we shall propose [some] preliminary points (*nuqaddimu muqaddimat^{an}*) that are required for a clarification of the problem. The [points] are our saying [the following]:

[α] A thing may be known by its essence (*bi-dhātihī*), or it may be known, not by its essence, but by its concomitants (*tawābi'*) and attributes (*ṣifāt*). As for the first, an example would be for us to see a color with our sight, in which case we perceive the quiddity (*māhiyya*) of the color inasmuch as it is (*min ḥaythu annahā hiya*). This knowledge is knowledge of a thing with regard to a specific reality and a particular quiddity. And it is the most perfect degree of knowledge of a thing.

[β] As for the second [i.e., knowledge of a thing's attributes], it is [for example] when a proof shows that the world is originated [i.e., has a beginning], and that every originated thing has an originator. Here, the intellect judges that the world has an originator, but it does not know what the quiddity (*māhiyya*) of that originator is, and what its reality is. So [what] is known of this originator is that

¹³⁷ Rāzī, *Sharḥ al-^cUyūn*, 1, 66.

it is an originator. As for what it [i.e., the originator] is (*mā huwa*) in its specified essence (*fī dhātihi al-makhṣūṣa*), this is not known. This [type of] knowledge, in terms of [its] being knowledge of a thing, is not with respect to the specific essence [of the object of knowledge], but rather it is with respect to it having some attribute or accident.

[γ] If you have understood these introductory remarks, we state: What is asked about by “What is it?” is either simple or composite.

[δ] If it is simple, then either [the question] is seeking complete essential knowledge [*al-‘ilm al-ḥaqīqī al-tāmm*] or knowledge that is accidental and incomplete [*al-‘ilm al-‘araḍī al-nāqis*].

If the former, it is [δ¹] one of those things that a person perceives with one of the five senses, or if not thus [i.e., perceived through one of the senses], he finds [δ²] some reality in himself, like knowledge of pain, taste, desire, anger and other psychological states (*al-aḥwāl al-naḥsāniyya*). Or [δ³] the thing that is asked about is external to things perceived by the senses and things perceived by the self.

[ε] As for the first category [i.e., δ¹], which is [when] what is asked about by “What is it?” [applies] to a simple quiddity perceived by one of the senses. The answer [to the question] is to point to that quality (*kayfiyya*). For example, if it is asked, “What is heat?”, the answer to this question is to state that “It is that thing which is perceived by the sense of touch upon touching a body of fire.” The answer is similar [when] one states, “What is whiteness?”, namely, [to respond] that “It is that which is perceived by the sense of sight upon looking at colors”.

Anyone who diverges from this rule (*qānūn*) in defining (*ta‘rīf*) these qualities is mistaken.

Now to the second category [i.e., δ²], which is [when] what is asked about [applies to] a simple quiddity not perceived by any of the five senses, but is perceived by the self in a necessary manner, for example, pain, taste, joy, and

sadness. If one asks, “What is joy?”, the answer is to say, “It is the thing which you find in yourself upon such-and-such a state.”

Now to the third [i.e., δ^3], which is [when] what is asked about by “What is it?” [applies to] a simple quiddity that is not perceived by the senses nor by the self. For this [kind of quiddity], **there is no way to define it (*taʿrīf*) that gives essential knowledge (*maʿrifa ḥaqīqiyya*), because we know necessarily after induction and testing (*al-istiqrāʾ wa-l-ikhtibār*) that it is not possible to have knowledge of that which falls outside of the first two categories in terms of real essential knowledge with respect to its particular essence. Rather, [only] a definition of it that gives incomplete accidental knowledge (*maʿrifa nāqiṣa ʿaraḍiyya*) may be possible.**¹³⁸

[ζ] This is the [same] discussion (*kalām*) [one ought to provide] if what is asked about [by “What is it?”] is a composite. The response is:

What is asked about by “What is it?” is a composite quiddity (*māhiyya murakkaba*) either in the way (*bi-ṭarīq*) that complete essential knowledge is given or in the way that incomplete accidental knowledge is given. If the first, the method of defining it is only by mentioning all the simples that are the [constitutive] parts of that quiddity, since we have indicated that there is no meaning to that quiddity except the collection (*majmūʿ*) of those parts. Then, if that is so, it is not possible to define that quiddity without all of the parts. This divides further into two, since that which is stated in the answer [to “What is it?”] is either [ζ¹] a singular term (*lafẓ mufrad*) that signifies through correspondence [*bi-l-muṭābaqa*] to the whole of those parts or [ζ²] many terms each of which signify a part of those parts.

As for the first [ζ¹], defining it is through a name (*taʿrīfuhu bi-l-ism*), the gist of which amounts to substituting a term for a clearer term in order for the questioner to understand, as when one asks, “What is man (*bashar*)?” and it is

¹³⁸ *Sharḥ al-ʿUyūn*, I, 67-68.

said, “It is human (*al-insān*).” This type is of little benefit and that benefit is only for language instruction and for providing another name synonymous to the first. As for the second [ζ^2], it is defining through the definition (*ta^crīf bi-l-ḥadd*). **For this reason, it is said that [technical] definition (*ḥadd*) has no reality but making precise what a name signifies in a general way (*tafṣīlu mā dalla ‘alayhi al-ism bi-l-ijmāl*). This is [the case] if what is asked of by “What is it?” is a composite quiddity and the response to it is by mentioning the method that provides complete essential knowledge.”**¹³⁹

In this passage, we find, once again, Rāzī expressing worries about our knowledge of the essences of things, as he did in **T1**. However, in **T2**, he makes a number of distinctions: essential versus accidental knowledge, simple versus complex quiddities, and linguistic versus some other kind of definition that remains unexplained. His general discussion from α to β leads to the primary distinction in the passage at γ between the various kinds of simple and complex objects of knowledge. Importantly, the distinction is made in response to the question, “What is it?”, which, as we saw above, is one of the scientific questions that Avicenna discusses in *Demonstration*, and which relates to nominal and real definitions. Rāzī’s distinction between “complete essential knowledge” and “incomplete accidental knowledge” seems to be addressing the Aristotelian theory of scientific knowledge, though how exactly his discussion applies to real definitions used in demonstrative science remains obscure in this passage. Our discussion of his analysis in the *Mulakhkhaṣ* and *Nihāya* will clarify a number of points that are assumed in this summary, particularly his claim at ζ^2 that technical definitions ought to be construed as “making precise what a name signifies in a general way”, a phrase that we saw Avicenna

¹³⁹ Ibid., 67-69.

used to describe nominal definitions in *Demonstration*.¹⁴⁰ However, Avicenna had claimed there that knowledge provided by nominal definitions does not provide knowledge of the essences of things in any way whatsoever, much less complete essential knowledge. Complete essential knowledge could only be obtained through real scientific definitions. Thus, either Rāzī has misinterpreted the relation of definitions to the scientific questions, or he is making a new claim. His statement at ζ², “For this reason, it is said that *ḥadd* has no reality but...”, suggests that he is making a new claim, which might be interpreted as stating that definitions in the technical sense, or those that are to be used in science, have “no reality” except in providing the nominal definiens of a complex quiddity. That is, the only complete knowledge that can be acquired of composite quiddities is that which is given by the nominal definition and not by real definitions. This is precisely what he will say in the *Nihāya* and the *Mulakhkhaṣ*, as we will see below. But in the *Nihāya* and *Mulakhkhaṣ* he will argue that no distinction can be maintained between definitions and descriptions.

Though my primary aim is to set out Rāzī’s views as set out in the *Mulakhkhaṣ*, *Nihāya*, *Mabāḥith* and *Sharḥ al-Ishārāt*, the following analysis will show that the account in *Sharḥ al-‘Uyūn* follows the same epistemological rules set out in the former set of works. In particular, we will see that Rāzī’s statement at ζ that “we have indicated that there is no meaning to that quiddity except the collection (*majmū‘*) of those parts” presumes his own analysis of quiddities and their parts, in particular his notion of structured universals. The *Mulakhkhaṣ* and the *Nihāya*, however, will explain very

¹⁴⁰ Rāzī, *Mulakhkhaṣ*, 106, 107-108, 110.

precisely what he means by “collection of parts”.¹⁴¹ However, to understand Rāzī’s view of universals of complex sensible objects one needs to better understand his view of simples. The above account makes a number of foundational distinctions regarding simples and sense perception that will be central to his larger epistemic programme, distinctions that were made and elaborated in the earlier works, as we shall see. As such, this chapter will focus on simples and will not fully tackle the problem of complexes. Before moving on, it should be noted that Rāzī does distinguish in **T2** between (ζ^1) lexical definitions and (ζ^2) technical definitions, a point which will be significant to our discussion of Rāzī’s view of definitions below.

Returning to our analysis of the text of **T2**, Rāzī, as stated, sets out a number of basic distinctions, including simples/composites, essential/accidental knowledge, and lexical/technical definitions (though, as stated, this last distinction, particularly what constitutes “technical definitions”, remains obscure). His preliminary remarks from α to β take the distinction between sense perception and proof as an example of, or analogy to, the distinction between essential and accidental knowledge. There is also a distinction, implicit though crucial, in the account between definability and indefinability. It is a good idea to clarify Rāzī’s terminology first, since his use of terms here is consistent with his usage in other works. Rāzī uses *ta^crīf* to apply to both technically definable things (objects of *ḥadd*) as well as those that are only “definable” by pointing towards a thing or providing some kind of statement that applies directly to the sensible experience or

¹⁴¹ As we will see, collection is a rather bad translation for *majmū^c*. That is, Rāzī does not view a structured universal as simply an aggregate of parts but as a kind of related whole forming a certain symmetrical dependency relation between parts, properties and wholes.

psychological state identifying the object. Rāzī underscores the point that the defining by pointing towards or providing statements of observation is not informative in any extra-linguistic way. Thus, *taʿrīf* is a general term that does not necessarily signify a definition or, at least, a *technical* definition. *Hadd*, however, is used here to refer specifically to technical definitions, which he seems to view here as a particular kind of *taʿrīf*.

Returning to the question of definability, the categories of objects of knowledge are divided here into: (δ^1) simple objects of sense perception; (δ^2) simple objects of internal perception or psychological states; (δ^3) simple objects not available to sense perception; (ζ) composite objects. Crucially, composite things are not described as being (direct) objects of sense perception. Here, then, composites seem to be similar to δ^3 in that they are not directly apprehended by the senses. We will return to composites after discussing the nature of simples.

At the end of ϵ , Rāzī states rather dramatically regarding δ^1 and δ^2 that “anyone who diverges from this rule (*qānūn*) in defining (*taʿrīf*) these qualities is mistaken”. We have referred to this rule as the Indefinability of Sensible Terms and, as we will see, the warning he issues here is construed in earlier works as primarily addressing the views of the *falāsifa*. In the section devoted to definitions in the *Mulakhkhaṣ*, which follows **T1** quoted above, Rāzī begins by discussing kinds of definitions, and suggests, in a manner consistent with **T1**, that real definitions are unattainable. In the following chapters, we shall examine this section in detail. But it can be noted here that Rāzī provides a division of simple and composite quiddities with regard to definition.¹⁴² He concludes his division

¹⁴² The division there is, as stated, analytic and less concerned with epistemological matters: (1) composites that do not compose other composites and so can be defined but not defined with (i.e., cannot be a part of

of quiddities by stating that this shows that, with regard to simples, we either have (i) no conception (*taṣawwur*) of simples or we have (ii) a conception of simples in a manner that does not require acquisition. The following section is devoted specifically to the question of whether conception of simples is acquired (*iktisāb*). The term *iktisāb*, it will be recalled, is what Avicenna uses in *Demonstration* for conceptions that are acquired by means of real definitions. In this section, Rāzī lists the following examples of simples: colors, light, noises, tastes, smells, tangible qualities, as well as psychological states like knowledge, power, will, desire, pain, pleasure, happiness and desire. It can be noted that Rāzī's examples of sensible simples correspond to δ^1 and δ^2 in *Sharḥ al-ʿUyūn* and his distinction in the previous section, i.e., (i) and (ii), corresponds to δ^3 and δ^1/δ^2 , respectively. However, he expands here by stating that it is not possible to provide a definition (*taʿrīf*) of these except by clarifying them through *linguistic expressions* (*tabdīl lafẓⁱⁿ bi-lafẓⁱⁿ awḍaḥa minhu tafhīm^{an} li-l-sāʾil*), because “there is nothing in existence better known than internal states (*wijdāniyyāt*) and sensibles (*maḥsūsāt*) for us to define the [latter] by [something better known].”¹⁴³ That is, the simples of δ^1 and δ^2 are indefinable (i.e., not to be acquired through definitions) and epistemologically basic. The *Mulakhkhaṣ*, being a compendium, does not fully expound, specifically in logic, on the philosophical significance of the points, though as we will see shortly he will point out some important philosophical problems. The *Nihāya* and *Sharḥ al-Ishārāt*, being much

the definition of something); (2) simples that compose composites and are indefinable but are defined with; (3) composites that compose other composites and so can be defined and defined with; (4) simples that do not compose composites and are thus indefinable and not defined with. By definition here he means technical but not real definition. That exact description of definition provided in the *Sharḥ al-ʿUyūn*, “making precise what a name signifies in a general way” (*tafṣīlu mā dalla ʿalayhi al-ism bi-l-ijmāl*), is found in this much earlier work. See *Mulakhkhaṣ*, 106, 107-108, 110.

¹⁴³ Rāzī, *Mulakhkhaṣ*, 109.

longer works, expand on these points made in the *Mulakhkhaṣ* regarding sensible simples with a number of examples.

The first of the twenty parts of the *Nihāya* (each referred to as *Aṣl*) assesses introductory problems (*muqaddimāt*) regarding definitions and proofs. The section can be viewed as the equivalent to the logic section of the *Mulakhkhaṣ*, though it proceeds in a very different manner.¹⁴⁴ The discussion of definition in the *Nihāya* proceeds primarily without referring to the familiar terms of Aristotelian logic and is not structured like the logic of the *Mulakhkhaṣ*, which for example systematically discusses the Porphyrian predicables.¹⁴⁵ However, he does point out specific positions of the Aristotelian logicians, specifically regarding real definitions and the status of the genus and differentia, as we shall see in Chapter 3 of this dissertation. Indeed, we will see that his argument in the *Nihāya* against real definitions is precisely the argument he provides in the *Mulakhkhaṣ*. As such, Chapters 1 and 3 of the dissertation will establish that although Rāzī seems to be more of an Aristotelian in the *Mulakhkhaṣ* and more of a *mutakallim* in the *Nihāya*, his philosophical programme specifically regarding definitions and predication is the same in both works.

Returning to Rāzī's problem concerning the conception and indefinability of sensible simples, the fifth section of the first part of the *Nihāya* discusses knowledge that is not acquired, which corresponds to the section of the *Mulakhkhaṣ* discussed above on acquiring conceptions of simples. As in the *Mulakhkhaṣ*, he specifically addresses

¹⁴⁴ As clarified further below, he does not presume the manner of studying logic in the Aristotelian school curriculum and as such he will generally avoid the terminology and the extensive discussion of syllogistic reasoning. However, we will see that he does directly address core questions raised in the *Organon*.

¹⁴⁵ However, it will be shown below that even the *Mulakhkhaṣ* will clarify the terminology so as to reflect his epistemic principles. See below on his discussion of part simpliciter (*juzʿ*) versus essential part (*dhātī*) as constituents of the quiddity.

sensibles (*maḥsūsāt*) and makes the same point that defining them would require knowledge of things that are better known.¹⁴⁶ However, Rāzī provides examples of the violations of the rule, or *qānūn* as he called it in **T2**, of the Indefinability of Sensibles. In his first example, Rāzī states that the *falāsifa* attempt to define ‘heat’ as “that which combines similar things and disperses differing things” and ‘cold’ as “the opposite of that”.¹⁴⁷ He then argues that if this definition means that the sensible quality that we name ‘heat’ necessarily applies to or entails those effects (*mūjiba li-hādhihi al-āthār*), then it is a claim that requires proof and a proof, he notes, is distinct from definition. This is a central point that we shall return to since it applies to his view of real definitions more generally. Here, Rāzī argues against the view that these (scientific) definitions provide a more precise conception of the terms ‘heat’ and ‘cold’. He argues that the perceived sensible quality is better known than the properties set out in the scientific definition. Rāzī here has something specific in mind, particularly regarding the nature of the properties set out in Aristotelian definitions, which is not elucidated in the *Nihāya*. Fortunately, the relation of the Indefinability of Sensibles to the views of the *falāsifa* is assessed in further detail in his commentary on Avicenna’s *Ishārāt*. Rāzī provides the full version of the truncated definitions provided in the *Nihāya* of ‘heat’ and ‘cold’ in addition to the definitions of other sensibles, citing Avicenna’s *Book of Definitions* (*Hudūd*) and *al-Shifā’*³ (specifically, *Generation and Corruption of The Physics*). Here, Rāzī holds that, in the Aristotelian view, these definitions are of the primary properties of sensible bodies

¹⁴⁶ This part of the discussion is shorter than the *Mulakhkhaṣ* as he leaves out the list of sensibles provided in the *Mulakhkhaṣ*. I will stick to using the single-quotes because Rāzī wants to emphasize that these terms are those ordinary-language terms that signify pre-scientific concepts, as clarified below.

¹⁴⁷ Rāzī, *Nihāyat al-‘Uqūl fī Dirāyat al-Uṣūl*, Ayasofya 2376, fol. 6b. These are the truncated definitions of “heat” and “cold” that Avicenna provides in *Generation and Corruption of the Physics* of *al-Shifā’*. See *Faṣl* 9, p. 154.

or, as he states, “the primary powers (*quwā*) through which action and reaction are completed in the [four] elements.”¹⁴⁸

Rāzī’s discussion of the scientific definition of sensibles builds on his discussion of Avicenna’s view of elemental forms (*al-ṣuwar al-naw‘iyya*) a number of chapters back, where Rāzī suggests that the elemental forms are not essential forms but (phenomenal) properties, a discussion we shall return to in Chapter 5.¹⁴⁹ In the section under discussion, Rāzī raises the same objection to re-defining sensibles such as “heat”, but adds here that we know of the properties set out in such definitions only after expending “great effort in applying induction (*istiqrā’*) to their cases and seeking out their particular instances.”¹⁵⁰ It is in this sense that Rāzī argued in the *Nihāya* that the properties in the scientific definition are known in a weaker sense than our common everyday knowledge of sensibles. Indeed, he goes on to argue that, even if we rely on induction, we will not know that these properties are grounded in the essential qualities (*al-kayfiyya al-qā’ima*) in, say, the element of fire since induction cannot provide knowledge that this is necessarily the case. Significantly, Rāzī adds that we would need to rule out, for example, that God is a willing agent for this premise to hold since it could simply be a result of the processional or phenomenal regularity (*ijrā’ al-‘āda*) that results from divine choice. He concludes by stating that taking the definition to be true of the essence of heat, in the sense intended by the *falāsifa*, requires settling such metaphysical questions by an extended and minute philosophical investigation. In short, our knowledge even of the essential properties of the elemental forms requires proof and so their definitions cannot supersede the primary meaning of a term based on the more reliable

¹⁴⁸ Rāzī, *Sharḥ al-Ishārāt*, II, 159.

¹⁴⁹ See Ibid., 75-80.

¹⁵⁰ Ibid., 160.

source of sense perception. In Chapter 5, I examine how Rāzī provides an alternative view of elemental forms or properties that does not rely on hylomorphic analysis. However, it is not clear, yet, how Rāzī precisely construes sensibles. A full understanding of Rāzī's systematic view of sensibles involves an assessment of his philosophical analysis of sensible qualities (*al-kayfiyyāt al-maḥsūsa*) in the second book of the *Mulakhkhaṣ* and the *Mabāḥith*. However, let us first return to the outline of his epistemological programme in **T2**, which provides some further distinctions with regard to the notion of sensible simples.

We have then the real scientific definition of sensible terms, such as 'heat', advanced by the Aristotelians. But if, according to the rule of the Indefinability of Sensible Terms, they cannot be defined thus, what does Rāzī have to say about such sensible terms? We certainly hope that he has more to say about what sensibles are than the mere fact that they are objects of sense perception. He does state that the objects of sense perception, though indefinable, can be shown or described by "pointing toward" or "indicating" (*al-ishāra*). Pointing cannot, in Rāzī's view, simply mean identifying individual instances of sense experience. Recall that Rāzī discusses the nature of sensibles in the context of his commentary on the question "What is it?". But pointing cannot constitute an adequate answer to the question, since the "What is it?" does not apply to individuals but rather to universals or kinds, as discussed above (i.e., the *what-is-it* of a thing). Rāzī in fact agrees with Avicenna and the Aristotelians, that individuals are indefinable. Indeed, as we saw above in the context of Avicenna's *Demonstration*, regardless of whether the question concerns the essential or nominal nature of the definiendum, the inquiry into "What is it?" applies to universals. However, if we first

take a closer look at **T2**, we will see that Rāzī attempts to provide examples of “definitions” of sensibles or responses to the “What is it?”. In **T2**, Rāzī had stated: “[I]f it is asked, ‘What is heat?,’ the answer to this question is to state that ‘It is that thing which is perceived by the sense of touch upon touching a body of fire’. The answer is similar [when] one states, ‘What is whiteness?,’ namely, [one responds] that ‘It is that which is perceived by the sense of sight upon looking at colors’. Now, if we take the two possible definitions or responses to “What is it?” specifically of ‘heat’, we have the following:

- a) heat =_{df} that which is perceived by the sense of touch upon touching a body of fire (Rāzī’s definition at ε of **T2**).¹⁵¹
- b) heat =_{df} the active quality moving that in which it inheres upward due to it causing lightness and because of which it collects things that are alike and disperses those that differ (the Aristotelian definition).

Importantly, as noted, definition (b) is meant to apply to a sensible quality (*al-kayfiyya al-maḥsūsa*) according to Avicenna and even more it defines what ‘heat’ actually is (i.e., it is a response to ‘What is it?’ as applied to a qualitative accident). That the scientific definition of ‘heat’ is grounded in the sensible quality is a central commitment of Aristotelian science since the domain of inquiry, physics, concerns sensible or perceptible bodies.¹⁵² The four elements of the physical world (fire, earth, water, and air) are combinations of the contrary perceptible qualities, heat/cold and moisture/dryness, scientifically defined. The perceptible contraries, further, constitute the core explanatory

¹⁵¹ Following the philosophical literature, I will use “=df” to signify the technical or real definition of a term.

¹⁵² Aristotle, for example, states at *De Caelo*, 306^a 9: “It seems that perceptible things require perceptible principles, eternal things eternal principles, corruptible things corruptible principles; and, in general, every subject matter principles homogeneous with itself.”

principles of physical change, since all other qualities and changes can be reduced to these essential sensible qualities of the four elements constituting the world of generation and corruption. This model of scientific explanation follows the theory of science set out in *Posterior Analytics* as we discussed in the previous section. Real definitions of such essences are thus crucial, at least in theory, to the larger project of philosophically or scientifically understanding natural phenomena. What Rāzī makes clear in his analysis is that definition (b) is not meant to stipulate a new technical or scientific sense of ‘heat’, which for Rāzī, as we will see, would be unobjectionable.

Now let us first examine definition (a). Recall that Rāzī asserts that knowledge of sensibles constitutes the most perfect degree of knowledge. But in **T2** he *seems* to identify this kind with our subjective experience of a sensible quality. This is suggested in **T2** where he indicates that sensibles perceived “by the senses” have the same status as internal psychological states, i.e., those objects of knowledge grasped “by the self”. However, if that is the case, Rāzī should respond to the question of “What is it?” with a subjective response, e.g., *I feel hot*, *I see white*, or *I feel pain*. In such statements, the indexical, “*I*”, determines a subjective and individual context of experience and it is precisely those empirical experiences that constitute the most perfect knowledge. Construed thus, what Rāzī means by sensibles or “*maḥsūsāt*” would be something like qualia or the “incorrigible” sense-data that some logical positivists in the 20th century believed should serve as a foundation for empirical statements. They viewed such experiences as incorrigible – i.e., impervious to doubt – because, for example, when I say “I feel pain”, *when* I am feeling in pain, it is impossible for me to be mistaken about my experience of feeling pain. That is, the statement, “I feel pain”, records only my

subjective experience of that instance of pain and does not make any objective claims about the independently observable or ontological nature of the pain. Indeed, others may even doubt the truth of my statement (from some objective or external perspective) and even I myself can doubt it at another time when I am not feeling pain. The precise details of the notion of incorrigible sense-data need not detain us, but it simply needs noting that the view that sense-data, construed thus, can serve as the foundations of empirical statements was severely criticized and ultimately abandoned. That is, the move directly from subjective experiences or sense-data to objective or intersubjective empirical statements was viewed as being riddled with problems. If Rāzī views *maḥsūsāt* as sense-data or qualia, and their epistemic status as being subjectively incorrigible in the way some logical positivists viewed sense-data, then Rāzī will, or at least ought to, severely limit the role of this category of knowledge in his system. But it is quite clear that Rāzī does not think that *maḥsūsāt* are limited in this way for a number of reasons. For one, Rāzī has much to say about sensibles in Book II of the *Mulakhkhaṣ* and the *Mabāḥith*, aspects of which will be discussed shortly.

Rāzī's sample definitions of the sensibles of "heat" and "color" in **T2**, which are formulated as responses to "What is it?", suggests that what he has in mind is distinct from the individual instances of sense experience. That is, in addition to the fact that it is an answer to "What is it?", which applies to universals not particulars, his formulation, "That which is perceived by the sense of..." (or in the case of psychological states, "It is the thing which you find in *yourself* upon such-and-such a state") removes the indexical "*I*" and attempts to formulate the experience independently of the speaker. Even in the case of psychological states, Rāzī inserts "yourself", which quite clearly applies to the

theoretical questioner and not necessarily to any particular individual. As such, it would seem that Rāzī formulates these “observational” statements so as to remove subjective indexicals and replace them with what might be viewed as objective or inter-subjective indexicals, e.g., *that which* or *yourself*. This is perhaps too speculative. More could be said, or conjectured, about Rāzī’s formulations in **T2**, but, in a particularly illuminating passage of the *Nihāya*, Rāzī establishes a number of central points regarding the nature of our knowledge of sensibles which supports this very reading. Recall that in the *Nihāya* the dispute, particularly with the *falāsifa*, concerned the relation of the essential properties set out in the real definition of, say, {heat}, to the sense given by the linguistic term ‘heat’. Rāzī states regarding the philosopher’s definition:

T3

[(i)] If what they mean by that [definition] is to clarify that this sensible quality that we call “heat” necessarily entails these effects (*al-āthār*) [i.e., the properties in the real definition], then that is a claim (*daʿwā*) that requires proof and a claim other than a definition. [(ii)] If [however] the aim of it is to clarify the definition (*taʿrīf*) of the thing named (*al-musammā*) by the term “heat”, then that is a lexical definition (*taʿrīf lughawī*), because those things [i.e., the essential properties] that they [the philosophers] mention never occurred to the minds of speakers of the language (*ahl al-lughā*) when they applied the term “heat”[...]. [(iii)] If [finally] the aim of it is the definition (*taʿrīf*) of this sensible quality (*al-kayfiyya al-maḥsūsa*) which we perceive when we touch fire, then it is known that this quality is better known to everyone than these things that they mention, because the masses (*al-ʿawāmm*), all of them, distinguish between heat insofar as it is heat (*min ḥaythu hiya ḥarāra*) and what is

other than it. But distinguishing a thing from [what is] other than it is only possible after [having] knowledge of that thing. **Hence, the masses know the reality of heat, even if they do not know that it is “that which combines similar things and disperses differing things.” As for the [intellectual] elites (*al-khawāṣṣ*), they do not know that heat is like this [i.e., accords to the real definition] without proof [*ḥujja*].**¹⁵³

Rāzī distinguishes between three possible objects of definition or, more generally, three possible aims that the *falāsifa* might have in defining ‘heat’. First is what he calls the “claim” or assertion that the properties in the definiens apply necessarily to the definiendum. As discussed in the previous section, Aristotelian definitions provide the necessary or *per se* properties that apply to an essence. However, definitions themselves are indemonstrable to avoid the infinite regress or circularity that arises from the requirement that all premises of demonstrations need to be demonstrated. That is, real definitions provide the immediate and necessary premises of demonstrations. Rāzī is well aware that this is what the theory of demonstrative science demands, as he makes clear in various places, including in his commentary on Avicenna’s discussion of demonstrative science in the *Ishārāt*.¹⁵⁴ Further, it is Rāzī’s own position that definitions cannot be proven by deductions.¹⁵⁵ However, here he distinguishes clearly between nominal definitions and real definitions. In the *Mulakhkhaṣ*, Rāzī devotes a chapter in his section on definitions to this precise problem, entitled “That definitions are not acquired by means of proof” (*fī anna l-ḥadd ghayr yuktasab bi-l-ḥujja*). Crucially, however, he states,

¹⁵³ *Nihāya*, fol. 5a.

¹⁵⁴ See *Sharḥ al-Ishārāt*, 1, 345-351.

¹⁵⁵ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 110.

T4

[This is] because a definition (*al-ḥadd*) is nothing but *making precise what a name signifies in a general way*, and this is something that cannot be subject to dispute except from the perspective of language, and this is not [a matter of] rational investigation (*baḥṭh ʿaqlī*)...but this [holds] if the definition is in respect of the name (*bi-ḥasb al-ism*). However, if it is in respect of the essence (*bi-ḥasb al-ḥaqīqa*), which is to point to a particular existent and claim (*yazʿamu*) that it is a composite of this or this [property], then there is no doubt that a proof is required.¹⁵⁶

The two kinds of definitions, namely “definitions in respect of the name” and “definitions in respect of the essence”, are of course nominal and real definitions respectively. It can be noted that the passage resolves the problem we encountered in **T2**, where he states precisely the definition of nominal definitions provided here. That is, it is now clear that Rāzī was in fact making that claim that, in responding to “What is it?”, definitions should *only* be construed as nominal definitions and not as real definitions. Real definitions, as the passage makes clear, make epistemological claims that go beyond the role of definitions. In Chapter 3, we will see his more “analytic” approach to the problem.

Returning to **T3**, the next two possibilities are more important, as they clarify what Rāzī’s own view of sensibles are. The next possibility, namely (ii), is that the definition aims to clarify or investigate the meaning of the named thing (*al-musammā*), i.e., the meaning of the term ‘heat’ that is employed by a particular language community. But to investigate the meaning of the term is to investigate the lexical definition, which, in turn, is to investigate the established usage of a term in the language. Rāzī’s discussion

¹⁵⁶ Ibid.

invokes the analysis of language as indicated by his statement, “Those (essential properties) that (the philosophers) mention never occurred to the minds of speakers of the language (*ahl al-lugha*) when they applied the term ‘heat’[...].” The details of Rāzī’s analysis of semantic theory is beyond the scope of this study. But we can, very briefly, summarize those points that are of philosophical importance with regard to our discussion. With regard to language, the determination of a meaning involves investigating the (historical) usage of a term, which was a crucial element in the “transmitted sciences” (*al-‘ulūm al-naqliyya*), particularly exegesis (*tafsīr*) and law (*fiqh*). In practice, this usually involved examining historical source materials, such as poetry and aphorisms, to find the primary meaning of a term. This linguistic investigation aimed to establish the primary sense that “the Positor” (*al-wāḍi‘*) of the language established or stipulated, that is, as opposed to secondary or historically accrued meanings. Determining what or who, precisely, the Positor is was a theoretical problem which was the subject of intense discussion.¹⁵⁷ For our purposes, the debate will not be particularly relevant, since our linguistic terms concern immediately perceived objects of sense, but Rāzī’s approach to the provenance and convention of language is pertinent to our discussion. In short, his view is that the question of determining the Positor involves historical and interpretive considerations that are ultimately indeterminable.¹⁵⁸ The upshot is that the Positor is an undetermined entity, be it the language community, an individual or even God.

¹⁵⁷ See Rāzī’s comprehensive discussion in *al-Maḥṣūl fī ‘Ilm al-Uṣūl*, ed. J.F. ‘Alawānī (Beirut: Mu‘assasat al-Risāla, n.d.), 181-190.

¹⁵⁸ He states, “The majority of the discerning scholars (*al-muḥaqqiqūn*) concede the possibility of all these alternatives, but refrain from making a certain judgment.” Ibid., 182.

Turning now to (iii), Rāzī examines the possibility that a definition applies to the common conception, {heat}, that is available to the everyday person untrained in the philosophical sciences. That is, {heat}, in this sense, picks out the pre-scientific concept and is contrasted with the concept that is signified by the real definition employed by those specialists in philosophy. Importantly, Rāzī's discussion, particularly in (ii) and (iii), leaves no doubt as to the nature of sensibles and whether they are, for him, simply the particular and subjective sense experiences, or sense-data, of individual persons. In (iii), Rāzī makes clear that {heat} here refers not just to the pre-scientific but also public notion, i.e., it is the concept grasped commonly by people. As Rāzī states, "Because the masses (*al-ʿawāmm*), all of them, distinguish between heat insofar as it is heat and what is other than it." Rāzī means not that each individual knows subjectively each instance of <heat>, but that people in general distinguish heat from what is not heat. More significantly, the public or intersubjective nature of the pre-scientific notion of heat (which we shall label {heat}^P to distinguish it from the real or scientific notion, or {heat}^R) is made clear if we consider the fact that, for Rāzī, 'heat' in its common usage is what signifies {heat}^P and the usage of a term is simply the (public) usage of the term in a language community, as indicated in (ii).¹⁵⁹ Our analysis of Rāzī's philosophical discussion shortly below and, more elaborately, in the following chapters, will further clarify some central aspects of the nature of public or intersubjective knowledge.

In **T3**, Rāzī makes evident a philosophical point that is crucial to avoid misunderstanding his argument, specifically the rule of the Indefinability of Sensible Terms and, more generally, his epistemological concerns in logic. That is, Rāzī is not

¹⁵⁹ Indeed, the analysis of the "semantic" provenance of words shows clearly that it is a matter of public usage.

arguing, like Ghazālī, to simply show that demonstrative knowledge falls short of the required certainty or that the Aristotelian position on a specific issue is under-determined. Rather, Rāzī is attempting to clarify the semantic foundations of his logical system, a point we shall elaborate on in the next chapter. Indeed, as we will see, Rāzī will find much use in the philosophical discussion of a thing's properties if, first, we strip the analysis of the epistemic assumption inherent in essentialism. However, in **T3**, Rāzī's main concern is not the inability of real definitions to provide scientific conceptions of sensible terms. Rather, his main concern is the fact that the epistemic assumptions encroach on the logical discussion. Here, Rāzī is attempting to regiment language so that terms and meanings that may intrude on ordinary-language terms may carry hidden epistemological claims, claims that Rāzī thinks undermine the epistemic and semantic foundations of logic. This point is underscored in **T5** below. The passage shows that, with regard to the "intrusion" of extra-ordinary meanings, Rāzī is particularly concerned with the influence that philosophical discourse has on ordinary language. It is important, then, to note that Rāzī does not take issue with stipulating or positing new meanings or terms where philosophical discourse "discovers" new concepts. In his discussion of errors in definitions in *Sharḥ al-Ishārāt*, Rāzī puts forth a narrative clarifying the development of scientific terminology and its relation to ordinary-language terms:

T 5

Know that the positors (*al-wāḍiʿīn*) of terms (*al-alfāz*) only posit terms according to the meanings of terms that they know, then those who (rationally) investigate the sciences (*al-nāẓirīn fī al-ʿulūm*) come across meanings and objects that the positors of a language do not know, and they

[i.e., the philosophers/scientists] need to use those meanings and investigate them, so naturally they needed to posit terms that signify them [i.e., the scientific concepts]. And because they disliked positing terms anew (*ibtidāʿ^{an}*), they sought the closest things (*al-ashyāʿ*) in suitability (*munāsaba*) and similarity (*mushābaha*) to the concept that they wanted to name. Then they transferred (*naqalū*) the name of that suitable meaning to that which they wanted to name. This is like what we mentioned in the beginning of this book with regard to the use of the term “power” in many senses according to the order (*tartīb*) that we mentioned.¹⁶⁰

Rāzī’s narrative explains how philosophers approach nomenclature and how new terms become attached, by “transference” (*n-q-l*), to existing terms with established meanings. He underscores the point that the philosophers wanted to avoid neologisms, that is, coining a term – i.e., a word or a linguistic type – that was not used previously in the language. Moreover, they did not simply seek out words that existed in a language but sought those terms that were most “suitable” or “similar” in meaning to the newly identified concepts.¹⁶¹ Rāzī’s point is to clarify how old terms gain new meanings but also how new meanings might enter the language undetected, since, in approaching nomenclature, the philosophers aimed to naturalize terms within the language. Rāzī makes no objection to this as long as the original meaning of a term is distinguished from the philosophical or technical meaning that becomes attached to it. As such, he does not take issue with the many senses of “power” (*quwwa*) elucidated by the philosophers since it is clear that they distinguish the technical senses from the original sense(s). But with regard to the sensible terms, we saw that this is not the case. Moreover, in Rāzī’s view,

¹⁶⁰ Rāzī, *Sharḥ al-Ishārāt*, I, 120-121.

¹⁶¹ It is not clear whether what mattered in seeking the suitability of a term was *only* its meaning, but it seems to certainly include meanings since Rāzī refers to “things” or *ashyāʿ* rather than just terms or *alfāz*.

there is much at stake specifically when it comes to the original senses attached to sensibles terms because they identify what, in his view, are epistemologically foundational concepts: hence, the primacy of the rule of the Indefinability of Sensible Terms.

Let us return to the notion of {heat}^P and how precisely Rāzī views its objective reality. The concept, as discussed, identifies the pre-scientific and public notion of heat, which is distinguished from {heat}^R that identifies the scientific concept formulated in the philosopher's definition. However, it remains to be clarified what relation might hold between the two. That is, is Rāzī arguing that the pre-scientific or everyday notion of heat is what heat is in reality, i.e., it accurately and completely corresponds to the extra-mental entity <heat>? Otherwise put, is there nothing more to the objective reality of heat than what is grasped by the common pre-scientific notion, {heat}^P? If so, then Rāzī would be committed to a number of claims. First, he would be saying that properties identified by the real definition *cannot* be proven to hold of heat. However, what Rāzī states, in **T3** and even more clearly in **T4**, is that it is a claim requiring proof and, as such, is not a real definition in the intended sense. Further, Rāzī would be also be committed to the claim that there is no further investigation of sensibles because there is nothing more to the phenomena but what is offered by the concept {heat}^P. Though this is certainly one way of viewing sensibles, it is not the approach that Rāzī will take. As discussed above, Rāzī's epistemological approach is based on a distinction between noumena and phenomena and not on the denial of noumena. Rāzī's philosophical discussion of sensible simples shows that he attempts to distinguish systematically between the phenomenal properties and the noumenal properties of a thing. In the next few chapters, I will elaborate on the structure

of Rāzī's philosophical approach, which is based on this distinction, and provide an analysis of various examples, which include not only sensible simples but complex quiddities as well, such as "body". Here I will, very quickly, look at his philosophical discussion of sensible qualities or *maḥsūsāt*, limiting myself to the problem of noumena versus phenomena.

As already mentioned, {heat}^P, as understood by the ordinary members of a language community, is signified by the ordinary term 'heat' and corresponds to the extra-mental reality, <heat>. If {heat}^P, however, corresponds to objective or external reality in the strong and exclusive sense mentioned above, there should be no reality to <heat> except that which is identified by the common notion {heat}^P. However, in the *Mabāḥith* and the *Mulakhkhaṣ*, Rāzī makes clear that there is in fact a distinction between our public or intersubjective notion of sensibles and what the sensible quality is in itself. His approach to sensibles requires a focused study and involves a number of positions he takes regarding substance and accidents established in the previous discussion. Though I will not discuss those positions here, it should be noted that our analysis of his view of the Aristotelian categories in Chapter 4 will bear directly on his view of sensible qualities.

Before examining a specific case of a sensible quality, it can be noted that, in his introductory chapters on the definition and division of qualities (*kayfiyyāt*) of the *Mabāḥith*, Rāzī notes that the approach that Avicenna takes in the *Shifā'* in dividing qualities is "weak" (*da'īfa*). As will be shown in Chapter 4, Rāzī believes that Avicenna's division is weak because the division, contrary to Avicenna's claims, does not identify real natures (i.e., we do not know the essences of such qualities). Rather, the division of

qualities, or any of the categories for that matter, is based on “external” properties or concomitants (*lawāzim*), a term which was discussed previously and which will figure prominently in Rāzī’s discussion of his own views, as shown in Chapters 2 and 3. In his discussion of the specific sensibles, heat and cold, which is found in his section on objects of the sense of touch (*al-malmūsāt*), he examines the definition of heat and cold provided by Avicenna in the *Shifā’*¹⁶² and elsewhere. He discusses various aspects of the definition that I shall leave aside for the moment. What is important to note here is that he concludes the section by raising an objection that these are not, in fact, definitions and that the properties do not apply necessarily to our concept of heat. He states in response to the objection:

T 6

We state that the aim of the descriptions (*rusūm*) of these qualities is not to provide the essences (*māhiyyāt*) of [those qualities], because sense perception provides what is possible with regard to that; rather, the aim is to mention their proper properties and their effects so that one can be distinguished (*tamayyuz*) one from another, and this obtains by [simply] mentioning these *lawāzim*.¹⁶²

Rāzī makes clear that, in his own approach to “definition”, the aim in defining ought not to be identifying the real natures of sensible qualities but their external properties or concomitants. But what does Rāzī mean by concomitants of *lawāzim*? A better understanding of what he states in **T6** will be afforded by our analysis of structured universals in the following chapters, as they explain how precisely he relates the external

¹⁶² Rāzī, *al-Mabāḥith al-Mashriyya*, ed. M. al-Baghdādī (Beirut: Dār al-Kitāb al-‘Arabī, 1990), I, 384.

properties of a universal and its parts in a way that does not presume the Aristotelian division between essential parts and accidents. In Chapter 3, I will argue that his notion of nominal definitions, which seeks only to distinguish x from non- x , allows him to appropriate properties established by induction or proof, such as those in the Aristotelian definition. This is what he means by “sense perception provides what is possible with regard to that”, i.e., possible rather than necessary properties can be applied to our common notion ‘heat’ to distinguish it from other things. In any case, the distinction here between the noumenal qualities and “phenomenal” qualities is clear enough. However, a better example, and perhaps one more significant from the perspective of analysis of Rāzī’s systematic epistemology, can be found in his discussion of the nature of color in his section on sensible objects of sight. The analysis involves a number of aspects of his theory of optics and the history of the Aristotelian view of sense perception and the nature of color, which will be dealt with in Chapter 6. Here, I provide a brief overview of the problem.

In assessing the nature of color, Rāzī examines the nature of the relation of light to the sensible quality, specifically by addressing the Aristotelian notion that color is actualized when the transparent medium between the surface of a body and the faculty of sight is actualized by light. As such, color is only color potentially when, say, it is in the dark or is in the inside of bodies.¹⁶³ There are complications here that will not detain us, particularly regarding shifts in the Aristotelian theory initiated by Avicenna.¹⁶⁴

¹⁶³ Aristotle states in *De Sensu* 439b11-12: “[W]e may define color as the limit of the transparent in determinately bounded body. For whether we consider the special class of bodies called transparent, as water and such others, or determinate bodies, which appear to possess a fixed color of their own, it is at the exterior bounding surface that all alike exhibit their color.”

¹⁶⁴ For Aristotle, the transparent medium’s being actually transparent is the primary condition for the perception of colors, that is, colors are actualized on the surface of bodies. For Avicenna, it is color that is

Importantly, Rāzī's theory of the nature of color does away with the Aristotelian analysis of potentiality and actuality and substitutes it with an analysis of phenomenal color versus noumenal color, or secondary versus primary quality of color. That is, arguing against the notion of light actualizing color, Rāzī states, "Light, no doubt, possesses an essence in itself (*māhiyya fī nafsīhi*) and it can rightly (*yaṣluḥu*) be an object of sight (*marʿiyy^{an}*). So why can it not be [the case that] that which is dependent on light is the following property (*ḥukm*): it is the possibility/suitability (*ṣiḥḥa*) of its being an object of sight and not the obtaining of that essence."¹⁶⁵ That is, color in itself is always actual but the perception of a color requires light. Rāzī, then, distinguishes between three things: (i) the disposition of the body to be a particular color when there is light, (ii) the existence of that color, and (iii) that color being such that can be seen. The first, (i), is the primary property of the essence of the color, whereas (iii) is the color in a secondary sense that we would perceive by the sense of sight if we are present and if the conditions for (ii) obtain. As we will see in Chapter 6, this draws on Rāzī's theory of perception as being relational rather than the impression or reception of the forms of things. Rāzī, then, draws a corollary from the above position. Opposing the Aristotelian view, Rāzī states that color

actualized when light obtains on the surface and the transparent medium is always transparent. For Avicenna 'color' refers to the phenomenal colors – red, green, and so forth – which are actualizations of dispositions of the surface of the body by their mingling with light. Rāzī is aware of Avicenna's departure from the Aristotelian tradition (*mukhālafat hādihā al-mashhūr*). But Rāzī provides his own position that does away with the actuality/potentiality analysis of color and states that the perception of colors depends on a body that is colored *in itself* to be illuminated. How more precisely Rāzī disagrees with Avicenna will be clarified in Chapter 6, which gets us into Rāzī's optics. Rāzī believes that Avicenna's departure from the Aristotelian theory of light and vision is inconsistent with his affirmation of a theory of perception based on form-transference or "impression" (*inṭibāʿ*), and in particular the view that vision depends on the reception of *simulacra* (*al-ashbāḥ*). Rāzī's own optics departs from both the extramission theory ascribed to the Euclideans and Galenists and the intromission theory of the Aristotelians in a number of crucial ways. For discussion of some background sources, see Peter Adamson, "Vision, Light and Color in al-Kindī, Ptolemy and the Ancient Commentators," *Arabic Sciences and Philosophy* 6 (2006), 207-236. For a discussion of Aristotle's view of color in itself (i.e., not from a psychological but physical/objective perspective), see Katerina Ierodiakonou, "Aristotle on Colours", in *Aristotle and Contemporary Science*, eds. D. Sfendoni-Mentzou, J. Hattiangadi & D.M. Johnson, vol. 2 (New York: Peter Lang, 2001), 211-25.

¹⁶⁵ Rāzī, *Mabāḥith*, I, 415.

can be viewed as obtaining actually in the interiors of body and not just their surfaces, since it is the potentiality of perceiving color that depends on light, not the existence of the proper properties constituting its essence.

As such, Rāzī here distinguishes between color in itself, or color that obtains independently of our perception of it, and the perceptible color which is dependent on various factors including light. The former sense of color corresponds to the objective extra-mental property, (i), which can be called $\langle \text{color} \rangle^R$, while the later corresponds to what can possibly be perceived.¹⁶⁶ If we return to Rāzī's semantic system, the color in the latter sense is that which is picked out by our common language terms, 'red', 'white', and so on. Crucially, however, 'red' and 'white' do not correspond directly to $\langle \text{red} \rangle^R$ and $\langle \text{white} \rangle^R$, since those are not the immediate possible objects of perception. Rather, 'red' or 'white' correspond to our collective human experience of the color, which requires the relevant conditions. That is, in a similar way to that of heat, which may or may not have those additional essential properties discovered by the specialists, 'red' in our everyday usage does not correspond to those properties that obtain independently of the conditions that make them perceptible (i.e., $\langle \text{red} \rangle^R$), even if the perceptible everyday quality may essentially and existentially depend on the former. The everyday concept {red} then corresponds not simply and directly to objective reality, or $\langle \text{red} \rangle^R$, but to red insofar as we identify it as the color we collectively perceive, which can be called the inter-subjective concept of red, or {red}^I. Rāzī's interpretation of color is proposed to allow for the same primary properties to give rise to different colors, or secondary properties, under differing circumstances. We will see in Chapter 6 that this is precisely what he is

¹⁶⁶ These general distinctions will be made more precise in Chapter 6 as they require a number of principles established in his systematic epistemology and psychology.

after. In the following chapters, I shall provide further examples from Rāzī's philosophical discussion that will expand on aspects of the above analysis as more principles are introduced into his system.

Let us return, now, to Rāzī's attempt at formulating an answer to "What is it?" with regard to sensibles in **T2**, where he avoided the pure indexical "T" and attempted to use a demonstrative indexical, like "that". In the context of the above discussion, these formulations might be viewed as identifying the observable and public events that give rise to the perceptions of such sensible qualities. This is consistent with his philosophical analysis where the pre-scientific public notion, say, {red}^P, is distinguished from the essential nature of red. Moreover, Rāzī also distinguishes the public notion from properties (i.e., *lawāzim*) that might apply *after* philosophical or scientific investigation. As we shall see in further detail, Rāzī's alternative approach to philosophical and scientific investigation is built on this primary epistemological principle. Indeed, it might be noted here that, rather than belittling scientific investigation, Rāzī wants to systematically assess natural phenomena without the stronger (causal) explanatory model of Aristotelian science which is based on the knowledge of essences and demonstrative proof. Rāzī is attempting to systematically study the phenomenal properties of things, which often will require some probabilistic method of inquiry such as induction and which cannot override our more certain epistemological truths without the proper kind of proof, a point which will be explored further in the following chapters.¹⁶⁷ But enough on simples and sensibles for now. We turn briefly to knowledge of complex quiddities,

¹⁶⁷ Note that Avicenna states in *Demonstration*, 211: "Definitions are not acquired through induction. And this has been clarified by [the fact] that real induction is from sensible individuals, which have no definition as we have clarified."

before a more thorough examination of Rāzī's logical analysis of universals in the next chapter.

What has been underscored above, perhaps indirectly, is that Rāzī's discussion of simple and complex quiddities places particular emphasis on sensible entities. Indeed, his analysis might be viewed as exclusively applying to quiddities and definitions of natural or sensible phenomena, as evidenced in the structure of his argument and in the fact that, in many of the passages above, we saw that Rāzī explicitly states that he is considering the essence of this or that perceived entity.¹⁶⁸ Rāzī's explicit references to the senses and extra-mental reality indicates that he is aware that his critique of the Aristotelian theory applies specifically to the epistemological assumptions inherent in the latter's view of natural phenomena, a point which will become more evident as our analysis proceeds.¹⁶⁹

As discussed, complex sensible quiddities or natures, taken as substantial unities of some sort, constitute a primary object of real definitions for the Aristotelians. In **T2**, we saw that Rāzī raises the technical sense of definition (*ḥadd*), in contrast to the general term *ta'arīf*, which applies to sensibles, when he specifically turns to the discussion of complexes. However, it was not clear there how he viewed our knowledge of complex sensibles. It is clear that sensible simples are epistemically more basic than complexes, but it is not clear in what precise sense. We also noted that complexes were similar to Rāzī's third category of simples (δ^3), which were not perceived by the senses. However,

¹⁶⁸ Rāzī has often pointed specifically to the sense of "sight". In Chapter 6, we will see that he accords a special status to vision because it relates to the form-reception theory of perception in a specific way.

¹⁶⁹ Note that this is quite unique in the history of pre-modern philosophy and science. For example, Owen Goldin states that due to the nature of the reception of late antique views of Aristotle's theory of demonstration, the scholastic tradition "never squarely faced the question of the nature of the immediate premises involved in demonstration that explain natural phenomena." See his "Two Traditions in the Ancient *Posterior Analytics* Commentaries," in *Interpreting Aristotle's Posterior Analytics in Late Antiquity and Beyond* ed. F. de Haas, M. Leunissen, & M. Martijn (Leiden: Brill, 2010), 156-182 (182).

he does, of course, believe that complex sensibles are perceived, as will be made clearer below, but it is not clear what the status of their universals is. In **T1**, he distinguishes explicitly between the observable or phenomenal properties of complex quiddities and the essential properties of things or kinds and stated that the latter is beyond our scope of knowledge. As well, in **T1**, Rāzī had stated that those things we know are simply the named things, i.e., *musammayāt*. However it was not entirely clear what he meant by *musammayāt*.

Our analysis of Rāzī's semantic and epistemological views suggests what he means by named (complex) things. That is, complex quiddities are simply those complex sensible entities that are picked out by our everyday use of terms such as 'man', 'horse', and so on. But it is still not clear how, precisely, he would distinguish here between phenomenal {man} and essential {man}. The next chapter, which discusses Rāzī's attempt to undermine the Aristotelian theory of predication by effacing the distinction and dependency relation between essential/constitutive properties and external/accidental properties will show this. Further, in the chapter following that on definitions, I will argue that nominal definitions provide knowledge only of phenomenal properties because real definitions are analytically problematic. In the following, I will briefly discuss a number of epistemological and psychological points or cautionary notes that Rāzī highlights at the beginning of the logic in the *Mulakhkhaṣ*, which relate particularly to complexes. A full analysis of the philosophical problem will be provided in Chapter 6.

In the introductory part of the logic of the *Mulakhkhāṣ*, after discussing the signification and division of terms, Rāzī turns to the division of universals.¹⁷⁰ The final

¹⁷⁰ Rāzī, *Maṭīq al-Mulakhkhaṣ*, 26-27.

division he considers is the division made by the Aristotelian commentators of a universal into its natural, logical and intelligible aspects. Rāzī dwells on and takes issue with the last, particularly the commonly held view (*al-mashhūr*) of equating the intelligible universal (*al-kullī al-^caqlī*) with a mental form (*al-ṣūra al-dhihniyya*). He provides a interpretation of how a mental form is construed: “What is meant is that if any one of the individuals of one species, existing in external reality, is presented to the soul, as opposed to another [individual], and the soul takes that quiddity abstracted of all its concomitant [accidents] (*lawāḥiq*), what obtains in the soul is only the [same] effect or its equivalent [i.e., to that of another of that species].”¹⁷¹ The quote closely parallels Avicenna’s phrasing in Book V in the *Metaphysics* of *al-Shifā’*, where he discusses the mental form.¹⁷² The discussion centers on how individual mental forms can be viewed as universals and on the question of the correspondence (*muṭābaqa*) of mental forms to individuals. The response invokes Avicenna’s theory of abstraction, which maintains that forms of (composite) individuals are reliably transmitted through the senses to the higher faculties of the soul where they are abstracted of accidents. These forms abstracted from accidents correspond to the essence or quiddity of the individuals. Avicenna’s theory will be discussed further in Chapter 6. Here, it can be noted that the unity of real definitions, which we saw was ensured by the Aristotelian theory of definition and universals, has a

¹⁷¹ Ibid., 28.

¹⁷² In V.1, Avicenna states, “It [i.e., the intelligible form] is one concept in the intellect whose relation to any one of the instances of animal does not differ. In other words, whichever [of these instances you take] whose representation is brought to the imagination in any state—the intellect thereafter abstracting its pure concept (*mujarrad ma^cnāhu*) from the accidents—then this very form obtains in the intellect.” In V.2, where Avicenna elaborates on the same point, he uses the term effect (*athar*): “For this effect (*athar*), is the same as the form of the previous [individual] which was abstracted of accidents.” Both in the *Mulakhkhaṣ* and in the *Metaphysics* of the *Shifā’*, the discussion centers around how mental forms, being individuals in individual minds, can be universal. See, Avicenna, *al-Shifā’: al-Ilāhiyyāt (The Metaphysics of The Healing)*, transl. M. Marmura with Arabic text (Provo, UT: Brigham Young University Press, 200), 156 & 160 (hereon referred to as *Metaphysics*; any references to Aristotle’s *Metaphysics* will be clearly distinguished). The translations are Marmura’s with modifications.

psychological parallel in Avicenna. That is, the forms or quiddities of a complex sensible in the mind is acquired through a psychological process of abstraction; more specifically, the various internal mental faculties distinguishes accidental unities from natural or substantial unities (which as we will see Avicenna refers to as *ittiḥād jawharī tabīʿī*). Following his summary of the *falāsifa*'s interpretation of mental forms, Rāzī states “this view is based on the assertion of mental forms, which according to us is unfounded (*bāṭil*).”¹⁷³ His rejection of mental forms, particularly abstract forms, is a matter he states will be taken up in philosophy (*ḥikma*) rather than logic. As noted, his analysis of mental forms, which involves a lengthy discussion of his analysis of the nature of knowledge, abstraction and perception, will be treated in Chapter 6. Here, I will focus on the problems he raises in the logic text itself, which primarily concern the nature of the correspondence of concepts to composites, and I will only briefly refer to his philosophical analysis.

After clarifying his own position on mental forms, Rāzī raises a number of problems, the first of which, he states, arises even on the assumption of the theory of mental forms (*bi-taqdīr al-qawl biḥā*). He states that one cannot maintain the universality of mental concepts on this interpretation of mental forms, that is, as being an essential (*dhātī*) property which constitutes a part of the quiddity of a thing. This is because the quiddity may come into existence after the individual and thus cannot be a part. This objection of course can easily be met, for example, by appealing to the isomorphic representative nature of mental forms. The presuppositions involved in this objection will be clarified in the next chapter (particularly as he questions the notion of the

¹⁷³ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 28.

constituent parts of a quiddity in itself applying independently of existence). But it can be noted here that Rāzī wants to underscore the representative nature of mental forms. In his philosophical discussion as analyzed in Chapter 6, we will see that Rāzī lays particular emphasis on representation (*tamaththul*) and how one is to conceive mental forms as corresponding to the essences or parts of the essences of things. He understands that mental forms may be viewed as being isomorphic to what they correspond to in external reality, but doubts that this can mean that they correspond to the essences of external individuals or their conceptual parts, a view which parallels, and is bolstered by, his objection to the Aristotelian theory of predication. I argue in Chapter 6 that his rejection of mental forms, i.e., specifically forms of complex sensible objects, is motivated by his view of representations of sensible complexes as being mind-dependent or arising from mental constructions.

The next problem that Rāzī raises deals specifically with the statement above “that the effect on the soul from each one of those individuals is one”, for which he attempts to provide an alternative explanation.¹⁷⁴ The problem concerns the nature of concept formation, specifically how universals correspond to individuals of a class, which we shall return to later. He suggests that the way to understand the above statement is:

T 7

[W]e conceive a common factor (*qadr mushtarak*) between those individuals. [But] if the conception of a common factor is not related to the realization (*taḥaqquq*) of the common factor [in external reality], the mental conception (*al-taṣawwur al-dhihnī*) does not correspond (*muṭābiq*)

¹⁷⁴ Interestingly, the wording reflects Avicenna’s phrasing in V.2 more than it does his summary quoted above.

to external reality (*al-amr al-khārijī*) and thus is not knowledge (*jahl*). If it does correspond, then that common factor must obtain in itself (*fī nafs al-amr*). That common thing is what is universal in reality, and the mental form is only called universal metaphorically due to its being knowledge connected with what is a universal thing.¹⁷⁵

The account is meant to contrast his notion of what I have termed the “common factor” with Avicenna’s view of quiddity or mental forms. First, Rāzī omits any role for abstraction in discussing the correspondence of universals to external individuals. That is, universals ought not to be viewed as corresponding to the forms of the individuals of a kind abstracted of accidents; they correspond simply to the commonality (*al-qadr al-mushtarak*) of a set of individuals. And as he states a few lines later, the commonality is known necessarily (*bi-l-darūra*). That is, obtaining the concept or universal may be due to a process of form-transference from individuals of a species, or it may be otherwise (i.e., whatever may give rise to our pre-scientific notions as picked out by our ordinary language terms). Rāzī simply wants to underscore the fact that, in logic, we are only entitled to posit concepts that simply distinguish one set of individuals from another. Rāzī’s notion of the role of definitions and his denial of the acquisition of (scientific) conceptions bear directly on this point. That is, unlike real definitions through which one acquires essential concepts, definitions, in Rāzī’s view, only distinguish (*tamayyuz*) an item, a point that was discussed above. Recall that, in *Demonstration*, Avicenna distinctly objected to the view that scientific definitions only distinguish an item and, invoking Aristotle, he demanded that real

¹⁷⁵ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 29; idem., *Mulakhkhaṣ*, fol. 4a.

definitions, which are used in demonstrative science, provide complete knowledge of the essence of a thing. Indeed, subsequent to his objections to mental or abstract forms, Rāzī states his own view:

T 8

What we hold is: We know necessarily (*bi-l-ḍarūra*) that the individuals of a single species are common (*mushtaraka*) with regard to the nature (*ṭabīʿa*) of that species and that each [individual] is distinct from another by a specific character it has (*khuṣūṣiyyatihi*), as “what makes [things] a commonality is distinct from that which differentiates them”. Thus that common factor (*al-qadr al-mushtarak*) is the universal. So the universal exists in external reality but as for that which is held popularly (*fī al-mashhūr*) of affirming an abstract form in the mind, its refutation will be taken up in philosophy (*al-ḥikma*).¹⁷⁶

Rāzī’s distinctions regarding universals in this passage will be revisited in the next chapter. It can be noted, as well, that there are a number of points in **T 8** that point to Rāzī’s epistemological views (discussed in Chapter 6) and his ontological analysis of universals (discussed in Chapter 5). What can be noted here is that in Rāzī’s view kinds, species or natures are simply the complex quiddities that are signified by ordinary language terms, i.e., the natures of “named things”. As we will see, Rāzī’s formulation of structured universals is one that will apply specifically to the (phenomenal) natures of named things. His account, however, will not deny the possibility of phenomenal properties being dependent on noumenal natures (say, Aristotelian natures) but will render them semantically irrelevant to logic. This is precisely what he did with regard to

¹⁷⁶ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 30; *Mulakhkhaṣ*, fol. 4b.

the simple nature of ‘color’. However, the question of complexes is more complicated, since Rāzī needs to formulate an alternative account of the (phenomenal) structure of universals.

An important point noted in **T8** that is relevant to our discussion is his reference to necessary knowledge. Rāzī has argued in the *Mulakhkhaṣ* and the *Nihāya*, from an epistemological angle, that the essential properties in real definitions are not necessary without a deductive proof. Knowledge of such properties is meant to contrast with our everyday grasp of universals, which, far from making any claims, simply identifies classes of distinct individuals. Of course, Rāzī will distinguish between properties that constitute, or more accurately apply to, universal kinds, but they are not notions that are accessible only to those trained in the art of definition, as Avicenna noted in *Demonstration* above. This explains Rāzī’s point about sensibles in **T3**: “...because the masses (*al-‘awāmm*), all of them, distinguish between heat insofar as it is heat (*min ḥaythu hiya ḥarāra*) and what is other than it. But distinguishing a thing from [what is] other than it is only possible after [having] knowledge of that thing.” That is, Rāzī views “knowledge of that thing”, which distinguishes heat “insofar as it is heat”, as certain or necessary only insofar as it applies to the everyday conception. He does not make any scientific claims about the necessary connection between constitutive properties and the thing itself. Similarly, in **T2**, Rāzī states that definitions can only be nominal definitions that apply to complex sensibles, and that they apply to objects in a manner that is based on complete and real knowledge. As such, the object of corresponding (or the “truthmaker”) here is not the noumenal qualities but the ordinary and phenomenal qualities of a thing. It is notable that, in **T8**, Rāzī does not say that the individuals of a

kind differ with regard to accidental properties (i.e., as opposed to the essential properties of their kind), but states that they differ with regard to their specificity (*khuṣūṣiyya*), a point that is clarified by the following. In Chapter 6, I will attempt to reconstruct Rāzī's view of phenomenal knowledge as grounded in phenomenal regularity (*al-ʿāda*).

We are left now with Rāzī's final objection to the problem of mental forms. The objection is particularly important to the above discussion and central to our discussion of the nature of Aristotelian logic. Again, against viewing universals as mental forms, Rāzī states, "Why can we not make each individual in external reality a universal by subtracting its particular [accidents] (*mushakkhkhaṣāt*)."¹⁷⁷ On Avicenna's account, as mentioned, we abstract from the instances of Zayd and ʿAmr the very same form, i.e., humanity, since our cognitive faculties abstract those accidental qualities that constitute each individual.¹⁷⁸ However, for Avicenna, there is no universal form or essence of Zayd-ness or ʿAmr-ness since there is no more specific kind, or essence, beyond

¹⁷⁷ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 29-30.

¹⁷⁸ Cf. *Demonstration*, III.5. The following points, from the translation of III.5 by J. McGinnis and D. Reisman, is pertinent to our discussion: "In short, the thing that sensory perception encounters is neither the true nature of the common human nor [the true nature] that the intellect encounters, except accidentally... So let us investigate how [to conceptualize] the human as an object of the intellect. It must be abstracted from any condition attaching to it externally, like measurement by a given determinate magnitude, qualification by a given determinate quality, delimitation by a given determinate position and place... If conceptualizing the human in the intellect by defining him were at all connected with any measurement, position, or anything similar, every human would have to share in [those things]... Now, conceptualizing the intelligibles is effected by means of the senses precisely in one way: *sensory perception takes the forms of its objects and delivers them to the imagery [faculty], and then those forms are subject to the action of our theoretical intellect*. There are there [in the imagery faculty] many forms taken from actual humans as perceived by the senses, which the intellect finds all mixed up with material accidents. For example, it finds Zayd having a particular color, complexion, shape of limbs, etc., and it finds ʿAmr having other such particular things. So the intellect turns to these material accidents and extracts them, as though it were peeling away those material accidents and setting them to one side until it arrives at the core account (*maʿna*) common [to all individuals perceived by the senses] without difference, and thereby acquiring knowledge about it and conceptualizing it." Jon McGinnis and David Reisman (eds.), *Classical Arabic Philosophy: An Anthology of Sources* (Indianapolis/Cambridge: Hackett Publishing Company Inc., 2007), 153-155. See also Avicenna's discussion of unity at *Metaphysics*, III.2 and *al-Najāt*, 2, 47-48, 86, where multiplicity and unity are viewed as concomitants of a thing's quiddity.

humanity that the cognitive faculty abstracts from Zayd or °Amr. Recall the foundational status of the *infima species* in the Aristotelian theory discussed in the previous section. “Human”, for example, identified the irreducible essence or nature of individual people, after which only accidental classes can be constructed. Rāzī, however, suggests that an individual may have a quiddity or haecceity that might be further identified as a kind and thus, potentially, an object of definition. “Haecceity” applies better to Rāzī’s discussion here, because, unlike a quiddity or essence that applies to the species or natural kind (i.e., the universal), Rāzī is considering the possibility of identifying the essence, in a broad sense, or the “thatness” of individuals, that is, immediate objects of sense perception. To what extent Rāzī develops a full-blown theory of haecceity needs further study. In any case, Rāzī’s point here is not to go back on his epistemological programme stated in **T1** that knowledge of the essences of things is beyond our grasp. His objection, rather, supports the precise point made in that passage. That is, he is raising the epistemological question as to how one might rule that possibility out, particularly given that the Aristotelians assert that the *infima species* locate the most ontologically fundamental kinds there are. As such, the Aristotelian would need to disprove the possibility of there being haecceities, even if we do not actually have knowledge of the haecceities of things. This is the point that Rāzī means to make.

There is one final point regarding knowledge of complexes in his preliminary discussion on conceptions in the *Mulakhkhaṣ*. Subsequent to the objections above, Rāzī raises a question regarding the relation of perception to a particular individual. The

particular individual, he states, can either be known by presence (*wijdān*), as for example our knowledge of our selves, or by the senses.¹⁷⁹ Regarding the latter, he asks whether the senses grasp the object of sense as it is (*‘min ḥaythu huwa huwa’*, i.e., its haecceity) or only the thing which is shared between it and another, that is, the common factor (*qadr mushtarak*). It should be noted that what is being considered here are composite individuals as opposed to the basic or simple objects of senses discussed above. He notes that the former is the commonly held view (*al-mashhūr*) but he argues for the latter.¹⁸⁰ He states that since we *can* conflate two objects with identical sensible qualities, we do not necessarily conceive the haecceity of a concrete individual.¹⁸¹ What we do conceive is its common factor or *qadr mushtarak*. He then states, “If you have understood this, then it will be apparent that that which each one of us points to by our saying ‘I’ is other than that which another [person] points to by saying that he is himself.”¹⁸² Here, Rāzī distinguishes between the pure indexical “I” and the demonstrative indexical, say, when one sees another person say “I”. That Rāzī maintains this strict distinction corroborates the interpretation that Rāzī’s descriptions of sensibles, as those given in **T2**, involve stripping them of pure indexicals and replacing the latter with demonstrative indexicals, so that the formulation provides a public or inter-subjective description of a phenomena.

¹⁷⁹ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 31.

¹⁸⁰ As indicated by previous references, when Rāzī uses *mashhūr*, it does not necessarily include Avicenna’s position, and he often addresses Avicenna directly when it concerns a particular position taken by the latter.

¹⁸¹ The argument seems problematic but this section immediately follows his argument against mental forms and so does not seem to primarily address the *falsafa* position, for which the argument is not problematic since mental forms apply equally to individuals as its quidditative universal form in the answer to “What it is?”, as discussed above. He recognizes this fact at the end of the discussion where he allows for the possibility that the sense does perceive its quiddity but in such cases the imagination (*khayāl*) simply fails to track the object. So the argument seems to be based on the denial of mental forms. That is, if we perceive only the sensible qualities of a thing, and perception in that sense gives us knowledge of what it is for that thing to be that thing, then we would not conflate it with another object with the same qualities. But we do, so we do not perceive the quiddity of that thing. The question does not concern the quiddity of a thing, but more fundamentally concerns the haecceity of a thing, which he envisages.

¹⁸² Rāzī, *Manṭiq al-Mulakhkhaṣ*, 32.

Regarding complexes as objects of knowledge, Rāzī's point here suggests that the proper objects of perception are only the simple sensibles, as suggested in **T2**, and not complex sensibles, a point we shall return to in the next chapter.

It might seem puzzling that Rāzī considers the perception of a complex individual as “not connecting with its haecceity (*min ḥaythu huwa huwa*) but rather with the common factor (*al-qadr al-mushtarak*).” Recall, however, that Rāzī considered *knowledge* of universals as the conception of a *qadr mushtarak* between individuals. That is, our conception of complex individuals and our conception of universals is of the same kind, i.e., phenomenal rather than noumenal.¹⁸³ Thus, aside from sensible simples, there are no privileged objects of knowledge, a point which contrasts with the Aristotelian theory of knowledge where perception of individuals, be they simples or complexes, is distinct from our scientific knowledge of universals (recall Avicenna's distinction between *maʿrifa* and *ʿilm* in *Demonstration*).¹⁸⁴ The question specifically concerns knowledge as it relates to our perception (*idrāk*) of complex sensible things. In Chapter 6, we will see that Rāzī raises this exact question in the context of vision. There it will be made clear, on the basis of his systematic epistemology, that our perception of even

¹⁸³ Rāzī seems to view sight as the only sense faculty that in some way perceives complexes, as we will see in Chapter 6. Recall that in **T1** he states: “As for the latter [kind of genus], it is extremely difficult, because if [for example] our sight locates a particular existent, we know that, as a whole, there is a self-subsisting entity (*dhāt^{an} qāʾimat^{an} bi-naḥsihā*), and we know that there are attributes that obtain in that entity. But if we want to know of [that] entity ‘what [kind of] thing it is’ (*ayyu shayʿin hiya*), and the attributes (*ṣifāt*) ‘what [kind of] thing it is’ and how many they are, knowledge of that becomes very difficult for us. Moreover, if we know two things that share in certain aspects and differ in another, it is not possible to know of the complete common factor ‘what [kind of] thing it is’ and how it is, and of the complete differentiating factor ‘what [kind of] thing it is’ and how it is. If that is difficult, then acquiring differentia and genus in the manner of verification (*al-taḥqīq*) is of utmost difficulty.”

¹⁸⁴ Avicenna elaborates on that point in *Demonstration*: “The existent, the thing, the cause, the principle, the particular, the universal, the limit and such things are all outside of objects of perception, even the essences of species, like the essence of human, is something that this not perceived by *khayāl* whatsoever and is not represented in the estimative faculty, rather it is only obtained by the intellect. And the same [applies] for every universal essence of the essences of the species of sensible things, let alone intelligible things.” (18) See, *al-Najāt*, 76. See also *Demonstration*, 12.

composite individuals is mediated by a number of mind-dependent processes (*bi-qiyāsⁱⁿ mā*). That is, our conception of complex sensible objects, as opposed to sensible simples, depends foundationally on conditions that obtain in our mind.

There are several points regarding the nature of *qadr mushtarak* and truth, raised particularly in **T7**, that we shall return to in the following chapters. In the next chapter, I will examine Rāzī's analysis and critique of the Aristotelian theory of *per se* predication and his alternative theory based on his notion of structured universals. Our analysis of the latter notion will clarify how Rāzī views complexes.

Chapter 2

Mereology: Constituent Parts, Substances and Structured Universals

In the preceding chapter, we examined the core elements of what I have termed Rāzī's epistemological programme in logic, which focuses specifically on the semantic and cognitive assumptions underlying the Aristotelian approach to conception and definitions. By distinguishing our ordinary language terms and their corresponding pre-scientific concepts from our conceptions of essential properties, Rāzī believes that he has flushed out extra-logical matters that encroach on the logical analysis.¹⁸⁵ I have shown that this revolves around his distinction between noumenal properties, which ought to require proof and not simply scientific definition, and phenomenal properties, though a more precise formulation of the latter remains to be had. What we have uncovered thus far is that phenomenal properties correspond to our basic concepts that are picked out by our ordinary-language terms. How additional properties might apply to, or be predicated of, those basic concepts, or what non-linguistic role his notion of nominal definitions might have, is of crucial significance and requires clarification. With regard to the relation of the epistemological concerns that Rāzī raises in the context of substantive views he discusses in philosophy proper (*ḥikma*, as he calls it), we have noted a number of points that apply to the nature of our knowledge of sensible reality. In particular, Rāzī

¹⁸⁵ I will generally use "concept" to refer specifically to that which is signified by a singular term, like, "man". I use "conception" to refer to a concept that is not only picked out by a singular term but also requires a specific method, along with the relevant epistemological principles, that lead to the correct acquisition of such a concept. "Concept", then, will refer generally to our nominal or pre-scientific notions, whereas "conception" applies to our knowledge of essences.

warns against Avicenna's theory of mental forms, which involves, in Rāzī's view, a number of problematic assumptions regarding our knowledge of universals.

The primary aim in this chapter is to examine the basic principles and structure of Rāzī's logical system, focusing on his theory of predication and how universals function as predicates. The discussion will address a number of foundational claims of the Aristotelian theory of predication, as highlighted in our preliminary discussion. We saw that the Aristotelian theory was grounded in the distinction between essential properties or constitutive parts, on the one hand, and accidental non-constitutive parts, i.e., properties external to the essence of a thing, on the other. The Aristotelian theory of predication posited an asymmetrical relation of dependency between constitutive parts and accidental or external properties in that the latter is dependent on the former, but not vice versa. As we will see, Rāzī's logical critique of the Aristotelian theory of predication can be viewed as rooted in his problematizing of that core assumption. It will become evident, however, that there is a direct relation between Rāzī's critique of the Aristotelian theory and Rāzī's larger epistemological programme. His epistemological worries centered on our knowledge of noumenal properties that are "acquired" in real definitions, which, as we will see more clearly, are precisely the constitutive parts of the essence in the Aristotelian theory of predication. If we have no epistemological access to the constitutive parts, it follows that the theory of predication cannot be based on a fundamental distinction between constitutive and external properties. Indeed, his theory of *structured universals*, as I have termed it, is Rāzī's attempt at reformulating a theory of universals after the logical analysis is cleaned of the extra-logical and epistemological

assumptions.¹⁸⁶ Here, however, we will find that Rāzī directly addresses a number of ontological assumptions regarding the mereology of quiddities (i.e., the relations of parts to wholes or within wholes). In formulating his theory of structured universals, Rāzī attempts to circumvent the problems involved in Avicenna’s formulation of the relations that hold between the quiddity and its parts (i.e., the relation of *dhātī* parts to the *māhiyya*, as discussed above).

In Chapter 4, I argue that Rāzī’s notion of structured universals is central to his approach to the study of natural phenomena in Book II of the *Mabāḥith* and the *Mulakhkhaṣ*. The categories he marks out as subdivisions of Book II, are not the Aristotelian categories, but the primary kinds of objects of phenomenal or sensible experience. To anticipate Rāzī’s general philosophical approach discussed in Chapter 4, and to provide the reader with a sense of why Rāzī might want to develop an alternative theory of universals, I examine below a particular example taken from Rāzī’s Book II regarding the nature of the sensible body. By applying the notion of structured universals to the analysis, Rāzī is able to sort out a number of confusions regarding the debate between Aristotelian hylomorphism and *kalām* atomism or indivisibilism. Importantly, Rāzī’s analysis leads him to find both views as inconclusive. Moreover, Rāzī attempts to devise a new way of looking at the problem without assuming the principles of hylomorphism or indivisibilism.

If our view of Rāzī’s approach is correct – namely, that Rāzī is sanitizing logic from extra-logical concerns particularly with regard to the nature of essences or essential (*dhātī*) properties – we should, or might, expect Rāzī to voice his concerns openly, and

¹⁸⁶ I have noted in the Introduction what I mean by “extra-logical” and the relative neutrality of logic that Rāzī aims for.

even make the necessary adjustments to his own view of quiddity. That is, one would expect that, prior to his analysis of the five predicables and definitions, Rāzī would clarify the nature of the relation of properties and parts to the quiddity. Indeed, as we saw in our discussion of Avicenna's *Madkhal*, the discussion of essential properties as parts of the quiddity occurred in his chapters on essential and accidental properties, prior to his discussion of the division and analysis of the five predicables. In fact, Avicenna's discussion showed how predicables were to be divided into kinds in the *Madkhal* and it follows the discussion of the principles of their division, as was the practice in the long commentarial tradition of Porphyry's *Isagoge*. Rāzī's discussion of concepts in the *Mulakhkhaṣ* loosely follows the structure of Avicenna's *Madkhal* and does, indeed, include an analysis of the quiddity and its parts before it turns to the predicables and definition.¹⁸⁷ Moreover, Rāzī raises a number of foundational points, regarding the nature of essential properties, which are not found in Avicenna's texts. Rāzī devotes two sections to the problem: one on quiddity (entitled, *fī mabāḥith al-māhiyya*) and the other on its part (*fī mabāḥith juz' al-māhiyya*). It should be noted that, unlike Avicenna who refers to the "essential part" (*al-dhātī*) or "constitutive part" (*al-muqawwim*) in the corresponding sections, Rāzī generally avoids the term "*dhātī*" or "*muqawwim*" and simply uses "part" (*juz'*). Avicenna's section titles do not refer to "part" (*juz'*) but more specifically to *dhātī* and *‘araḍī*, as noted above. As we will see, Rāzī will attempt to frame a more general approach to the question of the relation of parts to wholes stripped

¹⁸⁷ The introductory part of the logic of the *Mulakhkhaṣ* should be viewed as corresponding and responding to Avicenna's *Madkhal*, more than to Avicenna's discussion of predicables in the *Ishārāt*. This is evident in the division as well as the themes discussed. For example, the commonalities (*mushārahāt*) between the predicables are not discussed in the much shorter treatment in the *Ishārāt*. It is clear that Rāzī's expansions of Avicenna's lemmas in the *Ishārāt* draw on problems discussed in the *Madkhal*, such as those regarding the definition of *dhātī* and *lawāzim*. As discussed, his commentary on the second sense of *dhātī* draws on *Demonstration*.

of the epistemological assumptions involved in assessing the relations of essential parts to wholes. That is, Rāzī is interested in assessing the problems of mereology without presuming a more narrow discussion of the quiddity and its parts, which is based on the Aristotelian and Avicennan epistemology.¹⁸⁸ He does, however, directly take on some of the assumptions in the Aristotelian system. For this reason, Rāzī is forced to examine a number of ontological issues. As elaborated above, in order to systematize the relations that hold between various kinds of essential parts and in order to preserve the unity of the definiendum, the Aristotelian view posits unique genera-differentiae lines or hierarchies. On this view, genera such as “animal” encode a unique line of essential properties that implicitly provide the complete constitutive properties of, in this case, the genus of “man”. As we will see, Rāzī considers all such properties as attributes or properties simpliciter (*ṣifāt*) that apply to the essence in a symmetrical relation of dependency.

Before turning to the problems relating particularly to predication, I will very quickly note a number of points that Rāzī raises, again, against Avicenna’s epistemological and psychological commitments, which appear in his section on the quiddity and its parts in the *Mulakhkhaṣ*. First, Rāzī underscores a position, repeated in a number of his works, regarding knowledge of the part of a quiddity: not only is the part prior to the whole quiddity in existence, it is also prior in conception. This is meant to oppose the position of the “Shaykh” (i.e., Avicenna), whom Rāzī quotes as saying: “Those parts may not be known in detail, but when they are evoked in the mind they are represented in detail (*matā ukhtīrat bi-l-bāl tamaththalat mufaṣṣalat^{an}*).”¹⁸⁹ Rāzī states

¹⁸⁸ On mereology in Plato and Aristotle see Verity Harte, *Plato on Parts and Wholes: The Metaphysics of Structure* (Oxford: Clarendon Press, 2002); Edward C. Halper, *One and Many in Aristotle’s Metaphysics: Books Alpha to Delta* (Las Vegas: Parmenides Pub., 2009).

¹⁸⁹ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 43.

that Avicenna's view is that grasping the essence is prior to conceiving its parts. The passage that Rāzī has in mind is likely from the *Ishārāt*, though Avicenna makes the same point in a number of works.¹⁹⁰ In the *Ishārāt*, Avicenna states:

T 9

All of the constitutive parts (*muqawwimāt*) of a quiddity are included with the quiddity in conception, even if they do not occur in detail (*lam takhṭur bi-l-bāl mufaṣṣalat^{an}*)...but if they are evoked in the mind they are represented [in detail] (*idhā ukhṭirat bi-l-bāl tamaththalat*). So the essential parts (*dhātiyyāt*) of a thing – according to the custom in this place (*mawḍi^c*) of logic – are these constitutive parts, because the fundamental nature (*al-ṭabī^ca al-aṣliyya*) which only differs numerically, such as humanity, is constitutive of each individual falling under it, and to the individual are added [its] propria.¹⁹¹

The full analysis of why Avicenna distinguished between detailed representation of a quiddity and representation of the quiddity simpliciter involves a discussion of several psychological considerations, which will be discussed in Chapters 5 and 6. Here, it can be noted that Rāzī discusses the problem more fully in his commentary on the above quote from Avicenna's pointer on *al-dhātī al-muqawwim* in the logic of the *Ishārāt*. Rāzī assesses different ways of construing Avicenna's point, based on the principles of the Aristotelians. One involves the relation between Avicenna's theory of active and passive intellection and Avicenna's view of mental forms as corresponding to forms in external reality. Rāzī finds this interpretation problematic for a number of reasons that shall not

¹⁹⁰ *Sharḥ al-Ishārāt*, I, 51. See also *Najāt*, 13; *Madkhal*, 34-35.

¹⁹¹ It might be noted here that Rāzī often urges Avicenna to clarify whether he is speaking of simples or composites. The ambiguity of course relates to Avicenna's Aristotelian notion of the quiddities of substances as being simple or unitary though composite in a certain respect, as discussed above. Rāzī is aware of this but his point, as we will see, is that this involves problematic epistemological assumptions.

concern us.¹⁹² The other focuses specifically on how conception (*taṣawwur*) of the quiddity can be considered knowledge of a thing's essence, if that essence is constituted of parts that do not initially constitute a part of the conception. The concern is quite clearly motivated by Rāzī's epistemological principles, but, as we will see, it is also motivated by his own views regarding the role of parts in definitions. Here, it can be noted that Rāzī raises a distinction between knowing a thing (*al-shayʿ*) and knowing the reality of that thing (*ḥaqīqat al-shayʿ*). The former, he states, can be known even if all one knows is the concomitants (*lawāzīm*) of that thing. But he asserts that one cannot have knowledge of the reality or essence (*māhiyya*) of a thing without prior knowledge of its constitutive parts.

Crucially, Rāzī notes that he is aware that what Avicenna means is that one simply needs to conceive of the causal and explanatory priority of the part to the essence, not that the conception of the parts needs to be prior to the conception of the essence. In the preliminary discussion, we saw how Avicenna sees properties as causally ordered. But, to this, Rāzī responds that if knowledge of a thing's essence consists in the knowledge of its constitutive parts, then one's knowledge of the part must have already been obtained (*ḥuṣūl*) in detail. Rāzī's objection is in part motivated by his epistemological and meta-definitional concerns, as discussed previously, about the nature of the Aristotelian definitions. In particular Rāzī underscores the point that Aristotelian definitions involve a method of systematically accessing the essential parts of a quiddity that are not immediately clear (see, for example, **T1** where the parts, i.e., genus and

¹⁹² Note that in *Sharḥ al-Ishārāt*, because he as a commentator is attempting to expand and note problems in interpretations of the Aristotelian system, Rāzī *generally* refrains from asserting his own views fully. For example, here he does not challenge the Avicennan theory of intellection/abstraction and mental form. In the chapter of the *Ishārāt* on knowledge, Rāzī will raise a barrage of problems and objections. But even there he does not elaborate on his own views.

differentia, of the definiendum lay beyond our grasp and cannot be obtained by the method of division). Definitions as a method are, as discussed, “informative”, i.e., they provide non-analytic cognitive content. As we have seen, Rāzī objects to this view of definition. In the next chapter, we will see that though nominal definitions clarify or make “more precise” aspects of the definiendum, they are not cognitively informative.

Before moving on, it should be noted that, in **T9**, Avicenna mentions that *dhātī* refers “according to the custom in this topic of logic” to the constitutive parts (*muqawwimāt*). What he means, of course, is that *dhātī* in Porphyry’s *Isagoge*, which constitutes the first book of logic, refers only to the constitutive part, whereas in *Demonstration dhātī* includes both constitutive parts and *per se* accidents (i.e., *e2*-predicates; *al-‘awāriḍ al-dhātiyya*). As discussed above, Avicenna mentions in the same section of the *Ishārāt* the second broader sense of *dhātī*, and Rāzī provides a commentary on it. We shall return later to Rāzī’s discussion of *per se* accidents. It can be noted here that Avicenna’s point regarding “custom” or tradition underscores a number of exegetical commitments – or perhaps initial conditions – that sets him apart from Rāzī.¹⁹³ That is, Avicenna will normally discuss logical problems as they have been received within the long Aristotelian commentarial tradition. Rāzī, at least in his independent works, does not limit himself to the received set of problems in the Aristotelian tradition. We have already seen in Chapter 1 that Rāzī raises and addresses a number of foundational epistemological issues that do not preoccupy the Aristotelians.

We turn now to Rāzī’s discussion in the *Mulakhkhaṣ* of the parts of the quiddity or universal. Naturally, Rāzī’s discussion assesses only the composite quiddity

¹⁹³ As noted in the Postscript, Avicenna refers to the customary way of studying and interpreting the *Organon* in a number of places. However, an exception here is his *Manṭiq al-Mashriqiyyīn*, which addresses problems in a more general manner.

(*murakkab*), since simples have no parts. I turn first to a specific position Rāzī adopts regarding the relation of the part (*juzʿ*) of a quiddity to its external properties that Rāzī raises following his preliminary discussion, to which I will return later. Rāzī states the view, consistent with the Aristotelian position, that the part of a thing cannot be its external property or “attribute” (*ṣifa*) since an attribute requires a substrate (*maḥall*) in which it inheres. That is, attributes apply to the quiddity only posterior to the quiddity’s being constituted by parts. A part, however, is never posterior to the whole. Rāzī’s discussion here is a summary of the Aristotelian position, discussed previously, of constitutive parts and inhering properties, as initially set out in the *Categories*. Indeed, as we will see, Rāzī’s discussion of inherence and substrate closely follows the set of problems raised by the *said-of/present-in* distinction that we examined in the context of Aristotle’s analysis of predicative relations in the *Categories*, although Rāzī’s discussion will move on to address the Aristotelian theory more generally. It should be noted that in the corresponding section of Avicenna’s *Madkhal*, Avicenna does not use the language of attributes (*ṣifāt*) and the substratum (*maḥall*) in which they inhere.¹⁹⁴ However, Avicenna does refer to attributes (*ṣifāt*), substratum (*maḥall*), and inherence in the relevant sections of his version of the *Categories*, *al-Maqūlāt* (especially I.3 and I.4).¹⁹⁵ There, Avicenna also uses *ṣifa* or attribute, which is not used in the relevant sections of the *Madkhal*. Avicenna’s terms, however, for the *said-of/not-said-of* and *present-in/not-present-in* distinctions are *mā yuqāl/mā lā yuqāl* and *yūjadu fī mawḍūʿ/lā yūjad*, respectively.¹⁹⁶ For

¹⁹⁴ On *kalām* discussions of attributes and attribution, R. M. Frank, “Attribute, Attribution, and Being: Three Islamic Views,” in *Philosophies of Existence, Ancient and Medieval*, ed. P. Morewedge (New York: Fordham University Press, 1982), 258-278; Ibid., *Beings and Their Attributes*”.

¹⁹⁵ Avicenna, *al-Shifāʾ, al-Maqūlāt*, ed. I. Madkūr (Cairo: al-Maṭabīʿ al-Amīriyya, 1959), hereon referred to as *Maqūlāt*.

¹⁹⁶ Avicenna, *Maqūlāt*, 18.

substrate (*maḥall*) Avicenna uses subject (*mawḍūʿ*), since as we discussed Aristotle approaches the question of inherence through the notion of predication. That is, the primary substrates in which properties inhere are the ultimate subjects of predication, which correspond ontologically to individual substances and their natural kinds. Rāzī – when not operating as a commentator especially in the *Mulakhkhaṣ* – seems to strip the discussion down to the ontological relation of inherence. Hence, Rāzī uses substrate (*maḥall*) instead of subject (*mawḍūʿ*), and inhering-in-a-substrate (*ḥāll*) instead of present-in-a-subject (*yūjad fī mawḍūʿ*). Although not much will hinge on this observation, I believe it is borne out in the following discussion.

Rāzī concludes what we have called his summary of the Aristotelian view, that “the part of the quiddity cannot be an attribute of the quiddity” by stating, “Hence, no attributes are parts, and the converse.”¹⁹⁷ That is, Rāzī seems to be underscoring the mutually exclusive relation between parts and external properties, which we saw formed an asymmetrical relation of dependency in the Aristotelian account. After stating the Aristotelian view, Rāzī raises the following objection to it:

T 10

One can undermine (*yaqdaḥu fī*) the premise asserting that the inhering property (*ḥāll*) is posterior to the substrate (*maḥall*) by stating: Why can it not be the case that the quiddity of each of those simples [i.e., the inhering properties] must necessarily inhere in that complex quiddity **with the condition that the [complex] is constituted (*takawwun*) out of those [simple inhering properties]**. On this hypothesis (*taqdīr*), the essences (*dhawāt*) of those simples are prior to the essence of the complex quiddity,

¹⁹⁷ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 42.

and their inherence in it is posterior to the constitution (*takawwun*) of the complex quiddity.¹⁹⁸

The objection is questioning the asymmetrical dependency of attributes or external properties on the whole, that is, the quiddity that is constituted solely by parts. Rāzī's point seems to depart radically from the Aristotelian theory since the complex quiddity can now be viewed as being dependent in some way on external properties as well as parts. Crucially, the distinctions raised by Rāzī (or even the problem) do not parallel anything in the relevant sections of Avicenna's works. If this is so, Rāzī's suggestion is precisely aimed at effacing the asymmetry of the dependency relation holding between parts and external properties. Indeed, Rāzī states quite clearly that the relation is symmetrical as the property is taken in two ways: qua constitutive property on which the whole depends *and* qua inhering accident which depends on the whole in terms of it being an accident. That is, "constitution" and "dependency" are no longer defined exclusively in terms of whether the properties are internal to (or a part of) the quiddity or external to it as an attribute or non-part. His statement, "with the condition that the complex quiddity is constituted (*takawwun*) out of the simple inhering properties", asserts that the quiddity can be dependent on external properties, in which case they can be viewed as "constitutive" though not in the way that an internal part is constitutive. Rāzī, notably, avoids using the term "*taqawwum*" and rather uses "*takawwun*" to refer to the quiddity's being constituted or obtaining. "Constitute", "constitutive", and certainly "constituent" in English all imply a sense of being part of the object, but I will at times use it, even when Rāzī avoids *taqawwum*. The context, I hope, will make clear the precise

¹⁹⁸ Ibid.

sense it carries. That is, stripped of what might be termed the “constituent ontology” of the Aristotelian system, the dependency relation is any relation of dependency between a property and a universal.¹⁹⁹ However, all this requires more clarification since Rāzī’s discussion here is quite terse. In the following we will look at two further aspects of his discussion of parts, before returning to look more closely at points raised in **T10**. The first is the preliminary discussion to the chapter under consideration on parts of the quiddity and other points raised in the same chapter. The second looks at a case study found in a subsequent chapter, namely, Rāzī’s discussion of differentia, where he raises a number of points regarding the relation of parts to the quiddity.

We first turn to points raised by Rāzī in the preliminary discussion regarding the relation of parts to the quiddity. As pointed out above, Avicenna assesses the relations that hold between the quiddity, its parts and its properties within his “threefold distinction” of the ontological status of the quiddity, namely: the quiddity in itself, the quiddity *in intellectu*, and the quiddity *in re*.²⁰⁰ Rāzī’s ontological analysis of Avicenna’s threefold distinction will be discussed in Chapter 5. It was noted that, with regard to logic, Avicenna separates those things that apply to a subject in each of the two kinds of existence from those that apply to it irrespective of existence (i.e., the constitutive parts as

¹⁹⁹ See Michael Loux, “Aristotle’s Constituent Ontology”, in *Oxford Studies in Metaphysics*, vol. 2 (Oxford: Clarendon Press, 2006), 207-250.

²⁰⁰ See especially *Madkhal*, I.6 (p. 34), which discusses *dhātī* and *‘aradī*. Avicenna explicitly invokes his tripartite distinction: “...as the discussion has preceded for you that things have quiddities; and that those quiddities could exist in individuals (*al-a‘yān*) or they could exist in the mind (*al-awhām*); and that the quiddity [in itself] does not necessitate for itself any one of the two existences; and each one of the two existences can only obtain (*yathbut*) after that quiddity obtains (*ba‘d thubūt tilka al-māhiyya*); and that each one of the two existences attaches (*yulḥiqu*) to the quiddity propria and accidents that apply to the quiddity upon that [specific type of] existence, and it is possible that [those propria or accidents] might not apply to it in the other existence.”

well as some concomitants or *lawāzim*).²⁰¹ The relevant kinds of properties for our analysis are not those of mental existence – such as universality, particularity (non-universality), and so on – but properties that apply with regard to existence *in re* and with regard to the quiddity itself.²⁰² Avicenna states, “I do not mean by the essential predicate (*al-maḥmūl al-dhātī*) that which the subject requires in obtaining existence, like a human being born or created or generated, or black being an accident, but rather the predicate which the subject requires in its quiddity and is internal to (*dākhil*) its quiddity and a part of it, like shape is to triangle or corporeality to human.”²⁰³ In the preliminary discussion preceding **T10**, on the relation of the part to the quiddity, Rāzī raises two problems concerning the nature of that relation. The first concerns the unity of the parts, which we will return to below. The second is about the precedence or priority (*taqaddum*) of the part to the whole (*al-kull*). The objector argues that the priority of the part cannot be explained either in terms of (i) a priority with respect to the quiddity itself or in terms of (ii) a priority with respect to existence. The former claim does not hold because priority and posteriority do not apply when the quiddity is viewed in itself. The latter claim does not hold because, as an argument provided there states, the relation of the parts to the quiddity obtains prior to existence, so the priority cannot be explained *by* existence. Rāzī offers a few responses affirming that the precedence can hold irrespective of existence in support of the Avicennan theory (or at least what is entailed by it). He states, “And part of

²⁰¹ The examples Avicenna provides of such *lawāzim*, as noted above, were from geometry (e.g., the angles of a triangle equal two right angles), but our focus is on complex sensibles, so the latter items will not be relevant. For more on this, see for example *Sharḥ al-Ishārāt*, I, 45-46 and 64.

²⁰² In Chapter 5, I will examine how Avicenna avoids using the term “external existence” (*al-wujūd al-khārijī*) and consistently uses “existence in individuals”, which we have called *in re*. Rāzī, by contrast, will use “external existence” versus “mental existence”. I argue that this is due to the divergence in their ontological views.

²⁰³ *Sharḥ al-Ishārāt*, I, 46. See also *Madkhal*, 35, 42.

what confirms this [i.e., the response] is that the quiddity, insofar as (*bi-ḥaythu*) existence can be properly said (*yaṣihhu*) to occur to it (*ya^criḍu lahā*), is an aspect (*i^ctibār*) that cannot depend on existence, but rather [existence] is among the concomitants (*lawāḥiq*) [of the quiddity]. Hence, the precedence of [the parts] to [the quiddity] cannot be by existence.”²⁰⁴ *Lawāḥiq* is, as we will see, one of Avicenna’s terms for properties, like existence, that may apply to the quiddity in itself.²⁰⁵ Rāzī is dissatisfied with this response and attempts to formulate a different notion of precedence or *taqaddum* which takes existence into account, so as to argue that the relation of the parts is not solely with respect to the quiddity in itself. He states:

T 11

Why can it not be the case that the priority is *by* existence (*bi-l-wujūd*) [in response to] the statement that “priority by existence only obtains with existence.”²⁰⁶ We say that this [statement] is unacceptable (*mamnū^c*),²⁰⁷ because if two things are such (*bi-ḥaythu*) that when they come to exist, the existence of one is dependent on the existence of the other, then that mode (*ḥaythiyya*) obtains prior to realization of existence (*taḥaqquq al-wujūd*) and that *ḥaythiyya* is what is meant by priority (*taqaddum*).²⁰⁸

²⁰⁴ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 41.

²⁰⁵ Existence, however, does not “occur” to the quiddity as does an accidental property, as discussed in Chapter 5.

²⁰⁶ This is a point stated in the initial objection and assumed as true in the “Avicennan” response. Note that Rāzī, in the *Mulakhkhaṣ*, will often raise an objection followed simply by “*qawluhu*” and a quote from a previous lemma, which is meant to show that his objection applies specifically to that lemma.

²⁰⁷ *Mamnū^c* here simply means not accepted as used in dialectic (*ādāb al-baḥth*).

²⁰⁸ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 41.

Here, the quiddity as a whole is dependent on its “parts”.²⁰⁹ But the dependency relation is not based on an interpretation of the parts being internal to or constitutive of the quiddity. Rather, it is some mode or property that is explained by the fact that the dependency relation holds *in existence*. This seems to diverge from Avicenna’s view because the relation of the quiddity in itself to its constitutive parts is a relation that holds irrespective of (external) existence, unlike proper accidents and some *lawāzim* which specifically apply in existence. Moreover, the formulation of the dependency relation is consistent with his view in **T10** that the part can be an inhering property as well. That is, the dependency relation in **T11** is not grounded in the notion that parts are internal constituents of the quiddity on the condition that the quiddity is dependent on them in existence *when they come into existence*. Moreover, Rāzī’s formulation states that the existence of the quiddity is dependent on the existence of the parts, but not the reverse. That is, the inhering properties, in **T10**, on which the quiddity is dependent, are also dependent on the quiddity, but this is because of the properties’ own quiddities, as he states. In **T10**, the dependency is symmetrical, but here, i.e., with regard to proper parts, it is not. Indeed, he states clearly, following **T11**, that the part can precede the whole.²¹⁰ The precise distinction, then, between the two kinds of properties needs clarification, which we will return to. The point that the dependency relation applies *when they come into existence* also addresses, as we shall see, the causal relations that hold between parts and quiddities as construed by the Aristotelians. In particular, we will see that there are no privileged causal features possessed by the part. It is interesting that he labels the

²⁰⁹ At the beginning of his discussion of parts, Rāzī states: “Every whole [universal] requires for its existence (*thubūt*) the existence of its parts together (*ma^{can}*), and for its non-existence (*lā-thubūt*) the non-existence of one of its parts.” *Manṭiq al-Mulakhkhaṣ*, 39.

²¹⁰ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 41.

dependency relation a “mode” or *ḥaythiyya* rather than an attribute or property. If, as I have suggested, he has formulated **T11** (i.e., the dependency relation in existence) with **T10** (i.e., symmetrical dependency) in mind, he certainly would want to avoid the dependency or *ḥaythiyya* being a property since this would lead to an infinite regress (i.e., a dependency property will itself require a dependency property). But this seems to force us to construe the *ḥaythiyya* as mental construction or in some way a mind-dependent property. Admittedly, Rāzī’s statements are brief and far from transparent. Before considering further texts that pertain to these distinctions, we shall turn to more concrete examples in his analysis of the differentia as a constitutive part. But let us first label Rāzī’s formulation of the dependency relation in **T11**: *M* (for mode or *ḥaythiyya*).

We turn, then, to a number of points regarding the theory of the quiddity and its parts that Rāzī raises in his analysis of the predicables and, in particular, in his interpretation of the parts of a definition. As discussed, on the Aristotelian view, a clear distinction is made between external or non-constitutive properties and constitutive properties, that is, properties that are parts or constituents of a thing. We formulated the notion of each thus:

P1) If a property *F* belongs as a part to *x*, *F* does not inhere in *x*.

P2) For *F* to inhere in *x* is for *F* to belong as an accident to *x*.

Briefly put, the constitutive parts (P1) are the proper parts of the definition, namely, the differentia and genus. By proper, I mean differentia and genus construed in the narrow sense that Avicenna required in the *Madkhal*. Recall that the differentia in fact refers to the narrow kind of differentia, which Avicenna called “*khāṣṣ al-khāṣṣ*”, to differentiate it

from a number of other kinds which included external properties, such as proper accidents and *lawāzim*.²¹¹ External, or more loosely “accidental”, properties (P2), on the other hand, are external to the essence and include proper accidents (i.e., *propria*), common accidents, and the broad category of *lawāzim*, as previously discussed. And because of the strict Aristotelian position on the asymmetrical dependency of (P2) on (P1), the two constituted mutually exclusive categories, which is precisely what Rāzī questions in **T10**. Moreover, let us recall that the differentia can only constitute a species in one genera-line and not in several independent genera-lines, unlike external properties. In this context, we saw the language of causal and necessary explanations. That is, the differentia *divides* (*yuqassim*) the genus and constitutes (*yuqawwimu*) the essence of a species and thus is a cause (*‘illa*) of the latter. The ontological aspects of the causal language will be examined in Chapter 5. Here we will quickly assess a few points regarding Rāzī’s alternative notion of the differentia, before returning to his more general theory of universals.

Again, if Rāzī means to assert the full consequences of the view outlined in **T10**, where he attempts to efface the distinction between constitutive parts and external properties, we should be able to detect the relevant shifts as applied in his discussion of the predicables, particularly the differentia. And this, again, is precisely what we find. Here, I will focus directly on the points relevant to the immediate discussion, before returning to Rāzī’s broader analysis of complexes and definitions.

²¹¹ Recall that Avicenna has three main types of differentia: general differentia (*‘amm*), proper differentia (*khāṣṣ*), and most proper differentia (*khāṣṣ al-khāṣṣ*). The first two have a number of subtypes but the fundamental distinction between the first two and the third (i.e., the differentia specifica) lies in the fact that the former presume an essence while the latter constitutes one.

First, in his discussion of differentia, Rāzī compares his own view to the Aristotelian/Avicennan position on the relation of the differentia to the genus and species:

T 12

The differentia is taken in relation to the absolute generic nature (*al-ṭabīʿa al-jinsiyya al-muṭlaqa*) and divides (*muqassim*) it, while in relation to the species [the differentia] is a part (*juzʿ*) of it [i.e., the species], while in relation to a particular species of the genus (*ḥiṣṣat al-nawʿi min al-jins*), the Shaykh holds (*dhahaba... ilā*) that the differentia is necessarily the cause of its existence.

But in our view, that is not necessary [i.e., that the differentia is a cause of the existence of a species], for the [reason] that the differentia can be an attribute (*ṣifa*) and the attribute is dependent on the subject of attribution (*al-mawṣūf*), and that which is dependent on a thing is not a cause (*ʿilla*) of it. Rather the matter *might* be (*qad yakūnu*) thus according to the details (*tafṣīl*) whose verification (*taḥqīq*) will be addressed in philosophy (*ḥikma*).²¹²

This is an illuminating passage for a number of reasons. I will leave the details of the ontological discussion for Chapter 5. However, it can be noted that Rāzī is underscoring the ontological implications of the Aristotelian position and quite clearly he attempts to separate those ontological implications from his own view of logical universals. A brief examination of the “intrusion” of such ontological matters in the Arabic reception of the *Organon* will be discussed in the “Postscript” to Part 1. We have discussed in general the Aristotelian view Rāzī outlines in the first paragraph of **T12** in our preliminary discussion. The details of Avicenna’s specific interpretation will be dealt with in Chapter

²¹² Rāzī, *Manṭiq al-Mulakhkhaṣ*, 73-74.

5, which involves a particular interpretation of Aristotle's form-matter analysis as it corresponds to the nature of the differentia and the genus. We will examine some aspects of that discussion below. Let us, then, turn directly to Rāzī's own view in the second paragraph.

Rāzī denies the necessity that applies specifically to Avicenna's interpretation of differentia as a cause of the particular species to which the differentia necessarily belongs. However, the reason he provides for his objection seems to overturn the entire Aristotelian notion of the relation between genera/differentiae and the species. That is, differentiae are not necessarily parts of the species but attributes (*ṣifa*). Indeed, his argument seems to be that the relation between the universal and its parts is not necessarily that between the whole and its constituent parts. Perhaps the most significant phrase in **T12** is “for the reason that the differentia *can be* an attribute...”, since this violates the very definition of differentia as postulated by the Aristotelians and specifically the necessity with which it applies to the essence. Crucially, Rāzī clarifies the dependency relation between the attribute and the universal, which is the subject of attribution, i.e., *al-mawṣūf*. Hence, the differentia is not necessarily a constitutive part but can be a dependent external attribute. Most significantly for our analysis, his alternative view of the differentia seems in **T12** to draw – directly – on the theory he sets out in his discussion of parts in **T10**. We will return to the precise relation shortly. It is important to note that Rāzī does not exclude the possibility of the differentia as being a part, a point which follows from his epistemological programme, as clarified below.

Rāzī's entire chapter on the differentia is interesting and relevant to our analysis, but my focus here is to understand the structure of Rāzī's logical system. Still, one sub-

topic in his chapter on differentia will help to draw out some of the implications of **T12**.

The discussion centers on the finitude of the parts of a quiddity. Rāzī states,

T 13

The position (*madhhab*) of the Shaykh regarding differentiae and genera entails that the final differentia (*al-faṣl al-akhīr*) be the primary cause (*al-‘illa al-ūlā*) and that the highest genus be the final effect (*al-ma‘lūl al-akhīr*). But it is not possible to use that as proof for the finitude of superordinate genera (*al-ajnās al-mutaṣā‘ida*), because a proof has only been given of the finitude of contingent things to a primary cause not to a final effect. However, according to our position (*madhhab*), this might or might not be the case. Rather, **perhaps the final differentia is the final property (*al-ṣifa al-akhīra*) and the highest genus the first subject-of-a-property (*al-mawṣūf al-awwal*)**.²¹³

The precise question concerns ontological problems dealt with in Chapter 4 and 5. But from what was outlined in our preliminary discussion, the general point is clear. That is, we assessed how the Aristotelian approach to universals (especially, in contrast to Plato’s) posited a hierarchy and finitude of essential universals, specifically differentiae and genera. Moreover, we noted that to ensure the unity of the essence of the definiendum, the Aristotelians viewed the genera and all intermediate differentiae as indeterminate and only determined by the final property, which is the differentia specifica. This causal relation was also viewed as necessary because the differentia falls exclusively in specific genera-lines so that the same differentia cannot determine or constitute a species that is in another genera-line or even another species in the same

²¹³ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 80. On Avicenna’s view, see See McGinnis, “Logic and Science,” 174–178, and the discussion in Chapter 5.

genera line.²¹⁴ Rāzī, in fact, discusses this very point – viz., that a single differentia will constitute only a single species (“*al-faṣl al-wāḥid lā yuqawwimu illā naw^{can} wāḥid^{an}*”) – as a sub-topic of his chapter on differentia.²¹⁵ He objects to possible arguments given for it and refers us to his previous discussion (i.e., quite likely **T12** or possibly even **T10**). In the *Madkhal*, Avicenna explains the role of the differentia in the terms stated by Rāzī in both **T12** and **T13**: “That which, when conjoined with the generic nature (*ṭabīʿat al-jins*), makes it [i.e., the generic nature] into a species (*yuqawwimuhu naw^{can}*)...so [the differentia] is essential to the generic nature, bringing into existence a species, which it [i.e., the differentia] establishes, distinguishes and specifies, which is like [what] rationality (*nuṭq*) is to human.”²¹⁶ The ontological aspects of the differentia construed as causes, particularly in the context of form-matter analysis, will be discussed in Chapter 4.²¹⁷ Let us turn from the Aristotelian theory to Rāzī’s own position in **T13**.

First, the term “position” (*madhhab*) is one that Rāzī uses often in the *Mulakhkhaṣ*, *Mabāḥith*, *Sharḥ al-Ishārāt* and other works. We saw in **T12** that he referred to Avicenna as “holding a position” by the verb form “*dhahaba..ilā*.” Rāzī in fact uses *madhhab* in this very chapter numerous times. He often calls a specific interpretation of Avicenna’s view a *madhhab*. He will also refer, sometimes elusively, to his own *madhhab*. I take *madhhab* in such contexts to stand for a systematic philosophical position (which roughly corresponds to one sense of the term in law, where it is viewed

²¹⁴ So “rationality”, for example, occurs only in the genus “animal” by constituting the species “man” and cannot possibly be said to be a constitutive element of say “minerals”. See Michael Frede, “Individuals in Aristotle,” in *Essays in Ancient Philosophy*, 61-62.

²¹⁵ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 80.

²¹⁶ Avicenna, *Madkhal*, 74.

²¹⁷ An important concern here for Rāzī, which I have omitted from the analysis, is his view of the relations that hold between material or enmattered parts (specifically differentiae) and abstract or immaterial differentiae. This question will be discussed in Chapter 5.

as a systematic legal position). Thus, direct quotes and citations do not constitute a *madhhab*. As will be shown below, Rāzī's usage strongly indicates that he saw himself as asserting his own systematic philosophical positions in a number of areas, including epistemology, psychology and ontology (all of which seem to form an overarching systematic approach). And he refers to those positions collectively as his *madhhab*.

Returning to **T13**, his reference here, in logic, to his *madhhab* refers to a systematic position that views properties, not as causes of specific and necessary lines of hierarchically ordered properties, but simply as “attributes” or properties of a thing whose dependency relation does *not* make them dependent on the order of constitutive parts. Indeed, in stating, “perhaps the final differentia is the final property (*al-ṣifa al-akhīra*) and the highest genus the first subject-of-a-property (*al-mawṣūf al-awwal*)”, Rāzī again draws directly on the notions advanced in **T10** (and now **T12**). His position in **T13** suggests that what might be the last determined or constituted property - i.e., highest genus in the line of genera, say, “body” with regard to “man”- might be the first subject-of-the-property. Here Rāzī means that the differentia specifica can possibly apply to a genus more general than the lowest genus that the differentia divides and, as Avicenna states, existentiates. More significantly, he states that the differentia specifica, which, as we have seen, is the cause and determinant of a species and all its properties, can be the final attribute or *ṣifa*. Rāzī's discussion of his view of the differentia in **T13** of course radically departs from the Aristotelian theory, but it is entirely consistent with everything he has stated as his alternative view. Indeed, recall that, in **T10**, Rāzī asserted that the dependency of the quiddity on parts (and inhering properties) is itself a property or “mode” applying to the dependency in existence, and not to the very nature of those parts.

But what precisely is his alternative view? The fundamental grounds on which Rāzī opposes the Aristotelian view of predication is clear. He particularly opposes the notion of constitutive parts, which is based on the division of properties of a universal into internal and external kinds that are asymmetrically dependent. Then there are more specific issues that fall under this primary objection. But Rāzī, as I have been suggesting, wants to assert a systematic or positive philosophical position of his own. To understand his systematic position, we need to assess a number of additional points and texts. But let us first take stock of what has been established so far. Indeed, the above establishes a number of crucial points from which we can begin to re-construct Rāzī's view on universals and predication, though it will remain incomplete until we examine more textual data. The following are elements of Rāzī's positive positions as established in the previous discussion:

1. For any universal x , x is dependent on all its parts, i.e., x fails to obtain if one part fails to obtain.²¹⁸
2. The “parts” of x , i.e., those properties that x depends on, can be attributes or inhering properties (*ṣifa*). Thus, the properties on which x depends can be (i) inhering properties and/or (ii) non-inhering properties (which we will call “part” though without all the Aristotelian trappings since we do not accept them in “our *madhhab*”). [From **T10**]
3. Parts and properties bear a dependency relation to the quiddity such that the quiddity is dependent on the parts or properties in existence. This is the “mode” that applies to the parts or properties of a quiddity, which we labeled M . On the

²¹⁸ At the beginning of his discussion of parts, Rāzī states: “Every whole [universal] requires for its existence (*thubūt*) the existence of its parts together (*ma^{can}*), and for its non-existence (*lā-thubūt*) the *lā-thubūt* of one of its parts.” See, *Manṭiq al-Mulakhkhaṣ*, 39.

one hand, the parts themselves may exist prior to the quiddity. On the other, with regard to inhering properties, the dependency relation is symmetrical, i.e., the inhering properties are dependent on, and not prior to, the quiddity. [From **T11**, **T12**, & **T13**]

4. There is no “nature” neutral to existence, constituted by necessary and exclusive parts.

From our analysis thus far, it is not clear what precisely M is: a further property or part of the quiddity or, perhaps, some condition. Rāzī has not suggested that the mode, M , is a further part or property of a quiddity, x . Moreover, M cannot be a property of all the parts of x , since each part of x may obtain independently of x . In the case of inhering properties, the quiddities of those properties are the ground of their dependency on x (**T10**). What we are sure of is that there are parts and then there are inhering properties. Let $P(x)$ and $I(x)$ be the functions collecting all of the parts and inhering properties, respectively, on which the quiddity, x , depends.²¹⁹ Thus, x might be viewed as constituted thus: $x = P(x) + I(x)$. However, the parts are not a sufficient condition for the existence of x , since the parts, Rāzī has stated, may exist prior to x without x 's coming into existence. Indeed, Rāzī, in **T11**, states that a mode or dependency relation that holds in existence between the parts must obtain, which is the property or condition M . Since our addition function is sufficiently vague, perhaps we can reformulate our equation thus: $x = [P(x) + I(x)] + M$. Indeed, Rāzī will himself formulate M in this way, i.e., as a further element in addition to the part and properties. But M , as suggested, cannot be a further part of x nor

²¹⁹ From what we have discussed so far, it seems that $I(x)$ can return an empty result but $P(x)$ cannot. This will be clarified below.

an inhering property since we will then require another M , so that we would have: $x = P(x) + I(x) + M + M' + M'' \dots$ The mode, M , then, must be a condition or something other than a property or part, but Rāzī has not yet clarified what that might be. Though we have shown that Rāzī's analysis was closely interconnected (particularly **T10**, **T12**, and **T13**), perhaps Rāzī did not intend his points in **T11** to be applied generally. In any case, let us see if we can find anything that might shed light on the elusive M -condition. Any texts that refer to the notion of M or discuss the dependency relation between parts and the quiddity will be helpful.

First, it can be noted that Rāzī always refers to the quiddity as the “collection” of parts (*majmūʿ*), a phrase which we encountered in **T2**. For example, he states in his chapter on parts in the *Mulakhkhaṣ*:

T14

It is not possible for any one of the parts to be more obscure (*akhfā*) [i.e., less well known] than the [quiddity], since the quiddity is nothing more than the collection of those parts (*li-annahā laysat illā majmūʿ tilka al-ajzāʾ*). So conceiving of the [quiddity] is only possible after conceiving of the parts; hence, conceiving of the quiddity cannot be more clear (*ajlā*) [i.e., better known] than [conceiving of] the parts.²²⁰

The passage addresses the conditions of definition that were usually set out by the Aristotelians (i.e., the definiens is “better known” than the definiendum), which will not immediately concern us. What we need to find out is what he means precisely by *majmūʿ al-ajzāʾ*, which we translated as “collection of parts”; that is, if

²²⁰ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 46-47.

he does indeed intend something specific. But before we investigate the term *majmūʿ*, we shall quickly turn to a few points concerning the parts themselves.

In **T14**, Rāzī states that the parts cannot be more obscure than the quiddity, which means that the parts must be equally or better known than the quiddity. However, it is not clear here in his discussion of parts and wholes what precisely the parts are or have to be, specifically with regard to the act of conception. This gets clarified in his subsequent discussion of definitions and conceptions. His analysis of definitions in this section will be better assessed in the next chapter, but here I focus on a few points. In the second chapter, Rāzī clarifies several relations that hold between parts or simples and quiddities or complexes, a few of which are relevant to our discussion. He states, “The simples of complex quiddities (*basāʾit al-māhiyyāt al-murakkaba*) cannot be defined due to their simplicity (*lā yuḥaddu li-basāṭatihā*), but the [simples] can define (*yuḥaddu bihā*) [other quiddities] since they are the parts of other quiddities [i.e., quiddities other than their own quiddities].”²²¹ That is, the simples are the indefinable parts of the definitions of a complex and the parts, of course, have quiddities distinct from the quiddities of the complexes. Simples such as these are contrasted by Rāzī with those simples that are not parts of any complex quiddities and thus do not fall in any definiens (i.e., *lā yuḥaddu bihā*). Importantly, Rāzī notes at the end of the chapter, “It is clear from these postulates (*taqdīrāt*), that a simple is either not conceived at all (*aṣl^{an}*), or if it is, its conception is not in need of acquisition (*al-iktisāb*).”²²² This recalls our discussion in Chapter 1, and especially Rāzī’s distinction in **T2** between the three

²²¹ Ibid., 107.

²²² Ibid., 108.

kinds of simples, namely, sensibles (δ^1), psychological states (δ^2), and simples that are not objects of sense perception (δ^3). Indeed, in the very next chapter, Rāzī launches into the division of simples available to conception (i.e., sensibles, δ^1 , and psychological states, δ^2), which we discussed with regard to his epistemological programme. Here it becomes clear that his epistemological programme is directly connected to his mereological analysis. That is, the parts of a complex quiddity are (simply) composed of simple sensibles or they are composed of composites composed of those sensibles. If we go back to our formula, $x = P(x) + I(x)$, we can view these functions as (ultimately) outputting simples. That is, the function collects specifically all the simples that are parts or properties on which the quiddity depends. Indeed, it is notable that in his discussion in **T10** of inhering properties, on which the quiddity depends, Rāzī called these properties “simples”. That is, both proper parts and inhering properties are simples. Still, if Rāzī has something like this in mind, the universal would simply be an aggregate of sensibles or parts, which, as it stands, does not really constitute a theory of universals (we shall discuss precisely why below). However, he did say that the complex quiddity is the “collection of those parts”; so let us turn to his notion of “collection” or *majmūʿ*.

Recall that we had left unexamined the first objection to Rāzī’s initial discussion of the parts of a quiddity, which centers on the unity of the parts. There, Rāzī raises an objection to his own view that a complex quiddity is made up of parts. The objection attempts to strike at the root of the simple versus complex distinction (as framed by Rāzī), by arguing that once we posit simples as parts of complexes we cannot (and need

not) assert that complex quiddities are unities in any way. The argument claims that the accident of unity can inhere neither in the aggregate nor the individual parts of a whole and so such simples cannot be parts of any unified quiddity.²²³ In brief, there are no complex quiddities, only aggregates of simple quiddities. That the objector uses “simple” here is important, because what the objector, it seems, has in mind is something like the indivisiblism (or atomism) of the *mutakallimūn*, according to which the only substances are simples or indivisible parts, and composites are not metaphysical unities. In any case, Rāzī’s response is short: “The [argument] is countered (*manqūḍ*) by [reference to] all *unified structures* (*al-hay’āt al-ijtimā’iyya*).” Here, *al-hay’āt al-ijtimā’iyya* seems to have a technical sense, so a literal translation will not be particularly helpful. He does in fact refer to *al-hay’a al-ijtima’iyya* in various places and to anticipate that discussion I shall call it the *unified form* or *structure*. In terms of our immediate problem, it might be noted that *ijtimā’* has the same root as *majmū’*, “collection”. However, Rāzī’s response is too terse to be of much use in clarifying how he addresses the problem. Notably, Rāzī does not quarrel here over the metaphysical intricacies of the nature of unity involved in the argument, in contrast, for example, to his response to the second objection, where he does elaborate. So, now, we have the additional mystery of what the *unified structure* is.

In his discussion of definition in the *Nihāya*, Rāzī provides an important clarification of what a *unified structure* is, especially in relation to the parts of a complex universal. He states, “We hold that the *unified structure* (*al-hay’a al-ijtimā’iyya*) is one of the parts of the complex quiddity, but is external to the quiddities of its substrates

²²³ Ibid., 40.

(*ma^crūdāt*) [i.e., the parts], and the converse.”²²⁴ Notably, the discussion in the *Nihāya* concerns the same problem – the relation of the parts to the whole – that is raised in the objection in the *Mulakhkhaṣ*. In the *Nihāya*, however, the question regards definition and, as such, focuses on the epistemological identity of parts with the quiddity rather than the metaphysical unity of the complex. That is, the question is how knowledge of the parts can lead to knowledge of the complex quiddity. The problem, as we will see, leads Rāzī to his critique of “real definitions”. Here, let us examine his positive view of what the unified structure is.

In the *Nihāya*, then, Rāzī asserts that in addition to the parts of a quiddity there is the property or further element he calls the *unified structure*. Let us call the property of being a unified structure, *I*. I use “property” here in a general sense, which may be a further part, inhering property or some other element of the quiddity. I shall leave the question open as to how this property should be construed more precisely. Rāzī states that *I* is external to the quiddity of the parts. Indeed, he considers *I* as occurring (*al-^cāriḍa*) [accidentally] to those parts (*al-hay³a al-ijtimā^ciyya al-^cāriḍa li-tilka al-ajzā³*), which is why he called the parts the “substrates” (*ma^crūdāt*) of *I*.²²⁵ If we return again to our formula, we can adjust it thus: $x = [P(x) + I(x)] + I$. And if we return to the relation of *M* – that is, the mode of dependency that holds between the parts or properties of the quiddity and the quiddity itself - to the parts of a quiddity we find a certain parallel. That is, with regard to *M*, the parts of *x* may exist independently of *x* since *x* obtains only if some additional property obtains with respect to the parts of *x*, i.e., *M*. In other words, *M* must occur accidentally to the parts of *x* (i.e., it cannot be a necessary property of the

²²⁴ *Nihāya*, fol. 4b.

²²⁵ Ibid.

parts of x), otherwise the parts of x could not exist independently of x . Similarly, I being accidental to the parts of x obtains only when x obtains and the parts of x can obtain independently of x or I . But with the latter, that is property I , we have more. That is, Rāzī explicitly states that I is an “accident” of, and in addition to, the parts of x . Like M , I cannot exist independently of the parts, but M was viewed specifically as the dependency relation between parts, the quiddity and existence. In the *Nihāya*, Rāzī focuses on the notion of the universal and its role in definition. What is crucial, however, about the status of I with regard to definition is that it is not in fact a part of the definiens. That is, I is posited as directly applying to the parts of the definition but I is not *in* the formulation of the definition. In fact, Rāzī posits I in this context to meet objections to construing the definition of x as that which simply constitutes the parts of x .

Given Rāzī’s discussion, I cannot be viewed as a sensible simple since it would then be either a part or inhering property (i.e., those items that are collected by the functions $P(x)$ or $I(x)$). Still, I must be a property that is indefinable or not acquired through definition, otherwise we would have an infinite regress of definitions. As such, what I seems to be is the perceptible or sensible form of a complex quiddity, as indicated by the lexical sense of the word *hay’a*. Indeed, it is precisely used in that sense in *kalām*. Though the term has various senses in *kalām*, including “shape”, Dhanani and Frank distinguish a particular sense of *hay’a*, which the former translates as “visual appearance” and the latter as “perceptible disposition”.²²⁶ In Dhanani’s discussion, it is clear that the *hay’a* is a certain property that explains our perceptual ability to distinguish objects of

²²⁶ See Alnoor Dhanani, *The Physical Theory of Kalām: Atoms, Space, and Void in the Baṣrian Muʿtazilī Cosmology* (Leiden: E.J. Brill, 1994), 23-24; Richard M. Frank, *Beings and Their Attributes: The Teaching of the Baṣrian School of the Muʿtazila in the Classical Period* (Albany: State University of New York Press, 1978), 105.

perception. Rāzī seems to add *ijtimāʿiyya* to qualify *hayʾa* in order to indicate the unity of the perceptible structure or form. As such, *hayʾa ijtimāʿiyya* might be viewed as referring to the perceptible rather than ontological unity of the composite quiddity.²²⁷ This, however, is somewhat speculative and, in any case, we have Rāzī's more elaborate statements on the matter in Rāzī's philosophical discussion.

First, in Book II of the *Mulakhkhaṣ*, in his chapter on the quiddity, Rāzī discusses the relation of parts or simples to the whole. Notably, the chapter is entitled, "On the manner of the *ijtimāʿ* of simples of the composite quiddity."²²⁸ In this chapter, Rāzī discusses the dependency relation that is required to hold *between* parts so that the whole is not simply an aggregate of parts; that is, the parts need to form a kind of unified reality (*ḥaqīqa muttaḥida*). He provides the example of a rock beside a man which forms a composite but is not a unified whole. However, he states, "As for the constitution (*takawwun*) of ten of the units it contains, and [the constitution] of paste (*maʿjūn*) by the collection (*ijtimāʿ*) of medical ingredients (*al-adwiya*), and the [constitution] of an army of the individuals, and the [constitution] of a village of houses, are [all] due to (*li-ajli*) the *unified structure* (*al-hayʾa al-ijtimāʿiyya*) which is one of the parts of the composite and

²²⁷ Dhanani also notes a distinct usage in Ibn al-Haytham that signifies the perceptual form of a visible body. Like Ibn al-Haytham, who disagrees on "scientific" bases, Rāzī, as mentioned, disagrees with both the intromissionists and the extramissionists, though he does so on philosophical bases. In Chapter 6, I will provide a preliminary assessment suggesting that Rāzī in fact draws on Ibn al-Haytham's theory. I only indicate here that there seems to be philosophico-scientific motivations underlying Rāzī's analysis. That is, he is seeking to construct a theory of universals which corresponds to a theory of optics that specifically rejects the notion of mental forms or "the impression of forms" (*inṭibāʿ al-ṣuwar*), which is what he believes the Aristotelians are committed to. Indeed, if we recall that he strongly opposes the notion of mental forms at the beginning of logic in the *Mulakhkhaṣ*, this hypothesis seems plausible. In Chapter 6, I will argue that his opposition to mental forms is based not only on his epistemological and logical programme, but also on the philosophical conclusions that he draws from a number of developments in optical theory. In particular, his opposition to mental forms is based on the insight he gains from optics that our conceptions of the complex objects of sense perception are mind-dependent or involve a certain mental construction (*qiyās mā*). In any case, I will proceed here without presuming or referring to any of my results there.

²²⁸ Rāzī, *Mulakhkhaṣ*, fol. 49.

it is the formal part (*al-juzʿ al-ṣūrī*) on which the rest [of the parts] depend.”²²⁹ This is a crucial passage in a number of regards. First, his examples are noteworthy in that they do not, in any way, represent examples of the kind of substantial unities that Aristotle or Avicenna have in mind. Moreover, Rāzī seems to appropriate the Aristotelian discussion of the ontological relation of form to matter to the metrological relation of the form, or structure of parts, to parts. Here, Rāzī does not even raise the notion of matter. Indeed, as we will see in Chapter 5, Rāzī will argue against the notion that form and matter apply, respectively, to the differentia and genus of a thing. In any case, we have already seen in logic that any notion of differentia as a form that is causal and constitutive is opposed by Rāzī.

Given that formal part (*al-juzʿ al-ṣūrī*), or *hayʿa ijtīmāʿiyya*, is not one that has a deeper causal or ontological role, and given his rather pedestrian examples of composite universal unities, the formal or structuring property, which he says is a part or property along with the other parts or properties, is simply a matter of the phenomenal nature of these objects. That is, composite universals are simply phenomenal unities, which, as discussed in Chapter 1, are those picked out by our ordinary language terms. In Chapter 6, I will argue that his systematic epistemology in fact views the structuring property as being mind-dependent. That is, our knowledge of complex sensible things involves a mental construction and thus the structuring property applies only to our perception of the phenomenal qualities of sensible things. In any case, what we have established thus far will be sufficient for understanding Rāzī’s logical programme, which does not draw out his more systematic and detailed positions that pertain to our conception of complex

²²⁹ Rāzī, *Mulakhkhaṣ*, fol. 49a.

quiddities. Before moving on, it should be noted that in the *Mabāḥith*, in a section treating qualities that apply properly to quantities (*al-kayfiyyāt al-mukhtaṣa bi-l-kammiyyāt*), Rāzī assesses the nature of shape (*al-shakl*), and distinguishes shape from *hay'a*, which, in this section, is viewed as a kind of positional quality (*al-waḍ'*).²³⁰ He states there that the *hay'a* is that which obtains by reason of the relation between the parts of *x* and things that are external to *x*, in addition to the relations that hold between the parts themselves. Here Rāzī is concerned primarily with material parts and not conceptual parts, but it seems to carry epistemological ramifications similar to the structuring property. Nevertheless, *waḍ'* and *hay'a* are not considered parts of the conception of a thing, i.e., they are accidental qualities or relations. By contrast, Rāzī wants to assign a certain epistemological independence to *hay'a ijtīmā'iyya*. Below, I suggest what he might have in mind more precisely. It should be noted here that because *I*, or *hay'a ijtīmā'iyya*, is a perceptible quality of the object of knowledge, there is no problem of the infinite regress of *I* (or *M*, which is the mode that applies to the parts prior to existence). That is, *I* is not a part or property that requires some ontological ground in extra-mental reality. In this way, Rāzī is also able to explain the unity of complex objects without appealing to metaphysical principles such as form and matter.

Indeed, let us return to how *hay'a ijtīmā'iyya* is used by Rāzī to respond to the objection to unity. Recall that an objector argued that there are no complex unities, since the attribute of unity would have to be a further part or property of the complex, leading ultimately to an infinite regress. Given the above discussion, Rāzī seems to be trying to find a middle ground between the austere indivisibilism of *kalām* and the ontological and

²³⁰ Rāzī, *Mabāḥith*, I, 536.

epistemological assumptions of Aristotelian essentialism. Indeed, if *hay'a ijtīmā'iyya* is a response to the objection to unity, it must be that the *unified structure* gives the parts, as Rāzī construes them, a certain perceptible unity. However, this is not to deny the possibility of assessing the ontological unity of complex quiddities, the denial of which is presumed in the premise of indivisiblism. When we examine how Rāzī applies the notion of “body”, we will see that he objects to the *kalām* definition of body as an indivisible part on the same grounds that he based his objections to the scientific definition of sensibles. That is, this particular *kalām* definition does not refer to the nominal usage of “body” but to some property, i.e., noumenon, which requires a deductive argument or proof. Recall that, previously, Rāzī said the deeper ontological relations between parts and the quiddity is assessed in *ḥikma*. His message, which is made consistently in the above analysis, is that those discussions fall properly in philosophy and not logic and that the logical terms should be neutral with respect to those considerations. In this sense, his discussion in logic is “analytic”. As will be clarified further in the next chapter, Rāzī’s analysis of definition attempts to proceed in a general manner that can address diverging approaches to definition (i.e., irrespective of epistemic assumptions of the Aristotelians). It is telling that subsequent to his discussion of *hay'a ijtīmā'iyya* in the *Nihāya*, which proceeds in the general manner referred to, he states, “The framing (*tawjīh*) of the problem (*al-ishkāl*) in the terminology (*‘ibāra*) of the logicians (*manṭiqiyyīn*) is to say...”²³¹ Rāzī goes on to “frame” the problem in terms of differentia and genus. This supports the suggestion noted above regarding Rāzī’s practice in his own analysis of logic, particularly when it comes to the foundational issues of parts of the quiddity, to

²³¹ Rāzī, *Nihāya*, fol. 4b.

strip the logical analysis of terminology, such as *dhātī*, *‘araḍī*, *faṣl*, *jins* and so on. That is, such terms evoke semantic content that might confuse his more analytic approach to problems. This point will be further assessed in the next chapter.

Returning to our discussion of the objection to unity, I suggested that Rāzī wants to preserve the unity of the parts without committing himself to Aristotelian or any other kind of essentialism. Given the above analysis, *I* (i.e., *al-hay’a al-ijtimā’iyya*) might be construed as the property of being a unified perceptible form or structure, i.e., the *structuring property* of the parts of a complex. As we have seen, the universal, in Rāzī’s view, is not construed as an essence or quiddity composed of constitutive parts. Rather, it is a sort of structured unity that can be composed of internal or inhering properties. This notion is what I have labeled *structured universal*, though what precisely such a universal might be will be clarified below.

It should be noted here that a relation can be drawn between his discussion of *hay’a ijtimā’iyya* and Rāzī’s discussion of the *common factor* in **T7** and **T8**. Rāzī had stated in **T8**, “We know *necessarily* (*bi-l-ḍarūra*) that the individuals of a particular species share in the nature of the species and that each one [of the individuals] differs from another [individual or other things] by its distinctness (*khuṣūṣiyyatihi*). This common factor (*qadr mushtarak*) is the universal.” Here Rāzī identifies the universal with the common factor which, it will be recalled, was meant to oppose the view that the universal represented the form of things in the mind. Rāzī’s psychological point – that we know the common factor *necessarily* – was aimed against the Avicennan view of the acquisition of conceptions, which is coupled with the view that the true forms, or objects of definition, are those that are abstracted by the higher faculties and stripped of their

accidental qualities. Rāzī's point here seems to be that the common factor is those immediate, or ordinary, concepts of composite sensibles. His view of the structured universal consists of a mereological analysis of what our conception of the ordinary composite universal is, i.e., the common factor. As suggested, since *I* cannot be a further part or property that is in the definiens, *I* cannot be acquired through division or definition, that is, *I* is not identified by a real differentia. Construed thus, the response to the objection to unity seems to be straightforward: unity is a basic cognitive fact of such complexes and any metaphysical question regarding the unity of parts in a quiddity is the domain of philosophy proper. Of course, Rāzī does not think this settles the metaphysical question, but his answer initially seems to be disappointing only because he is constrained by his own logical programme. We will see in more detail how all this is borne out in the case examples. But, to anticipate, if the correlation between the common factor and the structured universal stands, we should expect that structured universals correspond simply to our general concepts picked out by our ordinary language terms. This, as the case examples will show, is precisely what Rāzī has in mind.

But before turning to the case examples, let us flesh out some philosophical implications of a number of notions that the above analysis has been employing throughout, particularly in the context of mereology and universals. Let us distinguish between three broad types of wholes that are sometimes distinguished in the philosophical literature on universals: aggregates, related wholes, and Aristotelian substances. I begin with the first two and will return later to substances in the Aristotelian

sense. An aggregate is simply the sum of individuals.²³² The aggregate of books, for example, is simply the sum of individual books irrespective of how they might be catalogued or stacked. The collection of books in a catalogue, however, differs from the *aggregate* of the very same books, in that collection depends in part on it being organized under, say, the Dewey decimal system. The collection is a related whole. That is, the collection is dependent on the parts of the aggregate but it possesses additional properties, such as being subject to call number searches or organized in stacks according to a specified order. The aggregate of books however does not possess such properties, since the identity of the aggregate does not depend on relations that belong to, or obtain between, the individual members of the aggregate.

If we return to Rāzī's notion of *structured universals*, it would seem that Rāzī's complex quiddities are not simply aggregates, since, as stated, the true parts of *x* without the organizing property *I* is simply an aggregate or composite and not the *complex* quiddity or collection of parts (*majmū' al-ajzā'*). Indeed, if Rāzī's complex is simply an aggregate, he would agree with the first objector who denied that it possesses unity. But structured universals *seem* to differ from related wholes as well, specifically in that structured universals possess – or more precisely permit – more structure or complexity than related wholes do. The relation in a related whole applies to pre-constituted individuals, i.e., what Rāzī would deem proper parts. But, as we saw, in addition to the proper parts, Rāzī allows for accidental or inhering properties. Now, the relations that might hold between proper and accidental parts and the structuring property can be

²³² I will gloss over whether the aggregate is a class distinguished from the individuals taken together or not. The discussion draws on the analysis of universals by Armstrong and Scaltas. See Theodore Scaltas, *Substances and Universals in Aristotle's Metaphysics* (Ithaca: Cornell University Press, 1994), 28-35; D.M. Armstrong, *Universals and Scientific Realism: A Theory of Universals* (Cambridge: Cambridge University Press, 1980), 61-94.

significantly more complicated. For example, a complex might not obtain simply by relating individuals to spatio-temporal patterns. As such, Rāzī thinks that a *hay'a* *ijtimā'iyya* possesses a real property over and above *hay'a* simpliciter. Rāzī may have envisioned, for example, that properties, over and above the relations holding between individuals, are required in the case of certain complexes. Here, the book collection in fact makes for a better example of a *structured universal* than a related whole. That is, if *I* is the property of being structured or organized under the Dewey decimal system, then in addition to the individual physical books there may need to obtain certain accidental properties that obtain in the collection as a whole. An example of such a property is that the books treat subjects that fall under one of the Dewey-decimal classes of knowledge (i.e., language, arts, history, technology, and so on). The set of Dewey-decimal classes, or accidental properties generally, can be viewed as belonging to the collection as a constituted whole. But if a book is added to the collection that falls outside the given classes, the collection is no longer a collection organizable by the same property – i.e., the ability to be catalogued by the Dewey decimal system – and is thus a different collection.

I have risked over-extending the metaphor of the book collection because I think it underscores an important insight that is borne out in subsequent chapters and is one that likely motivates Rāzī's complication of the matter. Specifically, the complication has to do with relations that hold between noumenal and phenomenal parts. That is, Rāzī need not rule out the possibility that between the inhering properties (i.e., being about history or art) and the proper parts (i.e., being a book authored by x and entitled y) certain necessary relations may hold, as the Aristotelian asserts. But he envisions a collection of

items where identifying the proper parts as essential to the quiddity and proper accidents of a thing may be in many cases beyond our grasp. Recall that in **T1** Rāzī contrasts knowledge of “named things” with the apprehension of quiddities that are “real in themselves” and expresses doubts about our ability to grasp the real quiddities. In light of **T1**, Rāzī’s position here can be understood as stating that, in most cases, our knowledge of sensible reality falls short of grasping such essential properties. It is for this reason that even though Rāzī posits both proper parts and accidental parts, the latter is what he uses exclusively in referring to the predicables, specifically the differentia. In the next chapter, we will see that Rāzī effaces the distinction between differentia and propria, rendering all properties effectively external to the quiddity. As such, the inhering property needs to be taken in a broad sense since they may be something like Aristotelian propria; though, Rāzī will argue that a *de re* necessity cannot be affirmed of such properties. This, as we will see, is why he does not use the Aristotelian terms of differentia or proprium, but will rather prefer to use *lawāzim*.

If I might pursue the example further: Rāzī seems to envision a collection of books with lost titles and authors, i.e., the constitutive parts, so that we have no access to the “essence” of the individual books that make up the collection. That is, we do not know its author, publication date and so forth (all of which I am construing for the purpose of the example as equivalent to the constitutive parts of an individual book). That is, we do not know that the fact that the collection treats biology is because some author trained in science undertook the task of writing the parts of the collection that treat biology. Only real knowledge of the “constitutive properties”, say, knowledge of the author of a specific book, would tell us the constituted essence of the collection. Indeed,

here we only say that the collection (and not parts of the collection) treats biology because we do not even know how the collection might originally be divided; that is, we have no knowledge of the order of its *internal complexity*.

Turning to Aristotelian substances, the basic difference between substances and Rāzī's structured universals is underscored in the above. That is, the parts of Aristotelian substances, as set out in definitions, not only identify parts but provide a full explanation of what the substance is, i.e., why it is the substance. And as such, scientific definitions or proofs will show why the proper accidents are necessarily attributes of that substance, as we have discussed in the preliminary discussion.

Let us turn now to Rāzī's philosophical discussion. Rāzī's theory of universals as structured universals is not only suggested in his analysis of the Aristotelian predicables in logic, but also in his philosophical discussion of specific complex entities. We saw that he applied his theory to the interpretation of the differentia, so that the differentia, in Rāzī's *madhhab*, is an attribute (*ṣifa*) and not necessarily a constitutive part. We will return to the analysis of complexes in logic, expanding particularly on the status of the Aristotelian categories, but I provide, here, a few examples from his philosophical discussion, which parallel my example of the book collection as applied to aggregates, related wholes, structured universals and substances. The examples serve to clarify a number of points discussed above regarding Rāzī's notion of complexes.

Given our analysis of Rāzī's views in the previous two chapters, "body" (*jism*) should fall into the category of a complex quiddity. It certainly does not fall into his list of immediate sensibles or internal psychological states. So we shall begin with this assumption. In his philosophical discussion of body in the *Mulakhkhaṣ*, *Mabāḥith*, and

other works, Rāzī distinguishes between general definitions or descriptions of body according to the Aristotelian version and those, he states, offered by “some people”. The latter includes descriptions such as magnitude (*miqdār*), space-occupation (*taḥayyuz*) and extension (i.e., that which has length, breadth and depth).²³³ The philosophers’ definition that Rāzī provides is: “the substance of which three dimensions intersecting at right angles can be posited (*f-r-d*) as possibly [obtaining]”.²³⁴ I shall gloss over a number of intricacies in Rāzī’s handling of the various definitions, but it should be noted that the definitions, in Rāzī’s view, should be taken as applying to the same object or definiendum, which specifically is the corporeal or sensible body, i.e., that of which corporeality (*al-jismiyya*) is predicated.²³⁵ In II.2 of the *Ilāhiyyāt*, Avicenna seeks to provide the real definition of body (*taḥqīquhu wa-taʿrīfuḥu*), arguing that the general definition of body is not “in reality” what the body is (i.e., body insofar as it is body). He states that corporeality (*al-jismiyya*) “in reality (*bi-l-ḥaqīqa*) is the form of continuity in which it is possible to posit (*f-r-d*) three dimensions.”²³⁶ This point is a qualification of his previous formulation that the body is a single continuous substance (*jawhar*).²³⁷

²³³ Rāzī suggests that this group, some of whom are undoubtedly *mutakallimūn*, do not distinguish between that which *has* length, breadth, and depth, on the one hand, and that which *is* long, broad, and deep (*al-tawīl al-ʿarīḍ al-ʿamīq*), on the other. For example, they do not seem to address problems in identifying magnitude with body, such a body being indeterminate with regard to actual three-dimensional magnitudes. Following his approach to definitions, Rāzī defines body as that which possesses such attributes. Avicenna cites these definitions as well in *Metaphysics*, II, 2, 48. See *Mulakhkhaṣ*, fol. 113a-113b; *Mabāḥith*, II, 9, 12; *Sharḥ al-Ishārāt*, II, 35.

²³⁴ Rāzī tweaks the definition in a number of ways. Rāzī seems to be wrestling with the consequences of Avicenna’s hard distinctions between receptivity (*al-qābiliyya*), three-dimensionality and corporeal form. Rāzī states that Avicenna views “possibility” here as a general one-sided possibility (*al-imkān al-ʿāmm*), so that possibility does not entail non-necessity. This Rāzī states is to allow for the necessary relation that the property of three-dimensionality holds of celestial bodies. See *Mulakhkhaṣ*, fol. 113a-113b; *Mabāḥith*, vol. 2, 12; *Sharḥ al-Ishārāt*, vol. 2, 5.

²³⁵ *Al-jismiyya*, or corporeity, is referred here generally to the concept of “being a body” which he distinguishes from Avicenna’s use of it as referring sometimes to the corporeal form (*al-ṣūra al-jismiyya*).

²³⁶ Avicenna, *Metaphysics*, II, 2, 51. For a full discussion of Avicenna’s theory of corporeity, see A. D. Stone, “Simplicius and Avicenna on the Essential Corporeity of Material Substance,” in *Aspects of Avicenna*, ed. Robert Wisnovsky (Princeton: Markus Wiener, 2001), 73–130. For an important analysis and

Returning to Rāzī's discussion, he states that the properties of extension (*ḥajm*) or space-location (*taḥayyuz*), i.e., those in the general or non-Aristotelian definition, are known immediately by perception (*mushāhada*), while the properties in the real definition require proof, or at least are more obscure (*akhfā*) than the object of definition. Significantly, Rāzī states that this is the case only if we take the object of definition to be the sensible body referred to by our normal usage of "body", which refers to the universal of the sensible item perceived by the senses or observation (*al-ḥaqīqa al-mushār ilayhā bi-l-mushāhada*).²³⁸ Avicenna's definition is not simply introducing a new technical sense of body but providing the real definition of what our concept of the sensible body actually is, i.e., the inner-reality (*bi-l-ḥaqīqa*) or complete essence of body.²³⁹ Indeed, seemingly in direct response to Avicenna's claim that the definition provides the knowledge of the inner-reality or complete conception of body, Rāzī replies, "This definition is a description (*rasm*) and does not provide a complete conception (*kamāl al-taṣawwur*)..."²⁴⁰ *Kamāl al-taṣawwur*, not incidentally, invokes the condition that

Avicenna states in *Demonstration* is required of real definitions, against those who fail to

clarification of aspects of Avicenna's view of body, see Jon McGinnis, "A Penetrating Question in the History of Ideas: Space, Dimensionality and Interpenetration in the Thought of Avicenna," *Arabic Sciences and Philosophy*, 16 (2006), 47-69.

²³⁷ Rāzī thus constructs the full definition with "substance" included as the genus. Indeed, in II.1, Avicenna includes body among the five kinds of substances (i.e., in addition to form, matter, soul and intellect). This is significant because it involves an important principle that Rāzī draws on in nearly all his philosophical works, which I omit in the discussion here. The principle is that "substance" is not predicated of a thing as a genus but as a concomitant (*lawāzīm*), which is discussed in Chapters 4 and 5. But this is now an obvious consequence of Rāzī's epistemological and logical programme, as established in the previous analysis.

²³⁸ Chapter 6 will clarify why Rāzī refers specifically to sight or visual observation when discussing knowledge of complex sensible things.

²³⁹ See especially in II.2 paragraphs 9 and 12. Incidentally, it might be noted that, in commenting on the Aristotelian position, Rāzī attacks those who think that prime matter posits a thing or existent beyond the sensible body. Rather, Rāzī states the prime matter simply grounds the distinction between the essence of the sensible body and the properties or forms that occur externally to it. See, *Mulakhkhaṣ*, fol. 119b.

²⁴⁰ The response is precisely to the claim: "Conception of what body in itself (*li-dhātihī*) is [known] immediately and this [real] definition provides [knowledge of] its inner-reality." This involves points clarified below. See Rāzī, *Mulakhkhaṣ*, fol. 113b. The same point is made, and expanded on, in the other works; see *Mabāḥith*, vol. 2, 12-15; *Sharḥ al-Ishārāt*, vol. 2, 6.

underscore the “completeness” of our conception of an essence, as discussed above. In another passage, Rāzī highlights the epistemological assumptions that have been worrying him in logic:

T15

Certainly [the sensible] body is a composite of genus and differentia in one respect (*bi-iʿtibār*) and of matter and form in another respect, **but, as for us, since we do not grasp (*nashʿur*) the essences (*ḥaqāʾiq*) of those constitutive parts (*muqawwimāt*), we will doubtless define (*ʿarrafnā*) “body” by its effects (*bi-āthārihi*) and concomitant attributes (*bi-lawāzimihī*).²⁴¹**

This passage directly invokes Rāzī’s analytic epistemological programme that he sets out in the logic section of his early works. According to this programme, “body” may be viewed as constituted of noumenal parts, namely, matter and form (which correspond, in Avicenna’s interpretation, to the genus and differentia of the definition) on the basis of the Aristotelian system. However, “as for us”, as he states, we examine only the phenomenal properties. In the next chapter, we will discuss in more detail what he means by effects (*āthār*) and concomitants (*lawāzim*) and how they apply to a quiddity in a manner that is not based on a *de re* relation of necessity.

In **T15**, Rāzī makes the point I attempted to illustrate with the example of the book collection. His discussion underscores the epistemological rift dividing internal or constitutive parts (such as differentia), on the one hand, and external properties, on the other. However, in **T15**, Rāzī underscores a less obvious point regarding structured

²⁴¹ *Mabāḥith*, II, 15. Rāzī expands on this with points that will be discussed below, particularly his notion that substance is not predicated of a thing as a genus.

universals. Recall that our formulation was complicated by the fact that the relation between parts of x , given by $P(x)$, and the inhering properties of x , given by $I(x)$, was ambiguous, particularly when taking property I into consideration. Rāzī confirms that he does not want to preclude any analysis of noumenal parts or any relations that may hold between noumenal parts and inhering properties. His statement there suggests that actual properties such as ‘extension’ (in actuality) may or may not be due to, or inhere in, some noumenal property that is more remote (*akhfā*) than “extension”, like receptivity or continuity. However, the actuality of such a relation between the noumenal and phenomenal properties needs to be assessed and given a technical signification, distinct from the concept signified by our ordinary term. This would especially be the case if there is no real or knowable relation between our pre-scientific notion of body and the scientific noumenal notion. That Rāzī is sensitive to this, and does not prejudge the matter, is probably due to his awareness that most philosophical and scientific works build on real definitions that presume to provide knowledge of noumenal properties.

Rāzī’s statement in **T15** underscores the point that the fundamental divide between him and the Aristotelian approach is the epistemological problem of distinguishing phenomena from noumena. In his philosophical discussion, Rāzī states that the Aristotelian view that magnitude is distinct from body is based on the prior rejection of indivisibles, since indivisibles which constitute bodies possess determinate unit-magnitudes, whereas a continuous body can have differing determinations of magnitude. However, Rāzī recognizes that this is a dispute over one noumenal view of the ultimate constituents of the phenomenal body versus another, viz., *kalām* indivisibilism versus

Aristotelianhylomorphism. As such, Rāzī sees the *mutakallimūn* as positing entities just as noumenal as the Aristotelians' form and matter.

Rāzī frames the discussion of *kalām* indivisibles in the following terms. After stating that a number of responses can be produced for his initial objections to the Aristotelian definition of body, Rāzī says,

T16

But the primary [response] is that the quiddity of body is apprehended by a primary conception (*taṣawwur^{an} awwaliyy^{an}*) since everyone knows necessarily of the extended (*kathīf*) body that it is space-occupying and [has] extension (*ḥajm*) and [everyone] distinguishes between that and what is not such. And you have come to know that what is such [i.e., immediately known] one need not be concerned with (*yashtaghil*) by defining it. Yes, the one who affirms that body is composed of indivisible parts does not explain body by space-occupation because one [indivisible] part is [according to him] space-occupying though not a body. Rather a body according to him is a name for a specified number of those indivisible parts composed in a specific manner, which is in reality a linguistic question (*baḥth lughawī*).²⁴²

The terminological problem centers on the divergence of the *mutakallimūn*'s use of "body" from the common usage. That is, body as construed by the *mutakallimūn* depends on affirming the constituent parts of body, namely indivisibles, whereas the common usage applies to extension (or space-occupation), which is an immediately observed property. However, the *mutakallimūn* would certainly insist that the body constituted by indivisibles is the sensible that is picked out by our word "body". However, the property

²⁴² Rāzī, *Mulakhkhaṣ*, fol. 113b.

of extension, which Rāzī considers is the structured universal that applies to the observed body, is explained in the *mutakallimūn*'s view by a more basic noumenal constituent of the body, i.e., the indivisible part. So the problem, once again, amounts to a distinction between noumena and phenomena.

Indeed, in his philosophical works, Rāzī believes that proofs adduced for either *kalām* indivisibilism or Aristotelian hylomorphism are ultimately inconclusive and thus fall short of demonstrative certainty.²⁴³ As such, Rāzī attempts to devise a third way of analyzing the problem that takes the phenomenal body as the substrate (*al-mawrid*) on which the attributes of unity and multiplicity occur. That is, the properties of continuity and divisibility of body are explained not by internal constituents but by the phenomenal qualities of unity and multiplicity.²⁴⁴ Rāzī's position also involves his views on individuation, unity and quantity, which I shall not investigate here. Rāzī's position in the debate between indivisibilism and hylomorphism is one that later writers would draw on.²⁴⁵ In other works, where he focuses on comparing the strengths and weakness of Aristotelian hylomorphism vis-à-vis *kalām* indivisibilism, Rāzī does lean towards that latter view. Crucially, however, he states that such proofs are built on numerous and

²⁴³ In later philosophical works, such as *al-Maṭālib al-ʿĀliya*, Rāzī seems to endorse a version of *kalām* atomism. There, however it is clear that the proofs adduced in favour of this version seem more probable than the alternative. The sheer quantity and variety of proofs and counter-arguments he provides for the indivisible part is telling, particularly in contrast to other positions. There is, in his view, "probabilistic" force to the atomistic position. In some places, it seems that the epistemic threshold is lower in that he says atomism entails fewer absurdities or outrageous claims than hylomorphism. In his discussion of body in the *Maṭālib*, Rāzī very clearly follows the epistemological programme set out in the early works. See Rāzī, *Maṭālib*, 6, 127-129. It should also be noted that, even though Rāzī tends toward indivisibilism in this work, he makes clear his tentativeness in affirming it and the problems that require resolution if one does endorse it. For example, he states that the science of geometry (*handasa*), from beginning to end, disproves the indivisible part (*al-jawhar al-fard*), so whoever affirms (*athbata*) the indivisible part must denounce the sciences of geometry. It is clear, here, that the rejection of geometry, in Rāzī's eyes, is a problem and not simply a position one must uphold. See *Maṭālib*, 6, 166.

²⁴⁴ *Mulakhkhaṣ*, fol.119a; *Muḥaṣṣal*, 119.

²⁴⁵ See for example Shams al-Dīn Maḥmūd al-Iṣfahānī, *Maṭālib al-Anzār ʿalā Ṭawālī al-Anwār* (Beirut: Dār al-Kutub, n.d.), 111-112.

corroborating deductive proofs, which gives indivisibilism a certain probabilistic force.²⁴⁶

What is significant here is the extent to which his epistemological programme informs his overall philosophical approach, though a more comprehensive analysis of the application of his logical programme has yet to be undertaken. Below, I argue that the very structure of his philosophical works, especially the *Mabāḥith* and the *Mulakhkhaṣ*, is organized in accordance with his logically informed philosophical approach.

One of the most important results entailed by our analysis of Rāzī's structured universals concerns the theory of *per se* predication and demonstrative science, as discussed in the preliminary analysis. Rāzī's structured universal is grounded in our pre-scientific knowledge of sensible complexes. Moreover, his epistemological and logical programme precludes any definitional method through which one might acquire knowledge of the *nature* of the structured universal. That is to say, what fundamentally constitutes such universals cannot be discovered by means of the definitional tools of logic. Therefore, a particular science or philosophical domain cannot base itself on assumed principles obtained by such logical methods. With this in mind, Rāzī redefines the nature of the predicates (i.e., the differentia and genus) that are employed in *per se* predication and demonstration. On Rāzī's account, the differentia is not a differentia, i.e., a constitutive part, but a property, which may even be external to the quiddity of a thing. In this way, Rāzī attempts to undermine the basis of Aristotelian demonstrative science. However, further elements of his view of structured universals and predication remain to be assessed. In the next chapter, we shall investigate Rāzī's critique of real definitions and his assertion of nominal definitions. There, some further aspects of Rāzī's notion of

²⁴⁶ See especially his lengthy discussion in *Maṭālib*, 6, 5-216. As noted above, he is tentative in endorsing indivisibilism in this work.

structured universals will be clarified, particularly as it concerns the external properties (specifically, *lawāzim* and *āthār*) of such universals and the role they play in definitions. Moreover, the discussion in Chapter 4 will provide further details on Rāzī's view of the Aristotelian theory of demonstrative science. The analysis will show that Rāzī focuses on a central notion in the *Posterior Analytics*'s theory of knowledge, namely, the principles on which the *de re* necessity of predication is based.

Chapter 3

Against Real Definitions and *De Re* Necessity

Our analysis in the preceding chapters paves the way to our assessment of Rāzī's critique of real definitions. Rāzī provides a systematic division of the kinds of definitions (*dabt anwā^c al-ta^crīfāt*) in the *Nihāya* and the *Mulakhkhaṣ*. In the latter work, he introduces his section on definitions with a more concise version of the division. As noted in the last chapter, Rāzī's investigation of the parts of the definition remains at the broadest level of analysis. That is, it avoids presupposing a particular approach to definition, as indicated by his omission of the Aristotelian names of the predicables and his use of general terms such as internal/external and composite/simple to refer to quiddities and their properties. His approach to the division of definitions will proceed along the same lines, though we will see that the consequences are much more apparent here. Though he specifically divides off the kinds of definitions we labeled "informative", which applied to the Aristotelian division of definitions as interpreted by Avicenna, Rāzī will not specify the parts of a definition as genus or differentia. Rather, he considers separately the relation of the individual parts to the nature of the quiddity. As such, his division will include possibilities that are not included in Avicenna's division. Rāzī, here, attempts to provide an exhaustive list of the types of informative definitions as logically entailed by his division, even if the particular type under consideration has no philosophical use or has not been recognized or assigned a name. Still, Rāzī provides

clear indications as to how such a division maps onto the Aristotelian system of definition.²⁴⁷

It is important to note that Rāzī's division is meant to be exhaustive with respect to informative definitions, that is, definitions of a certain non-trivial kind, as discussed in our preliminary analysis. In particular, they are definitions that provide complete or partial knowledge about a thing that is not already given in our ordinary or pre-scientific conception of that thing.²⁴⁸ As Avicenna states, informative or "scientific" definitions are those through which one "acquires" (*yaktasib*) conceptions. Such conceptions are the relevant kinds of conceptions for philosophical discourse or, more specifically, demonstrative science. Rāzī finds that not all definitions are informative and certain types of definitions fall outside of this division. The specific kind of definitions that is endorsed by Rāzī, called "nominal definitions", falls outside of this division. In fact, the entire division is, as we will see, an argument against informative definitions, an argument that, in Rāzī's view, leaves nominal definitions as the only viable type. However, Rāzī wants to distinguish between nominal definitions and lexical definitions, a point already noted above (see especially **T2**). Following our discussion of Rāzī's division and critique of informative definitions, I will attempt to work out how and why Rāzī distinguishes between the nominal and lexical definitions.

²⁴⁷ As noted above, in the *Nihāya*, Rāzī indicates this by interpreting a problem "according to the phrasing of the logicians" (*‘alā ‘ibārat al-mantiqiyyīn*) and refers to the parts of the quiddity as genus and differentia. Moreover, he calls the Aristotelian definitions "real definitions" (*al-ḥadd al-ḥaqīqī*).

²⁴⁸ That it is meant to be exhaustive is indicated in him raising a counter-example to the completeness of his division, namely, definition by analogy (*al-mithāl*). He argues that analogies are similar to the definiendum in certain respects and different in others. Analogies are thus not included in the division, as a kind of definition, if we simply consider that they posit similarities. But if we consider that analogies distinguish an item, they can be viewed as similar to the distinguishing kind of definitions, i.e., type (2) in the division below.

Rāzī follows up his analysis of the kinds of definitions with arguments for rejecting all the possibilities set out by his categorization. He draws out the problematic implication that follows from his division. Below I provide a schematized outline of his critique that follows his division. Ultimately, Rāzī's argument aims to show that informative definitions only work if we make certain epistemological assumptions regarding conceptions and the manner in which such conceptions are acquired. His critique of informative definitions leads him to assert his own view of nominal definitions, which he defines as "making precise what a name signifies in a general manner". We had encountered this phrase in the previous chapter when discussing Avicenna's views in *Demonstration*, which corresponds to a kind of definition preliminary to scientific investigation. However, Avicenna does not distinguish between a nominal definition and a lexical definition.²⁴⁹

We begin with Rāzī's division of informative definitions according to the components of the definiens as outlined in the *Mulakhkhaṣ* and the *Nihāya* (the *Nihāya* provides some additional details, which will be noted). The arrows indicate the name and status accorded to each kind of definition. Rāzī states that the definition of a quiddity, *x*, includes items (*umūr*) that are:

(1) internal items to *x*, which divides into definitions that include:

- (a) all internal parts of *x* $\Rightarrow$ real definition/*ḥadd tāmm* (indisputably);
- (b) some internal parts of *x*:

²⁴⁹ I have not found any sources in which Avicenna explicitly distinguishes between nominal definitions (which he refers to in *Demonstration*) and lexical definitions. It seems that the two are the same in his view. In any case, even if he does distinguish between the two, it is clear that Avicenna does not find the distinction relevant to the philosophical analysis of definitions as does Rāzī or, at the least, not in the way Rāzī finds the distinction relevant to his critique of real definitions. Avicenna does not raise the distinction in the relevant discussions in logic or philosophy as far as I can see.

- (i) that distinguish x from what is not x $\Rightarrow$ whether this is *ḥadd* or not is disputable;
- (ii) does not distinguish x from what is not x $\Rightarrow$ this is indisputably not *ḥadd*;

(2) items external to x $\Rightarrow$ *rasm nāqīṣ* (incomplete description);

Conditions:

- i. For the definiens to be co-extensive (*musāwⁱⁿ*) with the instances of x in the existence and non-existence of x.²⁵⁰ That is, the external item applies to x when x exists and does not apply to x when x does not exist.
- ii. For the definiens not to obtain for anything other than x.
- iii. For the definiens to be more apparent to the mind than the definiendum.

(3) both internal and external items of x:

(a) the internal and external parts are not co-extensive:

- (i) the internal element has a larger extension than the external $\Rightarrow$ *rasm tāmm* (complete description).
- (ii) the external part has a larger extension $\Rightarrow$ no name.

(b) the internal and external items are co-extensive $\Rightarrow$ no name.

The *Nihāya* discusses a number of further consequences that can be drawn from the division. But before we address these additional points, let us quickly map the above

²⁵⁰ In the *Nihāya*: “For it to be impossible that the definiens does not obtain for all instances of x.”

categories onto the corresponding kinds of definition in Avicenna's division of definitions, which was examined in the preliminary discussion.

It was noted that Avicenna's division of definitions in the first chapter of *Demonstration* was preliminary, and that his more substantive analysis comes later, especially in IV.4. Although a comparison of Avicenna's and Rāzī's divisions will be somewhat superficial, I believe it does underscore some basic points relevant to the following analysis.²⁵¹ Rāzī's (1a), or complete definition (*ḥadd tāmm*), corresponds to (Ia) in Avicenna's division, which the latter labels complete or real definition (*ḥadd tāmm* or *ḥaqīqī*). (1b.i) corresponds to (Ib), which Avicenna labels deficient or incomplete definition (*ḥadd tāmm*). (1b.ii) has no equivalent in Avicenna's division since it is not a definition. Rāzī includes (1b.ii) to ensure that his division is complete. Rāzī's (2) corresponds to Avicenna's (IIb), which is labeled incomplete description (*rasm nāqīṣ*) by both authors. It might be noted that the conditions that Rāzī applies to (2) are important to his subsequent critique as they scrutinize the necessity involved in such definitions. (3a.i) is equivalent to (IIa), which is an incomplete description (*rasm tāmm*) in both authors. (3a.ii) and (3b) have no equivalent in Avicenna and, again, are mentioned by Rāzī for completeness.

The following analysis shows the rationale behind Rāzī's division and how it sets up his "analytic" critique, but a few telling divergences between Rāzī's division and that of Avicenna should be noted. Rāzī's primary criteria of division is, first, whether a property is an internal or external part and, second (if it is not internal), how the property

²⁵¹ Only in I.1 of *Demonstration* does Avicenna discuss the relation of the kinds of definitions to the internal and external parts of the definiendum and the relation between defining and distinguishing (*tamyīz*). In later chapters, Avicenna examines more details of the Aristotelian theory, specifically on the relation of the kinds of definition to demonstrations, to the four causes, and to ontological simplicity.

applies to the definiendum (i.e., always, necessarily, etc.).²⁵² Rāzī then draws out what is entailed *completely* by the division, whether or not the traditional Aristotelian categories of definition apply. What is omitted in Rāzī’s discussion is any reference to mental forms, the method of division, and the Aristotelian structure of universals. It will be recalled that Avicenna’s division, by contrast, begins with the levels of “acquired conception” (*taṣawwur muktasab*) and his division of definitions is intended to correspond to the various levels of scientific knowledge. His language draws heavily on the notion of mental forms; for example, he states that a complete conception, which is afforded by a complete real definition, is an “intelligible form that corresponds to the (externally) existing form”.²⁵³ Moreover, Avicenna distinguishes between a complete real definition that simply distinguishes, i.e., (Ia), and a complete real definition that entails “all the essential parts so that nothing is excluded”, which we labeled (Ia’). To illustrate his distinction, Avicenna refers to the definition of “man” as “a corporeal, rational, mortal [thing]”. He states that in this case the definition “overlooks” (*akhalla*) the *intermediary* differentiae (e.g., the properties entailed by “animal” are omitted). Here, Avicenna presumes the method of division that does not simply assess the whole and its parts but presumes a hierarchy of universals as discussed in the preliminary discussion. This stands in stark contrast to Rāzī’s division, which examines definitions propositionally or simply as statements. The relation of the parts to the object of definition is viewed as a given and not discovered or “acquired” through any specific method, like division. As such, Rāzī does not distinguish between the causal roles of parts, so that a certain set of parts has

²⁵² As well, the question of whether such parts are complete or incomplete and whether they “distinguish” (*tamyīz*) is considered, but are subordinated to the first two principles.

²⁵³ Avicenna, *Demonstration*, 4. See preliminary discussion above as well, pp. 24-29.

distinct causal features from another (e.g., the differentia as being *the* constitutive part and as existentiating other intermediary properties entailed by the genus). Rāzī is, of course, justified in viewing definitions in this way since he has already noted and argue why he does not accept the epistemic assumptions in the Aristotelian theory. His “analytic” division and critique is aimed to show that, without those methodological and psychological assumptions, the notion that scientific or informative definitions can afford non-trivial knowledge cannot be defended. The following analysis will fill out the details of the general points mentioned above.

Turning now to the additional points that Rāzī raises in the *Nihāya*, he states that (1) and (3) apply only to composites, while (2) may apply to composites or simples. This follows from his definition of simples and complexes in the previous section, as discussed in Chapter 2. Further, he states that, with regard to cognitive content, type (1b.i) must be less informative than (1a). This follows necessarily from the nature of the division, since what includes all the parts of x will provide more cognitive content than that which provides anything less than all its parts. He calls (1a) the most complete (*atamm*) of all types and sub-types of definitions, while type (2) is the most general since it applies to both simples and complexes. Type (2) has no notable sub-types but there are several added conditions, namely points (i) to (iii). The conditions in effect exclude common accidents and are inclusive of propria and concomitants (*lawāzim*) of x, though there are some qualifications as well.

Type (3) is notable since only (3a.i) possesses a name and the latter clearly corresponds to Aristotelian complete descriptions, for example, “laughing animal” for “man”. In discussing (3), Rāzī explicitly calls the internal *dhātī* and external ‘*araḍī*. But

^ʿ*araḍī* here is not simply used in the sense of “accident” (*araḍ*), since an accident is not a part of the definition. Recall that in Avicenna’s division of definitions he refers to the same term for the properties of the description (^ʿ*araḍiyyāt*). However, as noted previously, Avicenna in his initial division of definitions remains vague about how the properties distinguish the object. That is, in I.1. of *Demonstration*, Avicenna was providing a general outline. Later, however, we saw that a more precise sense of ^ʿ*araḍī* emerges, namely *per se* accidents or *e2*-predicates (i.e., *al-ʿawāriḍ al-dhātiyya*). In (2), however, Rāzī clarifies what he means by the external or ^ʿ*araḍī* by setting out conditions (i) to (iii). Rāzī’s precise formulations of these conditions are particularly significant. However, let us first review Rāzī’s discussion and interpretation of Avicenna’s view of external properties, which constituted two chief kinds: *lawāzīm* and *per se* predicates.

First, recall that, in his commentary on Avicenna’s definitions of concomitants, i.e., *lawāzīm*, in *Sharḥ al-Ishārāt*, Rāzī raised a number of problems regarding the ambiguity of the term “accompany” (*yaṣḥabu*). Rāzī adds necessity to the definition (i.e., *wājib al-thubūt*) but is still dissatisfied, since the definition would still include a number of propositions whose predicates would not be considered *lawāzīm* by Avicenna. Rāzī provides the example that man is rational is a fact that is “inseparable” from the fact that donkeys bray. But Avicenna, as discussed, does not want to include such facts as *lawāzīm*. As such, Rāzī clarifies that Avicenna means something more specific by his definition, namely, that there is some causal connection to the internal parts of the quiddity that explains the necessity. I noted that the question that Rāzī raises concerns the distinction between a *de re* and *de dicto* reading of the necessity of the property. The necessity condition by itself would not exclude the class of propositions (such as, man is

rational *and* donkeys bray) that can be read as holding in virtue of a *de dicto* necessity. As such, Rāzī adds the qualification “in virtue of some thing reverting to it [i.e., the quiddity]” (*li-amrⁱⁿ ‘ā’idⁱⁿ ilayhi*) which was meant to tie the predicate to the essence of the subject, though the predicate is not a part of the subject. Similarly, in his assessment of *per se* accidents in *Sharḥ al-Ishārāt*, again operating in the Aristotelian framework, Rāzī attempts to clarify the interpretive problems involved in Aristotle’s definition of such *per se* predicates, viz., predicates in whose definition the subject is included.

It is significant that in the conditions for *‘araḍī* set out in (2), Rāzī does *not* add any qualification that would ground the necessity of the property in the essence of the subject. That is, the necessity of the external properties in this division can only be read, thus far, as holding on a *de dicto* reading. This is precisely what I mean by Rāzī’s “analytic” approach. The aim, that is, of Rāzī’s division is to strip the causal connections that hold between constituent and external properties, a connection that he believes can only be maintained by holding the problematic assumptions that his “epistemological” programme underscores. Recall that Rāzī in **T1** had stated his position that the conception of the differentia and genus as internal or constitutive parts is beyond our grasp with regard to most sensible things. That discussion is found in a chapter entitled, “How the five predicables are acquired (*iqtinās*)” of the *Mulakhkhaṣ*, which is the exact title of the larger section (*al-jumla al-ūlā*) in which the chapter is found, though in the first sub-section, i.e. *al-qism al-awwal*. Moreover, the chapter directly precedes Rāzī’s discussion of definitions and in particular his division of definitions outlined above, which begins the second sub-section (*al-qism al-thānī*) of the first part (*al-jumla al-ūlā*) of logic, which centers on conceptions and definitions. Indeed, the core of Rāzī’s epistemological points

regarding constitutive parts as well as mental forms are established in *al-qism al-awwal*, which precedes his division and analysis of definition. As such, Rāzī is attempting to demonstrate that, if one rejects epistemological and psychological assumptions that he finds problematic, one will find the notion of informative definitions as internally problematic as well. Indeed, if we turn now to his critique of informative definitions, the above hypothesis is borne out. That is, Rāzī will force the proponents of informative definitions to explicitly state whether the *‘araḍī* is to be read as holding of the subject in virtue of a *de re* or *de dicto* necessity.

First, however, it might be noted that Rāzī, in *al-qism al-awwal* of the *Mulakhkhaṣ* (specifically in his chapter on parts of the quiddity), discusses the various meanings of *dhātī*, not all of which are constitutive parts. He states for the eighth type that it is what is called in the *Book of Demonstration* (*Kitāb al-Burhān*) an essential accident (*‘araḍ dhātī*), as for example the predicate in “the animal is laughing”.²⁵⁴ That is, *per se* accidents are a specific type of external property that is posited in demonstrative science. However, given his epistemological rules, an “essential” *dhātī* is clearly not the sense that is relevant to his general logical analysis. Rather, *dhātī* here stands for a part or constituent of a quiddity, which corresponds to the notion of a part that Rāzī advances in the context of his view of structured universals, as discussed in Chapter 2. That is, a part, in Rāzī’s view, did not have the causal and necessary role that the Aristotelians gave it. In this light, Rāzī views the differentia of the quiddity, in his *madhhab*, as possibly being an attribute, a view that opposes the Aristotelian and Avicennan view of the differentia as having a necessary and causal role in the constitution of the quiddity. It can also be noted

²⁵⁴ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 47-48. As such, we noted that the logic of the *Mulakhkhaṣ* is different from the programme of the *Madkhal* which falls in the Isagoge tradition.

that, in the Aristotelian complete description, the differentiating element is the *per se* accident or proprium (*‘araḍī*), which has a smaller extension or, rather, is more specific than the essential part (*dhātī*), just as animal is broader than laughing. As such Rāzī adds the appropriate qualifications to (3a.i). However, Rāzī draws out the logical consequences of his division and arrives at (3a.ii) and (3b), which have no place in the Aristotelian system. This is because, as discussed previously, the Aristotelian method of definition presumes genera-lines (or the Porphyrian tree) where the genus is usually broader than the differentia or the differentiating property, particularly in the context of defining complex sensible entities. As such, the Aristotelian method fixes the scope of the extension of the first element in the definition (i.e., genus) with a view to the second (i.e., the differentia or proprium). Finally, it can be noted here that the conditions are formulated so as to allow type-(2) definitions to include even *kalām* approaches to definition, a point we shall return to shortly.²⁵⁵

Turning now to Rāzī’s critique, his argument against informative definitions follows directly from his division of definitions. The argument as set out in the *Mulakhkhaṣ* and the *Nihāya* can be summarized as follows:

- (I) Type-(1a) definitions are problematic since “all the parts of x” is:

²⁵⁵ That is, in the manner rendered by Rāzī, type (2) allows not only for Aristotelian descriptions but the kind of definitions used in *kalām* as well. For example, in defining the “indivisible part” (*al-jawhar al-fard*) by, say, space-occupation (*taḥayyuz*), the *mutakallimūn* are, in their view, not defining the thing with something internal to the indivisible part but with an attribute that follows in and of itself (*li-mā huwa ‘alayhi fī nafsihi*); that is, what R. Frank calls the “essential attribute” which follows in existence (*muqtaḍāt^{an} an*) the “attribute of essence” which identifies the thing’s essence. I will not pursue this further here, but it can be noted that the attribute of essence (which seems to correspond to the Aristotelian constituent part of the essence or the essence itself) is not defined in any informative way. Thus they state: “When it is non-existent, the atom is specifically characterized by an attribute but is not manifest except through its occupying space, wherefore this [sc., its occupying space] must be entailed by the Attribute of Essence.” The translation is Frank’s. See his *Beings and Their Attributes*, 59, and especially chapters 2 to 4.

- (a) the same as x itself (*nafs al-māhiyya/ḥaqīqa*), which entails the definition of x by itself and which is thus circular;
- (b) internal to x, which is impossible since (by definition) all the parts of x are x and not a (proper) part of x;²⁵⁶
- (c) external to x, which is impossible because the collection of the parts of x would be something separate from x; if it is not separate from x, then it is a definition of type (2), i.e., a description and not (1a). [That is, “all the parts of x” would then be a concomitant of x].

(II) Type (1b.i) is impossible because if x is the sum of the parts in the definition plus the remaining parts, the parts in the definition would define all the parts of x; but the quiddity of each part is external to the quiddity of all the parts together, and so the definition would again be of type (2) and not (1b.i).

(III) **Type (2) is also problematic because the aim of this definition is either**

- (a) to define the specificity (*khuṣūṣiyya*) of the quiddity in which the external item occurs or (b) that on account of its being “some thing” from which that [concomitant] is entailed (*li-kawnihā malzūmat^{an} li-dhālika al-lāzim*);** but, in the former case, since different quiddities can have the same concomitant, this specificity cannot be inferred or proven and, in the latter, the concomitant is the given definiens and not the object of definition, so the definition will be circular.

²⁵⁶ That is, the aggregate of the parts of x is exactly x and so knowledge of all the parts of x is identical to x. The argument is that it cannot provide any non-trivial knowledge of x. Here, again, Rāzī presumes that the analysis proceeds analytically, so that external epistemological assumptions (such as the method of division or the notion of hierarchical universals) cannot provide any cognitive depth to the parts or circumvent the one-to-one relation between parts and the quiddity.

In the *Nihāya*, following the above argument, Rāzī concludes by stating:

T16

Know that the only escape (*khalāṣ*) from these puzzles (*shubuhāt*) is if we say that [real] definitions and descriptions are [simply] a matter of *making precise what a name signifies in a general way* (*tafṣīl mā dalla ‘alayhi al-ism bi-l-ijmāl*). But this entails another matter, which is that a distinction will no longer hold between a [real] definition (*ḥadd*) and description (*rasm*).²⁵⁷

We shall return to Rāzī’s conclusion after first assessing the argument.

The argument seems to make a clear omission. That is, the argument is aimed at all possibilities entailed by the division but no explicit argument is made against definition (3).²⁵⁸ Rāzī indicates in the *Nihāya* that his objections apply to descriptions in general, so that both complete and incomplete descriptions are ruled out.²⁵⁹ A closer look at the argument suggests that no further argument against definition (3) is in fact required. In particular, Rāzī’s argument (III), which is aimed at type-(2) definitions, seems to apply to definition (3), or at least (3a.i), as well. That is, the external items in definition (2), which constitute the differentiating property in the definition, as mentioned, are not

²⁵⁷ *Nihāya*, fol. 3b.

²⁵⁸ However, in the *Mulakhkhaṣ*, Rāzī states: “We do not accept the correctness of any of these divisions” (*lā nusallim ṣiḥḥat shay^{3m} min hādhihi al-aqsām*). Moreover, he attempts to meet objections that argue that the division overlooks certain kinds, like analogies as noted above, so that his argument is exhaustive.

²⁵⁹ *Nihāya*, fol. 3a.

simply accidents but concomitants. In the complete descriptions of (3a.i), the external properties are necessarily concomitants.²⁶⁰ In the case of (3a.i), the external property is the differentiating factor so an argument against it will in effect be an argument against the validity of the definition.

Argument (III) however needs clarification and is significant to our discussion above regarding Rāzī's (implicit) distinction between *de re* and *de dicto* necessity. As stated in the above summary, the argument distinguishes between two matters: (a) the specificity of a quiddity in which the external property occurs and (b) the attributions being a matter of entailment (*luzūm*). The latter, (b), requires some clarification. This point, I believe, is historically significant because it is meant to explicitly distinguish between two ways in which one might identify the external property that occurs to x. That is, Rāzī is explicitly making the distinction between *de re* and *de dicto* necessity or attribution. The text runs as follows:

T17

As for defining the essence (*al-ḥaqīqa*) by its concomitants (*bi-lawāzimihā*) [i.e., type (2) above], there is also a problem (*ishkāl*) regarding it [i.e., in addition to the problems raised against real definitions]; because if we say of a particular essence that it is that which entails such-and-such a concomitant (*yalzamuhā al-lāzim al-fulānī*), the thing we seek to know is either: [(i)] the specificity of that essence in itself

²⁶⁰ On the Aristotelian account, as noted, (3a.ii) is problematic because it is hard to see how a differentia or proprium that is divisive of the genus can possess a larger extension. It is not clear to me how such a definition might work on any account and it might be that Rāzī is simply following the logic of his division. But he does not seem to exclude it from being a definition or description as he does with (1b.ii). (3b) can in principle work on the Aristotelian account. But this involves the more complicated matter of mental or intentional versus real differentiae, which the Aristotelians allow in the case of, say, abstract entities. Rāzī's division seems to allow for such intentional properties.

(*khuṣūṣat tilka al-ḥaqīqa fī nafsihā*) or [(ii)] is on account of its being something from which that [concomitant] is entailed (*li-kawnihā malzūmatan li-dhālika al-lāzim*).²⁶¹

In the *Mulakhkhaṣ*, Rāzī states:

T18

As for defining the [quiddity] by external things [*al-umūr al-khārijiyya*], what is sought is either [(i)] the specificity of the quiddity (*al-māhiyya*) of which that external thing holds (^ʿ*araḍa*) or [(ii)] the definition of this much [*hādha al-qadr*], which is [to define that] it is some thing (*amr mā*) that has that external property (*lahu dhālika al-waṣf*).²⁶²

As pointed out above, Rāzī here is forcing the proponent of informative definitions to specify more precisely the notion of ^ʿ*araḍī* or *lāzim*, i.e., the external property that is relevant to informative descriptions. Rāzī’s use of terminology here is precise and deliberate. His first option (i), whose formulation is almost identical in both the *Nihāya* and the *Mulakhkhaṣ*, evokes Rāzī’s discussion of *lāzim* as requiring some thing that “reverts to” the quiddity. In any case, he will clarify (i) in his objection to it, which we shall return to shortly. His second option (ii) differs in each work. In the *Nihāya*, it seems to simply mean a *lāzim* that does not “revert to” or have a “specificity” rooted in the essence, i.e., it is the kind that is identified by the basic conditions he sets out for type-(2) definitions. In the *Mulakhkhaṣ*, the contrast between (i) and (ii) is even more evident, and

²⁶¹ Rāzī, *Nihāya*, fol. 3a.

²⁶² Rāzī, *Manṭiq al-Mulakhkhaṣ*, 103.

makes clear that the distinction amounts to one between a *de re* and a *de dicto* attribution. That is, with respect to (ii), he does not say in the *Mulakhkhaṣ* that the object of attribution is the quiddity or *māhiyya* but only “this much” (*hādha al-qadr*). Because, in the *Nihāya*, his discussion is more distant from Aristotelian terminology, Rāzī does not use *māhiyya* but uses *ḥaqīqa*, though in a general way referring to universal or object of knowledge. Also, with regard to terminology, it is notable that, in the *Mulakhkhaṣ*, he uses “to occur” (‘*araḍa*) for the attribution in (i) as well as “belongs to” (*lahu*). The term ‘*araḍa* here, following his discussion of the sense of essential part (*dhātī*) as the *per se* accident (‘*araḍī*) in *Demonstration*, implies the specific kind of attribution the Aristotelians envision. “It possesses” (*lahu*) simply indicates that the “some thing” possesses the attribution, irrespective of the quiddity of that thing.²⁶³ In fact, later in the discussion, Rāzī states with regard to (ii) that what is sought here is that the property, and not its specificity, “belongs to” *lahu*, as we shall see. Let us move on to examining why he dismisses both possibilities as ways of construing informative definitions.

With regard to (i), Rāzī focuses on the nature of the specificity or *khuṣūṣiyya*. Rāzī provides the same line of reasoning in both the *Nihāya* and the *Mulakhkhaṣ* against the possibility of identifying this specificity. His basic argument is that the same concomitant can apply to different quiddities. Rāzī states that our knowledge of a quiddity’s giving rise to or causing (*mu’aththira*) a certain concomitant does not lead to our knowledge of the type of specificity that we seek in such definitions. That is, our knowledge of a property as a concomitant, viz., a property that is inseparable of a thing in existence and non-existence, does not yield knowledge of the property as being a

²⁶³ It can be noted that (i) differs from the *kalām* definitions noted above because the essence in itself (or the Attribute of Essence) is simply an identity statement and no lower-level constituents can figure in the formulation of its definition. But (ii) does seem to include *kalām* definitions.

necessary or *per se* accident of a thing. Indeed, he states that even if it is granted that a concomitant only applies to a single quiddity, it is not possible to categorically assert (*lā yumkin al-qaṭʿ*) the necessity of the specificity without the evidence of sense perception (*ḥiss*) or proof (*burhān/dalīl*). That is, even if the concomitant applies only to one subject, i.e., the object (*malzūm*) entailing the concomitant property (*lāzīm*), the necessary relation cannot be affirmed without the further evidence of the sense perception or proof. Rāzī goes on to argue that even the evidence of sense perception and proof is of no use. He states that it is not possible to have knowledge of the specificity of the concomitant to the quiddity without first knowing the antecedent quiddity, and so using the specificity or the consequent concomitant to define the antecedent quiddity is circular. That is, rather than identifying a quiddity, descriptions seem to presume the very quiddity in which *per se* accidents are said to occur. It is significant that Rāzī's discussion here addresses problems that apply more broadly to the theory of demonstration. Indeed, recall that, for Avicenna, the link between two properties, such as "risibility" and "rationality", established an immediate and necessary relation of predication. Moreover, the order that obtains between the two properties, i.e., that "rationality" is necessarily the explanatory cause of "risibility", but not the reverse, is also known by the method of definition and not by demonstration. Recall that if such properties were defined by deductive proof, then all the principles of a demonstrative science would be deduced.

For his objection to (ii), Rāzī states in the *Mulakhkhaṣ*, "The writer (*al-kātib*; i.e., one capable of writing) is some thing that has [the ability of] writing (*shayʾ mā lahu al-kitāba*), so if the [definiens of] it [i.e., writer] is 'some thing that has the ability of writing, and is not due to the specificity of that thing [to it], the definiendum would be

identical to the definitions.” Rāzī’s point is that if the link between the concomitant properties (*lawāzim*) entailed by the subject and the subject itself is not grounded in the essence of the subject – that is, if it is not a *de re* attribution – then the definition will be trivial or tautological not informative.

Before returning to Rāzī’s conclusion that real definitions must be replaced by his “nominal definitions”, there is one final matter to be discussed regarding his argument against real definitions. In the *Mulakhkhaṣ*, subsequent to the above objections, Rāzī provides a more general objection to real definitions, which I shall discuss only briefly. The argument claims that one cannot seek the definition of an unknown quiddity without already having a conception of the quiddity one seeks to define, in which case the quiddity would be known and not need to be defined. On the other hand, if one has no conception of the quiddity, then one cannot seek its definition since one would not know what one seeks to define, nor would one know that one has defined it, even if he happens upon the right object of definition.²⁶⁴ Rāzī considers two objections to his argument that he attempts to repel with counter-arguments. The first objection states that the quiddity is known in a certain respect and unknown in another (*ma‘lūm min wajh wa-majhūl min wajh ākhar*), making it possible to seek its unknown aspect. It is significant that Avicenna provides the same response in *Demonstration* and *Syllogistic* (i.e., *al-Qiyās*, which is Avicenna’s version of the *Prior Analytics*) to Meno’s (*Mān[u]n*) paradox, which sets out a puzzle against seeking knowledge in general of what is unknown, very much like Rāzī’s specific argument against acquiring a conception of an unknown quiddity through

²⁶⁴ Rāzī, *Maṭīq al-Mulakhkhaṣ*, 103-104.

definitions.²⁶⁵ Avicenna states that what is sought (*al-maṭlūb*) is known to us in a certain respect and unknown in another (*maʿlūm lanā min wajh, majhūl min wajh*) and that it is the unknown that we are able to seek.²⁶⁶ Importantly, however, Avicenna raises Meno's puzzle in the context that it was raised originally in Aristotle's *Posterior Analytics* and the *Prior Analytics*, which focused primarily on how universal knowledge applies to particulars in syllogistic arguments.²⁶⁷ Like Aristotle, Avicenna attempts to avoid the pitfalls of Plato in responding to Meno (i.e., positing recollection) without, however, accepting that we simply do not know the particular fact.²⁶⁸ Avicenna's solution follows Aristotle in suggesting that what is unknown in such cases is known potentially.²⁶⁹

Rāzī is well aware of all this. Following his responses to the two objections, he states regarding his specific argument against concept acquisition, "Know that this question was raised by the ancients (*qudamāʾ*) regarding [the claim] that acquiring knowledge (*taʿarruf*) of what is unknown is impossible."²⁷⁰ That is, he recognizes that the problem was one that was applied more generally to acquiring knowledge or learning.

²⁶⁵ In *Demonstration*, Avicenna states that his full discussion was made earlier in *Kitāb al-Qiyās*, which can be found in chapter 19 of book 9 of *al-Qiyās*.

²⁶⁶ Avicenna, *Demonstration*, 27.

²⁶⁷ The problem can be illustrated with an example. To borrow Avicenna's example in *Demonstration*, from knowing that "every man is an animal" we cannot infer that Zayd, who is some man in India, is an animal, if we have yet to know that Zayd exists. It thus follows that we do *not* know that Zayd is an animal, which is the conclusion of the syllogism. But if we know that every man is an animal and Zayd is a man, we must know that Zayd is an animal. Avicenna in *Qiyās*, like Aristotle in the *Prior Analytics*, in fact considers a wider range of problems regarding what is known and unknown in syllogisms, which he seems to divide into two kinds: one in which knowledge of particulars falling under the major premise is potential and another in which the consequence of the relation between the major and minor premises is potentially known. The case of not knowing or perceiving the particular whatsoever is a particular case of the former kind, which Avicenna raises in *Demonstration* but not in *Syllogistic*.

²⁶⁸ Aristotle raises the problem in *Posterior Analytics*, 71a25-71b9 and *Prior Analytics*, 67a21-67b26.

²⁶⁹ Avicenna however also utilizes his distinction between conception (*taṣawwur*) and assent (*taṣḍīq*) to make the case that though all learning is preceded by some knowledge, not all knowledge requires pre-existing knowledge. Thus, some knowledge is not learned. In the *Qiyās*, Avicenna makes clear that Meno's paradox aims specifically at acquiring knowledge through syllogistic proof not definition. Avicenna even has Meno state the problem as one concerning the conclusion of a syllogism (*Hal al-maṭlūb ʿindaka bi-l-qiyās maʿlūm aw majhūl?*), 545.

²⁷⁰ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 105, *Mulakhkhaṣ*, fol. 11a.

However, Rāzī thinks that one should distinguish between two distinct matters to which the problem may be applied: (1) our assent to propositions (*al-maṭālib al-taṣdīqiyya*) and (2) concept acquisition.²⁷¹ As applied to propositions, he provides the following response: seeking whether x is y or not y (his example is whether the world is originated or not), presumes our knowledge or conception of x and y, but not whether the relation (*nisba*) between x and y holds or not (*bi-l-thubūt aw al-intifāʿ*). So, he states, what we acquire in assent is what we sought in the first place by means of prior conceptions. Here, again, Rāzī attempts to maintain a *de dicto* reading of propositions as evidenced by his separation of the question of our conception of the subject and predicate from the nature of the relation that holds between the two. With regard to (2), Rāzī states that the same cannot be said of conceptions, i.e., they cannot be shown by proof, and restates his previous argument against defining quiddities.

It should be noted here that Rāzī's approach and use of Meno's paradox underscores a fundamental departure from the Aristotelian view of knowledge and demonstrative proof. Rāzī's response need not invoke any distinction between universal knowledge and particulars or between potential and actual knowledge. Indeed, in his view, knowledge of particulars is no different from universal knowledge, a point that was established above. Moreover, there are no primary or immediate conceptions, provided by real definitions, which provide the principles of scientific knowledge. To Rāzī, all conceptions are equally non-quidditative; they are simply our pre-scientific concepts expressed by linguistic terms. Recall his discussion in **T2** quoted above:

²⁷¹ Ibid., 105.

As for the second [i.e., knowledge of a thing's attributes], it is [for example] when a proof shows that the world is originated, and that for every originated thing there is an originator. Here, the intellect judges that the world has an originator, but it does not know what the quiddity (*māhiyya*) of that originator is, and what its reality is. So, what is known of this originator is that it is an originator. As for what it is (*mā huwa*) in its specified essence (*fī dhātihi al-makḥṣūṣa*), this is not known. This [type of] knowledge in terms of being knowledge of a thing is not with respect to its specific essence, but rather it is with respect to it having some attribute or accident.

Rāzī thus distinguishes between attributes *simpliciter* and essences that provide the grounds for demonstrative knowledge. Let us now turn to the conclusion he draws from his argument.

Subsequent to his critique of real definitions, Rāzī had suggested that the only solution (*ḥall*) is to concede that definitions are simply a matter of “making precise what a name signifies in a general way” (*tafṣīlu mā dalla ‘alayhi al-ism bi-l-ijmāl*). He concludes, moreover, that accepting this would mean that one could no longer maintain a distinction between real definitions and descriptions. Of course, with these concessions, the entire edifice of the Aristotelian theory of definition would crumble and along with it the theory of demonstration and scientific understanding. But, in the foregoing analysis, I have suggested that Rāzī's aim is not simply to undermine the Aristotelian system but to critically assess its approach so as construct an alternative. We have seen some aspects of how this alternative system works. It involves a systematic reassessment of fundamental

notions and principles, and of the methods of establishing those principles. In the following, and in the next chapter, I shall attempt to outline more broadly how his system can be applied to his philosophical discussion. Here I will assess his notion of nominal definitions that he seems to draw quite heavily on in philosophy.

Rāzī's own analysis has suggested that not much needs to be said about definitions. That is, his epistemic programme and critique of real definitions attempts at length to show that conceptions are basic and trivial, which in turn trivializes the means to their acquisition, i.e., definitions. However, Rāzī does make a minor distinction that may be of some significance in systematizing philosophical discourse. That is, as we saw in **T2**, he distinguishes nominal definitions from lexical definitions, which, Rāzī states, simply substitute one term for another. He deems lexical definitions as trivial and otiose in scientific discourse, suggesting that nominal definitions, which he endorses in philosophical discourse, have some non-trivial role. We know that nominal definitions certainly cannot provide noumenal knowledge, but they might have a less cognitively substantive function. In the *Mulakhkhaṣ*, his solution to problems aimed against real definitions and concept acquisition is to simply state: "By definition, we only mean making precise what a name signifies in a general way." But what does this mean? And is it supposed to distinguish it from lexical or stipulative definitions?

In the following, I provide some background to Rāzī's discussion of nominal definitions, though I will not attempt to fully excavate its history. Rather, I will attempt to reconstruct Rāzī's theory of nominal definitions by examining further aspects of his analysis of the predicables. With regard to the historical background, it is quite certain that Rāzī does not invent the term *al-ḥadd bi-l-ism*, nor its definition, as we noted above,

though it is unclear whether he modifies the notion of what *al-ḥadd bi-l-ism* is. In the *Nihāya* he indicates that some of the discerning philosophers (*ba^cd al-muḥaqqiqīn*) have adhered to the notion that definitions simply detail what a name signifies generally, though he concludes that there remains in this position a certain ambiguity (*ghumūd*). The problem follows from the result that he drew from his critique of real definitions, specifically that definitions and descriptions will not differ. He states, “A description (*rasm*) is simply [what] is stipulated vis-à-vis what is thought (*bi-izā^ʿ mā yu^cqal*). So if one stipulates the name ‘knowledge’ vis-à-vis some thing that affects [the attribute of] being knowing (*bi-izā^{ʿi} amrⁱⁿ mā mu^ʿaththirⁱⁿ fī al-^cālamiyya*), and one mentions in the definition of knowledge this much, he has detailed (*f-ṣ-l*) what the name signifies in a general manner, which would entail that it is a definition (*ḥadd*).”²⁷² Rāzī states that this is what is held by some *muḥaqqiqūn* but that the position is somewhat obscure. The obscurity he has in mind could be that a description here is equated with any conventional definition, in which case no distinction would remain between descriptions and lexical definitions, and even stipulative ones. Rāzī perhaps wants to indicate in the *Nihāya* that there might be more to nominal definitions than this. Though ultimately not much will hinge on the question, in the following I make an attempt at showing that Rāzī does want to insulate nominal definitions from the charge of triviality that is made of stipulative definitions.

First, let us return to Rāzī’s description of nominal definitions as that which details what a name signifies imprecisely or in a general manner. Lexically, the two operative and contrasting terms in the definition are *tafṣīl* and *bi-l-ijmāl* (or alternatively

²⁷² Rāzī, *Nihāya*, 3b.

ijmāl^{an} or *bi-l-jumla*), which carry a range of meanings including, for *tafṣīl*, to explain, to expand and to divide; and, for *ijmāl*, to put together, to summarize, and to treat as a whole. Importantly, however, the terms seem to invoke a technical sense that appears in the *kalām* analysis of knowledge, specifically regarding a distinction made between general and detailed knowledge (i.e., *‘ilm al-jumla* versus *‘ilm al-tafṣīl* respectively). A range of problems involving the distinction interested the *mutakallimūn*, including how the two constitute distinct species of knowledge and how the distinction mapped onto the distinction between the nature of divine versus human knowledge. I shall focus, however, on points they raise regarding the object of knowledge rather than the nature of knowledge as a property or quality belonging to the knower.

In discussing whether general knowledge has an object, Ibn Mattawayh (fl. first half of the 11th century) in *al-Tadhkira* considers the example of knowing Zayd, i.e., an individual. Against a position ascribed to Abū Hāshim, which holds that general knowledge does not have an object, Ibn Mattawayh argues that one’s general knowledge of Zayd does have an object since we distinguish between the *jumla* that applies to Zayd from that which applies to another.²⁷³ Moreover he states that if one knows that Zayd has a mother, then his mother becomes distinguished from men, i.e., in a manner constituting general knowledge. That is, even if one does not know Zayd’s mother in a more precise manner (say, by perception and acquaintance), there is an object of our general knowledge of his mother which serves as the ground for the distinction between his mother’s being a female rather than a male. Another example is our knowledge of the rewards of paradise, which Ibn Mattawayh states is only ever general knowledge. This is

²⁷³ Ibn Mattawayh, *al-Tadhkira fī Aḥkām al-Jawāhir wa-l-A‘rād*, ed. D. Gimaret (Cairo: Institut français d’archéologie orientale du Caire, 2009), 622.

because detailed knowledge of the infinite set of things that comprise those rewards is impossible. It seems from the examples that the distinction seems to include both whole/part as well as universal/particular relations. The above examples seem to concern only knowledge of particulars and thus only the relation between wholes and parts. Thus, knowing Zayd or his mother in a general manner (*bi-l-jumla*) seems simply to involve fewer details or less factual information about each individual than knowing them with precision or detail (*tafṣīl*). The example he provides of our knowledge of oppression being evil (*qubḥ al-ẓulm*) and our knowledge of a particular oppressive act being evil seems, however, to be a matter of the relation between universal and particular knowledge.

Ibn Mattawayh reports an opinion of Abū ʿAbd Allāh (d. 367/977), a member of the Basran Muʿtazilī school, that knowing that oppression is evil, and knowing that *this* act is oppression, leads one to the (third) knowledge that *this* act is evil.²⁷⁴ This is a method added to the traditional *kalām* methods of proof (generally *naẓar* and *istidlāl*) by which belief becomes knowledge. This seemingly late admission might be due to the influence of Aristotelian syllogistic. But, whatever the source, what is significant is that the *kalām* distinction between *tafṣīl* and *ijmāl* is sufficiently pliable to allow for both whole/part and universal/particular relations. Here, the fundamental distinction between universal knowledge and particular knowledge, as held by the Aristotelians, is not made. The question remains of how these later *mutakallimūn* systematically approached the relation between universals and wholes/parts, if they ever did. It might be noted that Abū Hāshim's rejected opinion might be taken as viewing all general knowledge as relating to

²⁷⁴ Ibn Mattawayh, *Tadhkira*, 618.

something like universals since he denies that the former has any object of knowledge. But this is speculative on my part.

If we turn back to Rāzī's example of stipulating the name 'knowledge' for a specific effect of being-a-knower, his problem seems to be the following. Our knowledge of "knowledge" in a general manner (*bi-l-ijmāl*) does not comprise the various effects of being knowing, all of which would however comprise our knowledge of detailed knowledge (*tafṣīl*). If however we stipulate the name knowledge for "some" specific effect, our reference to that effect would "detail" what our knowledge refers to generally. But the same can be applied to each effect, thus resulting in the proliferation of names and definitions. To Rāzī's mind, the effects or those properties that are detailed can be viewed as the concomitants of specific kinds. Now, in the examples provided above, no major problem ensues because we cannot really be mistaken about who Zayd or his mother is. But we have encountered a non-trivial problem that Rāzī discusses, which concerns a clash between diverging, and competing, conceptions and definitions of the quiddity of a thing, namely, "body". That is, as discussed above, Rāzī considers the basic sense of "body" as referring to that which possesses extension and space-location. But the *mutakallimūn* unknowingly conflate uses of the term "body" when they, on the one hand, refer to it as that which has space-location and, on the other, as that which is made up of a certain number of atoms. Rāzī insists that the two senses must be distinguished since one requires a proof for the existence of atoms (i.e., its constituent parts) and the other (i.e., the concept signified by our ordinary-language term) is basic and requires no proof. The obscurity then arises from the fact that the *mutakallimūn* do not seem to systematically distinguish between the different types of relations that hold between certain universals

and their properties. The *mutakallimūn* certainly seem to have the philosophical resources, for example, in the distinctions that some make between the Attribute of Essence and the Essential Attribute of a thing. But as the above analysis of general and particular knowledge suggests, the consequences have not entirely been worked out. Indeed, even the distinction between whole/part and universal/particular relations remains in flux. All this requires a systematic analysis of developments in later *kalām*, which I believe served as an important background source for Rāzī's alternative system.

Chapter 4

Philosophy and Science: The Young Rāzī's New Philosophical Programme

In this section, I assess the structure of Rāzī's two main philosophical works, the *Mulakhkhaṣ* and the *Mabāḥith*, within the context of our previous analysis of Rāzī's epistemological and logical programme. I argue that Rāzī's restructuring of the philosophical corpus is motivated by his philosophical programme that sharply distinguishes between phenomenal and noumenal objects of knowledge. His objective was to advance a model of philosophy or science which did not involve the epistemological and ontological assumptions inherent in the traditional Aristotelian division of the sciences. In fact, our analysis of Rāzī's phenomenalist agenda in logic should lead us to expect this. That is, the Aristotelian division of the scientific disciplines, which involves the theory of the autonomy and "subalternation" of the sciences (particularly as interpreted by later commentators, and most importantly Avicenna), views the proper subject-matter of a science as corresponding to a fundamental ontological kind.²⁷⁵ That is, a science is defined by the genus or kind it studies or takes as its "subject-matter". Moreover, the propositions that an Aristotelian science seeks to demonstrate are those that are the *per se* properties of the subject matter, which are

²⁷⁵ For an analysis of the views of several ancient commentators on the theory of demonstration and the definition of a science, see especially these recent articles, Owen Goldin, "Two Traditions in the Ancient Commentaries"; Miira Tuominen, "Alexander and Philoponus on *Prior Analytics* I 27-30: Is There a Tension between Aristotle's Scientific Theory and Practice?" in *Interpreting Aristotle*; Maddalena Bonelli, "Alexander of Aphrodisias on the Science of Ontology," in *Interpreting Aristotle*, 101-121; Angela Longo, "Les « Seconds Analytiques » dans le commentaire de Syrianus sur la « Métaphysique » d'Aristote," in *Interpreting Aristotle*, 123-133.

primarily the *per se* accidents discussed above.²⁷⁶ As Avicenna states in the *Ishārāt*, “Each one of the sciences has a proper thing or things (*shayʾ aw ashyaʾ mutanāsiba*) whose properties (*aḥwāl*) we investigate and those properties are the *per se* accidents (*al-ʿarād al-dhātiyya*) of it, and the ‘thing’ is called the subject-matter (*mawḍūʿ*) of the science, like magnitude is to geometry.”²⁷⁷ If this is so, then it follows that no properties, or *per se* accidents, of a particular science can be proven to hold of the same subject, or a different subject, in another science. This, as it will be recalled, is due to the fact that *per se* accidents apply to the subject with a *de re* necessity rather than a *de dicto* necessity. That is, the properties apply necessarily to the essences of things. However, Rāzī rejects the *de re* readings of *per se* accidents and in fact the entire Aristotelian theory of *per se* predication on which the notion of demonstrative science is based. As such, we should expect Rāzī’s independent works of philosophy to depart from the traditional division of the Aristotelian sciences.

In the *Mabāḥith*, Rāzī indicates that he views the structure and order (*tartīb*) of his work as being novel and that this order bears some philosophical significance. In his conclusion to the *Mabāḥith*, he states: “Since God has enabled me to bring together these problems of natural philosophy and metaphysics (*al-masāʾil al-ṭabīʿiyya wa-l-ilāhiyya*) in this order (*al-tartīb*) and [with] the critical evaluation (*tahdhīb*) [of those problems] in a manner that no one before me has [employed]...”²⁷⁸ In his introduction to the *Mabāḥith*, he clarifies in a “general manner” (*ʿalā wajh kullī*) the order of his book and states at the end of the discussion, “If you reflect upon the order (*tartīb*) of our book, you

²⁷⁶ This is a simplification since there are demonstrations of events and attributes that are not *per se* properties in the narrow sense construed in the above discussion. However, my primary focus is on the *per se* or necessary properties that apply to sensible composites, that is, sensible substances.

²⁷⁷ *Sharḥ al-Ishārāt*, I, 348.

²⁷⁸ Rāzī, *Mabāḥith*, II, 557.

will find that it begins with the most general of things (*a^camm al-umūr*), and that descends from it [as the work proceeds] to the more and more specific. As we have finished [with providing] a indication (*al-ishāra*) of the manner in which [the book] is ordered (*kayfiyyat al-tartīb*), we will now set out the index of the chapters and sections.”²⁷⁹ Rāzī does not elaborate on the significance of the order of his work but there are clear indications that primarily epistemological considerations motivate his development of a new structure. For one, he connects the descending order from what is more general to more specific to the nature of our general and specific knowledge. He states, “Know that it has been established that whatever is most general, our knowledge of it is most perfect and complete.”²⁸⁰ Still, Rāzī provides only “pointers” or indications here. With regard to the introduction, his reluctance to expand further on his ordering may be due to the fact that he expects a general audience to read the introduction, as indicated by the long dedication of this work to the ruler Abū al-Ma^cālī Suhayl ibn al-^cAzīz. (There may be other reasons as to why Rāzī is not so forthcoming, which will be discussed shortly.) In the following, I assess what motivates Rāzī’s restructuring of philosophical discourse by drawing on the above analysis of his epistemology and logic as well as his analysis of a number of problems that relate to the structure of the work. However, I first turn to examining current views of the nature and structure of Rāzī’s *Mabāḥith* and *Mulakhkhaṣ*, and, more generally, interpretations of Rāzī’s approach to philosophical discourse.

²⁷⁹ Rāzī, *Mabāḥith*, I, 93-94. Cf. Ayman Shihadeh, “From al-Ghazālī to al-Rāzī: 6th/12th Century Developments in Muslim Philosophical Theology,” *Arabic Sciences and Philosophy*, 14 (2005), 170-171.

²⁸⁰ *Ibid.*, 90.

The unique and highly influential structure of the two works, the *Mabāḥith* and the *Mulakhkhaṣ*, was already noted by Ibn Khaldūn (d. 1406) in his *Muqaddima*. In his narrative of the development of *kalām* and *falsafa*, Ibn Khaldūn states,

Then those *mutakallimūn* who came later (*al-muta^ʾakhhirūn*) mixed the problems (*masāʾil*) of *ʿilm al-kalām* with the problems of *falsafa* due to the two [disciplines] sharing in [the same] topics of inquiry (*al-mabāḥith*) and [due to] the similarity of the subject-matter of *ʿilm al-kalām* with the subject-matter of the science of metaphysics (*ilāhiyyāt*), and [due to similarity of] the problems (*masāʾil*) of the former [*ʿilm al-kalām*] with the problems of the latter [*falsafa*], so that it became as though they are one science (*fann wāḥid*). Then they [i.e., the *mutakallimūn*] changed the order (*tartīb*) [advanced by] the philosophers (*al-ḥukamāʾ*) of the problems of natural philosophy and metaphysics, and they mixed them up [to make] one science, introducing it [i.e., the new science] with the discussion of general things (*al-umūr al-ʿāmma*), which they then followed with [the discussion of] corporeal things (*al-jismāniyyāt*) and its concomitants (*tawābiʿihā*), which [they followed] with [the discussion of] immaterial things (*rūḥāniyyāt*) and its concomitants, as was done by the Imām Ibn al-Khaṭīb [i.e. Fakhr al-Dīn al-Rāzī] in *al-Mabāḥith al-Mashriqiyya* and by everyone after him of the scholars of *kalām*.²⁸¹

Ibn Khaldūn's depiction of the structure of Rāzī's *Mabāḥith* is not entirely accurate.

The three sections into which he divides Rāzī's new ordering correspond to Books

²⁸¹ Ibn Khaldūn, *al-Muqaddima* (Beirut: Dār al-Kitāb al-Lubnānī, 1982), 921; cf. Ibn Khaldūn, *The Muqaddimah: An Introduction to History*, ed. F. Rosenthal (New York: Pantheon Books, 1958), III, 141-143.

(*Kitāb*) I, II, and III of the *Mabāḥith* and the *Mulakhkhaṣ*. In specific, Ibn Khaldūn's division corresponds to the philosophy or *ḥikma* section of these works since the *Mulakhkhaṣ* has a logic section that precedes Book I, which, as suggested above, constitutes philosophy proper in Rāzī's view. That is, it is where substantive philosophical problems are assessed (e.g., the status of mental forms, the ontological status of universals, and so forth), which, Rāzī's suggests, comes after our having sorted out the necessary epistemological and logical principles. The *Mabāḥith* does not have a logic section, but, as shown below, particularly in Chapter 5, Book I of the *Mabāḥith* presumes, and explicitly draws on, his discussion in logic.²⁸² Here, it should be noted that Ibn Khaldūn does not explain precisely the nature of each book and how the work as a whole forms a unity. His use of "corporeal things" and "immaterial" or "spiritual" things to designate the topics of Book II and Book III, respectively, is not entirely accurate. Book II, for example, discusses immaterial substances, such as the celestial intellects and souls.²⁸³ Book III focuses on the existence of the Necessary Existent, or God, and his attributes and acts. Below I will assess the nature of each book of the *Mabāḥith* and the *Mulakhkhaṣ*, and then how the two works constitute a unity. I turn now to contemporary scholarship.

Recent scholarship has made a number of attempts at tackling the question of the structure and aim of Rāzī's *Mabāḥith* and *Mulakhkhaṣ*. The interest in his new approach to structuring philosophical and theological works is, perhaps, primarily due to how

²⁸² In Chapter 5, I make the specific case that Rāzī's discussion of quiddity (*māhiyya*) in Book I of the *Mabāḥith* presumes and alludes to the distinction he raises between *de re* and *de dicto* necessity in context of his discussion of *per se* predication.

²⁸³ Rāzī, *Mabāḥith*, II, 451-463.

influential it was in post-classical Islamic philosophy and theology, a point already suggested by Ibn Khaldūn. Indeed, the structure of the *Mabāḥith* and the *Mulakhkhaṣ* served as the model for the new “philosophized” works of *kalām* in the post-classical period.²⁸⁴ It would also influence a new brand of philosophical compendia that would emerge in the post-classical period. Below, I suggest that Rāzī’s approach to structuring philosophy provided a framework for later authors to devise new systems that depart from the Aristotelian ordering of the sciences. Moreover, because Rāzī’s new structure is based on a philosophical programme, I suggest that these new systems, following Rāzī’s approach (even if they depart from him in details), were not based on *ad hoc* divisions that obscured the scientific system of the Aristotelians. Rather, post-classical authors seem to be attempting to devise alternative systems.

Recent studies have corroborated the general outline provided by Ibn Khaldūn. Frank Griffel has noted: “Overall, this [i.e., Rāzī’s approach to dividing the *Mabāḥith* and the *Mulakhkhaṣ*] leads to a new perspective on philosophy that will have a lasting influence.”²⁸⁵ Still, no comprehensive study seeking to explain the logic or rationale behind Rāzī’s model has been undertaken. The recent studies, focusing primarily on the structure of the *Mabāḥith* and the *Mulakhkhaṣ*, do however shed light on a number of aspects of the new model. I will examine the main results of these studies before returning to my analysis of the structure of Rāzī’s early philosophical works.

²⁸⁴ Frank Griffel, “Fakhr al-Dīn al-Rāzī,” 343-344; Eichner, “Dissolving the Unity,” 139-190; Shihadeh, “From al-Ghazālī to al-Rāzī,” 177-179. See also H. Eichner’s results in “The Chapter ‘On Existence and Non-Existence’ of Ibn Kammūna’s *al-Jadīd fī l-Ḥikma*: Trends and Sources in an Author’s Shaping the Exegetical Tradition of al-Suhrawardī’ Ontology,” in *Avicenna and His Legacy*, ed. Y. T. Langermann (Turnhout: Brepols, 2009), 143-177.

²⁸⁵ Griffel, “Fakhr al-Dīn al-Rāzī,” 343-344.

In an article entitled, “Dissolving the Unity of Metaphysics: From Fakhr al-Dīn al-Rāzī to Mulla Ṣadra al-Shirāzī”, Heidrun Eichner seeks to explain the structure of the *Mulakhkhaṣ* and the *Mabāḥith*, drawing in part on developments in preceding works of *falsafa*. Eichner notes that Rāzī divides the philosophical part (i.e., the section of *ḥikma* or philosophy proper) of the two works into:

Book I: Common things (*al-umūr al-‘āmma*);

Book II: Categories of Contingent Things (*aqsām al-mumkināt*);²⁸⁶

Book III: Pure Theology (*al-ilāhiyyāt al-maḥḍa*).

Eichner argues that *falsafa* works written before Rāzī contain features that “prefigure the structure of the *al-Mulakhkhaṣ* and the *al-Mabāḥith al-Mashriqiyya*,” but noting that the ordering of the Aristotelian sciences in those earlier works diverge in fundamental ways from Rāzī’s new structure.²⁸⁷ Eichner’s general conclusions regarding Rāzī’s approach to the restructuring of his philosophical works are particularly significant. First, Eichner views the Peripatetic works that precede Rāzī as forming an “encyclopedic tradition”, which consists in reorganizing and reformulating the positions of earlier authorities in the Peripatetic tradition. The primary authority in these works is Avicenna. Rāzī can be viewed as generally following this tradition of the encyclopedic exposition of philosophy. Second, Eichner finds that Rāzī’s philosophical works fall directly within the Avicennan tradition, stating that the Avicennan philosophical works, especially Bahmanyār’s *Kitāb al-Taḥṣīl*, contain a number of “conceptual parallels”. Eichner notes however that Rāzī incorporates elements of *kalām*. It should be noted that Eichner does not focus in this

²⁸⁶ Eichner has “Substances and Accidents” as the primary sub-division of contingent things, which is correct, but for reasons discussed below it is important to note that this section is meant to study contingent things more broadly, including non-existent or hypothetical entities. Eichner, “Dissolving the Unity”, 156.

²⁸⁷ Eichner, “Dissolving the Unity”, 156.

spanning study on what might underlie or motivate such a synthesis in Rāzī. However, she does provide a suggestion. Eichner states that the structural changes do not seem to be motivated by “deeper theoretical concerns”; rather, the changes follow from the general practical considerations of organizing philosophy that preoccupied the encyclopedic *falsafa* tradition subsequent to Avicenna.²⁸⁸

As suggested, Eichner’s analysis does not aim to assess the philosophical agenda behind Rāzī’s restructuring of philosophy. She views Rāzī’s innovations as leading to the dissolution of the unity of metaphysics and, indeed, the Aristotelian sciences in general. In another recent study, focusing primarily on the structure of the *Mabāḥith*, J. Janssens corroborates this result. He states, “In any case, one has to admit that ar-Rāzī – perhaps following Bahmanyār but certainly not slavishly – has somewhat blurred the distinction between logic, natural sciences and metaphysics.”²⁸⁹ Because no theoretical concerns are viewed as underpinning and motivating Rāzī’s reorganization of philosophy, the recent studies do not explain why Rāzī so radically departs from the *falāsifa* so that nothing is preserved of the division, autonomy, and subalternation of the Aristotelian sciences. In this light, Rāzī’s structure starkly contrasts with the post-Avicennan *falāsifa* – like Bahmanyār, Lawkarī, Abū al-Barakāt al-Baghdādī and so on – who seek, in one way or another, to preserve the major divisions of the Aristotelian sciences.²⁹⁰ In fact, the order

²⁸⁸ Ibid.

²⁸⁹ Jules Janssens, “Ibn Sīnā’s Impact on Fakhr al-Dīn al-Rāzī’s *Mabāḥith al-Mashriqiyya*, with Particular Regard to the Section Entitled *al-Ilāhiyyāt al-Maḥḍa*: An Essay of Critical Evaluation,” *Documenti e studi sulla tradizione filosofica medievale*, 21 (2010), 267.

²⁹⁰ According to J. Janssens, Bahmanyār departs from Avicenna, seemingly, to “re-Aristotelize” the division of the philosophical sciences. However, his own restructuring is far from a return to Aristotle’s actual view. What is relevant here is that Bahmanyār, ultimately, is attempting to provide a structure for philosophy that accords with the Aristotelian notion of the autonomy of the philosophical sciences and especially the notion of metaphysics as being the highest science from which other sciences derive their principles. See J. Janssens, “Bahmanyār ibn Marzubān: A Faithful Disciple of Ibn Sīnā?”, in *Before and After Avicenna: Proceedings of the First Conference of the Avicenna Study Group*, ed. D. Reisman with the

of the philosophical sciences advanced by these authors of *falsafa*, even if they diverge greatly from one another, have much more in common between themselves, in this regard, than with Rāzī. That is, though they disagree with regard to how the Aristotelian sciences ought to be ordered, they all agree that the sciences are ordered hierarchically with regard to the ontological status of their subject-matter and that all the sciences derive their principles from the highest science, metaphysics.²⁹¹ To explain the difference between Rāzī and the *falāsifa* more precisely, however, we will have to discuss the philosophical motivations underlying Rāzī's division in more detail.

The recent studies on the structure of the *Mabāḥith* and *Mulakhkhaṣ* do not make clear whether Rāzī's dissolution of Aristotelian philosophy is advertent or not. In any case, no philosophical agenda is proposed that would properly explain his new organization. Our above analysis has shown that it is extremely unlikely that Rāzī was simply unaware of the consequences that his restructuring of philosophical discourse would have on the autonomy and unity of the Aristotelian sciences. That is, he understands quite intimately Aristotle's system of demonstrative science, particularly as interpreted by Avicenna in *Demonstration*. In the following, I argue that Rāzī had a particular philosophical agenda in the restructuring of philosophy and science that was

assistance of A. H. al-Rahim (Leiden: Brill, 2003), 177-199; Ibid., "Bahmanyār and his Revision of Ibn Sīnā's Metaphysical Project," *Medioevo*, 32 (2007), 99-117. See also Janssens recent analysis of Lawkarī's *Bayān*, "al-Lawkarī's Reception of Ibn Sīnā's *Ilāhiyyāt*," in *The Arabic, Hebrew and Latin Reception of Avicenna's Metaphysics*, ed. D. N. Hasse and A. Bertolacci (Berlin: De Gruyter, 2012), 7-26. For Abū al-Barakāt, see Roxanne D. Marcotte, "Abū l-Barakāt al-Baghdādī," in *Encyclopedia of Medieval Philosophy*, 10-12.

²⁹¹ Abū al-Barakāt, however, seems to depart sharply from the Aristotelian/Avicennan line. Moreover, after Avicenna, Abū al-Barakāt is perhaps the most prominent philosophical source in Rāzī's works. However, in terms of Rāzī's unique epistemological and logical programme outlined above, I have not found evidence of Abū al-Barakāt's thought in Rāzī's larger methodological problems, particularly relating to Rāzī's approach to real definitions and *per se* predication. It might be noted that it is less likely that Rāzī followed Bahmanyār, considering the low opinion that Rāzī seems to have of him. For example, he states regarding the discussion of the formative faculty (*al-quwwa al-muṣawwira*): "Bahmanyār, despite meagre abilities in [philosophical] science (*ma'a qillat biḍā'atihi fī al-'ilm*), attempts to avoid such problems, which is also [an indication of] his extreme stupidity in attempting what is not possible." *Mabāḥith*, I, 280.

informed by his epistemological and logical programme. This is not to say that some of the primary results established in the studies of Eichner and Janssens fail to hold. For example, I believe that Rāzī's works are indeed meant to be "encyclopedic", at least in a broad sense. Rāzī states in his Introduction to the *Mabāḥith* that he has attempted to obtain (*taḥṣīl*) the core (*al-lubāb*) problems and positions of the predecessors, so as to elucidate them, raise aporias (*al-shukūk*) against them, and respond sufficiently to the aporias.²⁹² However, Rāzī makes a crucial addition: "Then [i.e., after elucidating positions and raising and solving aporias] I will add to the principles (*uṣūl*) that God has enabled me to investigate (*taḥrīr*), obtain (*taḥṣīl*), establish (*taqrīr*), and elucidate (*tafṣīl*) that which none of [my] predecessors (*al-mutaqaddimīn*) have [been able to] grasp (*lam yaqif °alayhi*) and none of the previous seekers (*al-sālikīn al-sābiqīn*) were able to obtain [*lam yaqdir... al-wuṣūl ilayhi*]. So this book of ours will be as though it includes all things of the same kind that other [works contain], but it exceeds other works by universal principles (*uṣūl kulliyya*), true foundations (*qawā'id ḥaqīqiyya*), scientific points, and philosophical subtleties."²⁹³ In the context of Rāzī's epistemological and logical programme, his statement here can be read as hinting at his unique philosophical agenda, which departs particularly from the philosophical approach and commitments of his Aristotelian predecessors.

In one of the more comprehensive studies of Rāzī's works, and particularly of problems in Books I to III of the *Mabāḥith* and the *Mulakhkhaṣ*, Muḥammad al-Zarkān

²⁹² Rāzī, *Mabāḥith*, I, 88.

²⁹³ Ibid., 89.

provides a more general analysis of the philosophical nature of the two works.²⁹⁴ Zarkān focuses on the notion raised by Ibn Khaldūn regarding the “mixing” (*al-mazj*) of *falsafa* and *kalām*.²⁹⁵ In Zarkān’s view, the notion is misleading. He argues that the *Mabāḥith* and the *Mulakhkhaṣ* are not in fact works of *kalām* but are strictly works of *falsafa*, which he defines broadly as those that fall within the Greek philosophical tradition. Zarkān locates his view of the two works within a larger narrative of the intellectual phases of Rāzī that he adopts from M. Qāsim, who wrote an earlier work on the development of Rāzī’s views.²⁹⁶ Qāsim’s narrative marks out four distinct phases according to the intellectual attitude that characterized Rāzī: (i) an early stage as a *mutakallim*, (ii) a stage influenced by *falsafa* (*thumma tafalsafa*), (iii) an agnostic stage with regard to *kalām* and *falsafa* (*thumma tawaqqafa*); and (iv) a stage in which he returns to *kalām* but “mixes” aspects of *kalām* and *falsafa*. To these four, the narrative adds a last phase in which Rāzī shunned both *kalām* and *falsafa* and turned to more spiritual matters. I will return to assess this narrative of the intellectual phases of Rāzī below. Here, it can be noted that Zarkān does not examine Rāzī’s logical and epistemological principles, and so Zarkān views the *Mabāḥith* and the *Mulakhkhaṣ* as primarily works of *falsafa*. Zarkān in fact distinguishes between the *Mabāḥith* and the *Mulakhkhaṣ*. He views the *Mabāḥith* as highly influenced by Peripatetic philosophy and in particular Avicenna. Rāzī’s rejection of the indivisible part is, for example, taken by Zarkān as suggesting that Rāzī shifts from a *kalām* approach to a hylomorphic Aristotelian approach. However, Zarkān sees Rāzī in

²⁹⁴ In addition to the *Mabāḥith* and the *Mulakhkhaṣ*, Zarkān’s study assesses a number of other works of *kalām* and philosophy from various periods of Rāzī’s life. See Muḥammad Ṣ al-Zarkān, *Fakhr al-Dīn al-Rāzī wa-Ārāʾuhu al-Kalāmiyya wa-l-Falsafiyya* ([Cairo]: Dār al-Fikr, [1963]).

²⁹⁵ Zarkān, *Fakhr al-Dīn al-Rāzī*, 606-626.

²⁹⁶ Ibid., 618.

the *Mulakhkhaṣ* as more critical and independent of Avicennan and Aristotelian views, and tending, to some extent, towards Platonism.

More recent studies have also distinguished between Rāzī's views in the *Mabāḥith* and his views in the *Mulakhkhaṣ*, though for reasons that are different from those provided by Zarkān. Shihadeh, for example, views the *Mabāḥith* as Rāzī's early attempt at engaging with *falsafa*, and is not representative of Rāzī's mature philosophical views. The *Mabāḥith*, according to Shihadeh, seems to contain internal contradictions and confusions. In the *Mulakhkhaṣ*, however, Rāzī is more "consistent and independent from Ibn Sīnā."²⁹⁷ Crucially, Shihadeh notes that the *Mulakhkhaṣ* refers the reader to his *kalām* works for an expansion on various problems raised in the *Mulakhkhaṣ*. As Shihadeh notes, this indicates that, by the time of his writing the *Mulakhkhaṣ*, Rāzī had begun to view his *kalām* and *falsafa* works as complementary. Like Zarkān, Shihadeh views the *Mabāḥith* and the *Mulakhkhaṣ* as primarily works of *falsafa* and not *kalām*.²⁹⁸ Moreover, Shihadeh views Rāzī's later work, *al-Maṭālib al-ʿĀliya fī al-ʿIlm al-Ilāhī*, as the culmination of Rāzī's synthesis of *kalām* and *falsafa*. The *Maṭālib*, which is primarily a theological work, provides a synthesis that is based on Rāzī's view of the attainment of human perfection through philosophical inquiry. Shihadeh states that the notion of philosophical discourse as leading to the attainment of human perfection is something that is opposed in the *Mabāḥith* and *Mulakhkhaṣ*. I will return shortly to Shihadeh's views on these three major works of Rāzī. It can be noted that my own analysis supports the notion that the later philosophized theological works, particularly the *Maṭālib*, have a very different aim than that of the *Mabāḥith* and *Mulakhkhaṣ*. However, I argue that the

²⁹⁷ Shihadeh, "From al-Ghazālī to al-Rāzī," 171; Ibid., *The Teleological Ethics of Fakhr al-Dīn al-Rāzī* (Leiden: Brill, 2006), 8.

²⁹⁸ Shihadeh, "From al-Ghazālī to al-Rāzī," 175.

philosophical approach that Rāzī sets out in his early works is one that is adhered to in his later theological works. More importantly for my analysis in this dissertation, I argue that the *Mabāḥith* and *Mulakhkhaṣ* do not fundamentally diverge with regard to Rāzī's philosophical outlook and approach. Rather, the main difference lies in the exposition of his views, which is primarily due to differences in the structure of the two works. This is not, of course, to deny that Rāzī's views on particular problems in the *Mabāḥith* may differ from his views in the *Mulakhkhaṣ*.

Here, a few notes can be made regarding the chronology of Rāzī's works. Griffel, Shihadeh, and Zarkān have provided a tentative chronology of Rāzī's works of philosophy and theology.²⁹⁹ Griffel includes the following works listed in chronological order as Rāzī's "Early Works": *al-Ishāra fī 'Ilm al-Kalām*, *Nihāyat al-'Uqūl fī Dirāyat al-Uṣūl*, and *al-Mabāḥith al-Mashriqiyya*. This set of early works is followed by the *Mulakhkhaṣ*, *Sharḥ al-Ishārāt*, and *Muḥaṣṣal Afkār al-Mutaqaddimīn wa-l-Muta'akhkhirīn min al-'Ulamā' wa-l-Ḥukamā' wa-l-Mutakallimīn*. Some of his later works written after 596/1209-10 include *Sharḥ 'Uyūn al-Ḥikma* and the *Maṭālib*. The *Maṭālib* seems to be his last work on *kalām* or *falsafa*.

In the above analysis, we saw that the *Mulakhkhaṣ* and the *Nihāya* were complementary, particularly with regard to Rāzī's methodological programme. His epistemological and logical concerns were identical, though his language differed to some extent. Moreover, we saw that problems and issues that Rāzī raised as a commentator on Avicenna, in *Sharḥ al-Ishārāt*, pointed to and complemented his positions in the *Mulakhkhaṣ* and the *Nihāya*. Some of his concerns regarding *per se*

²⁹⁹ Frank Griffel, "On Fakhr al-Dīn al-Rāzī's Life," 344; Shihadeh, *Theological Ethics*, 7-11; Zarkān, "Fakhr al-Dīn," 67-96.

predication were expressed in his analysis of Avicenna's discussion in the *Ishārāt*. In Chapter 6, I will examine further aspects of how Rāzī's commentary in *Sharḥ al-Ishārāt* support, sometimes more explicitly, his own systematic positions laid out in Books I to III of the *Mulakhkhaṣ* and the *Mabāḥith*.

In light of my discussion of Rāzī's methodological programme, I consider the early philosophical view of Rāzī, or "Early Rāzī", to be expressed primarily in the following works: the *Nihāya*, the *Mabāḥith*, the *Mulakhkhaṣ*, and *Sharḥ al-Ishārāt*. Here, I want to maintain that these works constitute distinct genres. The *Nihāya*, as Shihadeh argues, is primarily a work of *kalām*, as indicated by its structure and approach to discussing problems, whereas *Sharḥ al-Ishārāt* is a critical commentary on the *falsafa* work of Avicenna.³⁰⁰ The *Mulakhkhaṣ* and the *Mabāḥith*, however, advance, as I argue in the following, an independent philosophical approach that diverges significantly from both *kalām* and *falsafa*. Moreover, his approach and aim in the *Mulakhkhaṣ* and the *Mabāḥith* diverge from his later project, as described by Shihadeh, of developing a philosophized theology that focuses on the spiritual attainment of human perfection. I argue that Rāzī attempts to mark out, in the *Mulakhkhaṣ* and the *Mabāḥith*, a neutral space in which problems of ontology, "natural philosophy" broadly construed, and

³⁰⁰ I do not maintain that the distinction is one that is hard and fast. In fact, the structure of the *Nihāya* seems to depart from the structure of earlier *kalām* works (though, admittedly, the organization of *kalām* works was generally loose and often varied from one to another). However, the following analysis will show that the logic of its organization differs from that which informs the organization of what I view as his pure philosophical works: the *Mabāḥith* and the *Mulakhkhaṣ*. What makes them "pure", relative to the *Nihāya*, is that the very structure and approach follows quite rigorously the logical programme Rāzī sets out prior to Books I to III. Moreover, in the following, I suggest that Rāzī is attempting to provide a context to systematically approach the study of natural phenomena in a way that accords with his logical programme. My preliminary examination of the *Nihāya* suggests that it does not attempt to advance a positive or independent approach to the study of natural reality, but is primarily focused on defending Ash'arite creedal views. In this way, the *Nihāya* is closer to his later *kalām* work, *al-Arba'īn fī Uṣūl al-Dīn*. However, the *Nihāya* is a much longer work and it discusses a wider range of problems, including for example the analysis of the views of the astronomers and the philosophers, which the *Arab'īn* does not address in any detail.

theology can be undertaken. At the same time, however, the *Maṭālib*, written later when Rāzī is interested more in a philosophical theology, draws on the “pure” philosophical approach that was set out by the Early Rāzī. The following will clarify, and elaborate on, these general distinctions I have made.

An important point should be noted here. It may not be clear yet how the *Mabāḥith* fits into the philosophical and methodological programme advanced by the early Rāzī. My case studies regarding Rāzī’s analysis of quality, color and body attempted to show that his views in the *Mabāḥith* presume and invoke his epistemological and logical programme. However, the *Mabāḥith* was not written with a logic section, as noted above, and so it is not entirely clear how the work would draw on Rāzī’s methodological views. In Chapter 5, I examine how Rāzī’s discussion in the *Mabāḥith* proceeds. By means of a close textual analysis, I assess how he adapts the texts and views of Avicenna within the structure of the *Mabāḥith*, and how he asserts his own views. I show there that Rāzī operates in a very subtle manner. That is, often, his own views in the *Mabāḥith* can only be fully understood after systematically assessing his views on a number of related and foundational topics. Chapter 6 will corroborate this point. An important aspect of this is his logical views. Indeed, we will find that, in the *Mabāḥith*, Rāzī explicitly refers to an independent work of logic. However, my analysis in Chapter 5 will show that because Rāzī cannot directly invoke the results of his discussion in logic in the *Mabāḥith*, he has to approach problems in a more general manner and assert his own positions indirectly. This we will find in his discussion of Avicenna’s view of quiddity in V.1 of the *Ilāhiyyāt*. Rāzī departs from Avicenna’s analysis by pointing up the problem of *de re* necessity and the theory of *per se*

predication in Avicenna's *Demonstration*. The *Mabāḥith*, hence, differs from the *Mulakhkhaṣ* in that the *Mulakhkhaṣ* can directly draw on Rāzī's views in logic. We saw this to be the case where he directly referred to structured universals in his discussion of the quiddity in Book I of the *Mulakhkhaṣ*. Moreover, we will see that the indirect approach taken in the *Mabāḥith* requires more exposition, by contrasting and drawing out diverging views, which, in turn, requires more space. The *Mulakhkhaṣ*, however, is a summary or compendium of philosophical views, and as such cannot afford to devote such space.

A final point should be added regarding Rāzī's approach in the *Mabāḥith*. Rāzī, in the *Mabāḥith*, does not want to spoon feed his views to the reader. That is, he seems to expect his reader to draw out the consequences of the fundamental principles and points that he makes *in propria persona* throughout the *Mabāḥith*. However, distinguishing his own views and his summary or interpretation of the *falsafa* view is not always clear. Rāzī expects the reader to be able to distinguish between his analysis or interpretation of *falsafa* views and his assertion of his own views. For example, in his chapter on abstract or separate substances (*al-jawāhir al-mujarrada*), he states, "This is what we say on this topic, and this section is our [own] discussion (*min kalāminā*) and it comprises [a number of] hints (*rumūz*) and points (*nukat*) [so that] whoever invokes the preceding principles [i.e., that he has established] [will] by these [hints] grasp and obtain the truth that is necessarily entailed by them. But we have left them hidden so that only those worthy of [such knowledge] will obtain [knowledge of] them."³⁰¹ Here, Rāzī explicitly informs us that the reader needs to be attentive. But he will not always do so. My analysis in

³⁰¹ Rāzī, *Mabāḥith*, II, 460.

Chapters 5 and 6 will suggest that much of his analysis in the *Mabāḥith* presumes this methodology.³⁰²

I will begin first by examining the structure of the second of the three books of the *Mulakhkhaṣ* and the *Mabāḥith*, which is on contingent things, or more specifically substances and accidents. As Janssens has noted, Book II constitutes more than 90 percent of the *Mabāḥith*. The same can be said of Book II of the *Mulakhkhaṣ*. But before turning to Book II, I examine Rāzī's discussion of the Aristotelian categories. As noted above, Rāzī's view of the categories is central to understanding how he deploys his notion of structured universals in philosophy proper. In the Postscript at the end of this chapter, I discuss a number of problems with regard to the "neutrality" of the logic of Aristotle's *Organon* as received in the commentarial tradition. These problems include the role of form-matter analysis and the ontological status and role of the *Categories* in the *Organon*. There, I note that Rāzī, in *Sharḥ al-Ishārāt*, expands on Avicenna's discussion of the function and order of the books of the *Organon*, likely drawing on the logic of the *Shifā'*. Rāzī approvingly notes Avicenna's view that a full analysis of the categories ought to be separated from logic. In Avicenna's view, the *Categories* concern

³⁰² Here, the characterization of Rāzī's views in the *Mabāḥith* as diverging greatly from later works of philosophy and *kalām*, I believe, arises to some extent due to the ways in which Rāzī expresses his views. That is, for example, in places throughout Book II, Rāzī may be viewed as endorsing a *falsafa* position, like the theory of the Active Intellect. However, there he is not speaking *in propria persona*. As Chapter 6 shows, his chapter on knowledge in Book II points to aspects of why he in fact disagrees with the Avicennan view, which is further explained in his analysis of optical theory in his chapter on psychology at the end of Book II. Another problem, prominent in the literature, concerns Rāzī's view of hylomorphism in the *Mabāḥith*. As discussed above, his analysis of body has suggested that he does not endorse form-matter analysis in the *Mabāḥith*. In Chapter 5, I will examine how he systematically argues against form-matter analysis, and the hylomorphic interpretation of body, in Books I and II of the *Mabāḥith*. I show that the sections in which he sets out the hylomorphic view is simply an exposition of the dominant *falsafa* view, which he states is included for the sake of completeness. Cf. A. Setia, "Time, Motion, Distance"; Ibid., "Atomism and Hylomorphism"; Ibid., "Fakhr al-Dīn al-Rāzī on Physics". Setia views Rāzī as endorsing the *falsafa* view in the *Mabāḥith* and then returning to the atomism of *kalām* in the *Maṭālib*. See also Zarkān's discussion of various problems in the *Mabāḥith* in his work cited above. He suggests that Rāzī simply sides with the *falāsifa* on a number of views, which Rāzī later abandons.

metaphysical problems whose verification goes beyond the concerns of the logician. In the *Shifāʾ*,³⁰³ Avicenna preserves the traditional order of the *Organon*.

In his independent works, Rāzī provides his own reasons for excluding such discussions.³⁰³ In Book II of the *Mabāḥith* and the *Mulakhkhaṣ*, Rāzī, as noted, discusses contingent things, which he divides into “substances” (*al-jawāhir*) and “accidents” (*al-aʿrāḍ*). However, he divides the book into three parts: an introduction and two sections (*jumla*), one concerning accidents and the other substances. In the Introduction, Rāzī discusses the ontological status of the Aristotelian categories and whether we can determine the exhaustiveness of the ultimate ontological categories of existing things, i.e., the highest genera. Aspects of his arguments against the Aristotelian notion of the ontological status of the categories will be discussed in Chapter 5. Here I note two crucial points that he raises in his Introduction, which is grounded in his epistemological and logical programme. The first is the position that he pronounces in a number of works, in contrast to the position of Avicenna, that “substance” (*jawhar*) is predicated of what falls under it (i.e., as a subcategory) as one of its concomitants (*lawāzim*), and not as one of its genera. This is meant to stand in opposition to Avicenna’s division of substance into form, matter, body, soul and intellect. Moreover, it is aimed at undermining Avicenna’s real definitions of substances.³⁰⁴ Second, Rāzī does not believe that four things have been proven regarding the categories: (i) that each of the ten is a genus; (ii) that each category

³⁰³ That is, as noted, in *Sharḥ al-Ishārāt* it is not always evident when Rāzī is expanding on Avicenna’s position and when he is agreeing with the latter *in propria persona*. But external evidence suggests that Rāzī, for reasons that diverge from those of Avicenna, would like to exclude the *Categories* from logic.

³⁰⁴ Recall, for example, that Avicenna defines body as: “the *substance* in which three dimensions can be posited to obtain”. There are other considerations here that I will not address, most importantly the substantial status of differentia. Avicenna states that the differentiae of substances are substances. Rāzī, particularly in the *Mabāḥith* and the *Mulakhkhaṣ*, argues that this leads to a number of problems which can only be resolved if we state that substances are predicated of subordinate things as *lawāzim*. This debate has a long history in the commentarial tradition. See Frans de Haas, *John Philoponus’ New Definition of Prime Matter* (Leiden: E.J. Brill, 1997), 188-250.

is a highest genus (i.e., the most general ontological category); (iii) that the categories do not exceed ten; (iv) how they divide into species. Some points he finds more problematic or important than others. However, all his concerns are clearly grounded in his epistemological programme, as the following suggests. Rāzī states that it has not been shown that each of the ten categories divides into its species by differentiae rather than by concomitants (*lawāzim*). At the conclusion of his Introduction to Book II in the *Mabāḥith*, Rāzī sates, “This is the set of problems that need to be established at the beginning of the *Categories* (*fī awwal al-Maḳūlāt*).”³⁰⁵ As such, Rāzī agrees with Avicenna that investigation into the categories as ontological kinds properly fall outside the scope of logic, but he fundamentally disagrees with Avicenna on their nature. Rāzī does not explain in the *Mulakhkhaṣ* and *Mabāḥith* why he begins Book II with this discussion, but it is apparent that it is important. That is, the substantive sections of Book II, namely, parts 1 and 2, are divided into substance and accidents, which are further divided into their species. Rāzī’s categories generally accord with the Aristotelian categorization, though Rāzī adds further sections in Book II, like cause and effect. Rāzī does not explicitly explain this apparent inconsistency. From the above analysis, one can deduce what Rāzī probably has in mind, so I now turn to his more explicit discussion of the categories in a different work.

In a treatise entitled *al-Risāla al-Kamāliyya*, Rāzī devotes a chapter to a discussion of the Aristotelian categories (*maḳūlāt*). The treatise is a very concise treatment of logic, metaphysics, and natural philosophy and it is ordered in a different

³⁰⁵ Rāzī, *Mabāḥith*, I, 286.

manner than the *Mulakhkhaṣ* and the *Mabāḥith*.³⁰⁶ In *al-Risāla al-Kamāliyya*, Rāzī treats the categories in an independent book (*maqāla*) that follows his book on logic and which precedes his discussion of metaphysics or theological matters. He does not discuss “common things” (*umūr ʿāmma*) which is the topic of Book I of the *Mulakhkhaṣ* and the *Mabāḥith*. However, his chapter in *al-Risāla al-Kamāliyya* on the categories begins with a subsection on existence, followed by a section on the division of existents, and then a third section on the division of bodies. Only the fourth chapter discusses the ten *Aristotelian* categories. He begins the chapter by stating that “their” view of the categories rests on a number of claims, several of which he lists briefly, and then summarizes some points made in the *Mabāḥith* and the *Mulakhkhaṣ*. He concludes by stating, “Know that the philosophers (*ḥukamāʾ*) divide each one of the categories into many kinds, just as they have divided the category of quality into four kinds (*anwāʿ*).³⁰⁷ These claims only stand if they provide a proof that these kinds are real attributes that are common to and constitutive of the essence of the kinds (*dākhila fī māhiyyat al-anwāʿ*), and that they are not external (attributes), and that those things by which they divide these genera are differentiae, and not the concomitants (*lawāzim*) of differentiae, and if they are differentiae that they are proximate rather than remote differentiae.”³⁰⁸ Rāzī goes on to state that the philosophers have not provided demonstrative proofs that the categories are the highest genera and it remains to be shown that the nine accidents are genera at all.

³⁰⁶ The structure and theological nature of the *Risāla al-Kamāliyya* seems to parallel to some extent his later work, the *Maṭālib*, though there are some differences. However, I have not been able to establish whether this is a work by later Rāzī. It is notable that the core epistemological programme laid out in the *Mabāḥith* and the *Mulakhkhaṣ* is invoked in this text, even if it diverges from the early works in structure and aim. If this is in fact a later work, this point corroborates my suggestion that his methodological programme informs even his highly theologized works from the later period.

³⁰⁷ *Anwāʿ* is the term that Avicenna uses in his *Maqūlāt*, see V.2, and V.3.

³⁰⁸ Rāzī, *al-Risāla al-Kamāliyya fī al-Ḥaqāʾiq al-Ilāhiyya*, ed. ʿA. Muḥyi al-Dīn (Beirut: Dār al-Kutub al-ʿIlmiyya, 2002), 35.

Clearly, Rāzī's arguments here directly follow from his epistemological and logical programme.

Rāzī's discussion and critique of the Aristotelian categories in his post-logical philosophical analysis (which he generally labels *ḥikma* and we have labeled “philosophy proper”) show how his logical and epistemological programme informs the very structure of Book II of the *Mulakhkhaṣ* and the *Mabāḥith*. That is, the topics studied in each chapter and the subdivisions of Book II, which loosely correspond to the ten categories, are not the Aristotelian categories. That is, Book II, in accordance with his logical programme, cannot presume that each topic of philosophical analysis is a fundamental and basic kind of ontological entity. For Avicenna, the categories are properly proven in metaphysics, and so he devotes Books II and III of the *Ilāhiyyāt* of *al-Shifā'* to establishing the ontological nature of the categories. Unlike Avicenna, Rāzī does not accept the Aristotelian logical tools that give the *falāsifa* access to such metaphysical truths.³⁰⁹ The substances and accidents of Book II of the *Mabāḥith* and the *Mulakhkhaṣ*, then, are not ontological categories but are simply the phenomenal objects of our senses. That is, Book II begins by positing our pre-scientific knowledge of sensible objects. As discussed in Chapters 5 and 6, he provides various deductive or inductive arguments to show that certain properties hold of our pre-scientific concepts in a way that does not presume a more specific theory of demonstration and the principles of Aristotelian metaphysics, a point we shall return to shortly. Crucially, such properties or statements that apply to the objects of sensible reality are not objects specific to a particular domain or science. Moreover, as we have seen with regard to his discussion of quality and body,

³⁰⁹ This is not to suggest that the Aristotelians in fact applied the tools always or directly in their metaphysical or scientific discussions.

Rāzī will engage in the metaphysical arguments that the Aristotelians customarily and properly treat in metaphysics. This is important because he does not include such discussions in his third book that treats “Special Metaphysics”, which in fact is theology in a narrow sense.³¹⁰ Rāzī’s Book II then is the proper place to study sensible phenomena, but without presuming an ontological viewpoint. Rather, all one is entitled to there is the minimalist analytic approach he has set out in his logical programme.

In Book I, Rāzī treats a number of “general concepts” (*al-umūr al-‘āmma*), a notion which Eichner has treated quite thoroughly. Eichner notes that it is a unique contribution of Rāzī that would have a great influence on later works. It can be noted that Avicenna does use the term in the title of V.1 of the *Ilāhiyyāt*. Still, they are clearly different. In V.1 Avicenna mainly discusses the question of universals and definition from an Aristotelian metaphysical perspective (which I examine in detail in Chapter 5). By contrast, Book I of Rāzī’s *Mulakhkhaṣ* and *Mabāḥith* are what might be called the general ontology of each work, though, as we will see in Chapter 5, they will draw into the discussion important epistemological and logical points. As well, in Chapter 5, I examine how Rāzī’s discussion in Book I departs from Aristotelian metaphysics, construed as a demonstrative science, and how he sets the ground to oppose the assumption of form-matter analysis in Book II. Book I, as such, will pave the way for the subsequent analysis of sensible phenomena without presuming form-matter analysis (see especially my discussion of Rāzī’s interpretation of the ontological status of the differentia and genus in Chapter 5). Book I is, therefore, consistent with Rāzī’s analytic programme. Indeed, in

³¹⁰ On Avicenna’s view of metaphysics as a demonstrative science and the relation of special metaphysics and henology to metaphysics more generally, see Amos Bertolacci, *The Reception of Aristotle’s Metaphysics in Avicenna’s Kitāb al-Šifā’*: A Milestone of Western Metaphysical Thought (Leiden: Brill, 2006), 209-211.

Chapter 5, I argue that Book I directly draws on his logical analysis, and, particularly, his arguments against *per se* predication. In this way, Rāzī's logical and ontological analysis leads to a new approach to the study of sensible phenomena.

Rāzī's study of the natural world is conducted within a new philosophical framework which departs from the Aristotelian approach and division of the natural sciences. However, one point is crucial to note regarding Book II. Rāzī states in his Introduction that Book II is about contingent things, i.e., the phenomenal categories of contingent things (without, of course, presuming what such categories are ontologically). Book II, then, is not limited to sensible phenomena but includes non-sensible contingent things, such as, hypothetical or fictional entities. Hence, Rāzī can assign independent chapters to the study of, say, prime matter, even though he does not affirm it. He states, "Know that prime matter has not been affirmed in our view. But those who do affirm it have discussed its characteristics, so we shall also discuss it so that our book is comprehensive of all that is said on each topic."³¹¹ The discussion and analysis of hypothetical problems and positions thus is something that is often conducted in Book II of the *Mabāḥith* and the *Mulakhkhaṣ*. We return, in Chapter 5, to some aspects of his discussion of form-matter analysis in the *Mabāḥith*.

It is interesting that Book III, which treats special metaphysics or theology, is by far the shortest book in both works. It discusses proofs for the existence of the Necessary Existent and then properties or "attributes" of the Necessary Existent. Significantly, Rāzī places the Neoplatonic cosmological question of emanation in Book III and not Book II, as part of the discussion on the manner in which divine acts proceed (*ṣudūr al-af'āl*) from

³¹¹ Rāzī, *Mabāḥith*, II, 53.

God. Here, he examines and dismisses Avicenna's interpretation of emanation.³¹²

Crucially, his alternative, it might be noted, is not simply to affirm a willing Creator.

Rather he attempts to assess whether cosmological contingency is absolute or not; that is, whether all things other than God are absolutely contingent or not. Here he attempts to formulate a theory which accounts for the initial cosmic conditions, which are absolutely contingent and are required for secondary conditions to obtain.³¹³ That is, the secondary conditions are not absolutely contingent but require a particular configuration of the initial or prior cosmic conditions (which he seems to interpret as unchanging or constant phenomena). The initial conditions seem to be something like the circular motion of the heavens.³¹⁴ But what is important here is that Rāzī does not map this model directly onto the present sensible world, as the *falāsifa* map the emanationist model directly onto the Ptolemaic model of the universe. That is, Rāzī intends his model to be general, providing only an *a priori* metaphysical model that may apply to the structure of any world. All this requires further analysis but I mention this point in a preliminary way to show that, even in Book III, Rāzī attempts to follow his programme. Indeed, he begins the book by stating that most of the premises required in this book are established in the previous books.³¹⁵

³¹² Rāzī, *Mabāḥith*, II, 529-535.

³¹³ Rāzī states, "There is nothing to prevent [the possibility] that all contingent things are dependent on God, but they are of two kinds." The first kind is that whose contingency applies to its quiddity in such a manner that contingency itself is sufficient for it to proceed from God without condition (*bi-lā shart*). For the second category, however, the nature of its contingency is not sufficient for it to proceed directly from God. Rather, its quiddity presumes "the obtaining of other things prior to it obtaining, so that the prior things are preparatory (*muqaddima*) for the causes to obtain in the posterior things." Ibid., II, 535. This is a brief outline. Rāzī discusses this position in more detail in other works.

³¹⁴ Some aspects of the discussion in the *Mabāḥith* is clarified in *Lubāb al-Ishārāt*, ed. °A.H. °Aṭiyya (Cairo, 1355 A.H.), 106-108.

³¹⁵ Rāzī, *Mabāḥith*, II, 491. Here, it can be noted that Book I concerns the Necessary Existent. It might be speculated that as opposed to natural phenomena, which is a subset of contingent things, the Necessary Existent was examined simply by reference to the concepts of contingency and necessity. As such, the analysis of problems here does not proceed in the inductive and quantitative manner of the analysis in Book II. Moreover, resolving the problem of the act of creation and emanation seems to be viewed by Rāzī as being indeterminable from the perspective of sense perception and the analysis of natural phenomena. In

Still, what he intends more precisely by setting out this new cosmological model in Book III needs investigation.

The above analysis establishes, I believe, an important development in the history of philosophy and science. That is, Rāzī's model of philosophy provides a new framework for the philosophical study of natural phenomena. What is most significant is that, in Rāzī's view, the proper study of natural phenomena involves the logical tools and epistemological principles that aim to remain neutral to questions of essences or noumena, in contrast to the Aristotelian system. Rāzī attempts to provide an alternative to the Aristotelian approach to the foundational principles that inform the study of natural phenomena. The alternative, in his view, will not carry the epistemological and ontological baggage of the Aristotelian system. Although a systematic study is required to assess the overall impact of Rāzī's innovations in natural philosophy, the very nature of Rāzī's restructuring of philosophical discourse, at least in theory, opens up possibilities in exploring new scientific theories and approaches to the study of natural phenomena. Particularly important are those views that were not viable scientific options to those working within the Aristotelian system. Here I will briefly discuss and list examples of the kinds of divergences that might have led to new avenues of scientific inquiry.

Let us turn to Rāzī's approach to problems that specifically regard the study of the natural world. In Chapter 5, I will assess how Rāzī argues against form-matter analysis and against the Aristotelian view of nature as the fundamental principle of change. Moreover, Rāzī will attempt to formulate a notion of elemental and natural forms (*al-*

this regard, see, for example, his discussion of the debate between God as a willing agent and as a necessary cause, *Mabāḥith*, II, 508-515. There Rāzī clearly departs from the traditional *kalām* approaches to the problem. He seems to view both positions (or the dichotomy) as problematic. His own views on the nature of time seem to complicate both views.

ṣuwar al-ṭabīʿiyya) as constant properties that are inductively found to apply to a body. What establishes such results are proof (*dalīl*) and induction more generally. Crucially, Rāzī can defer here to results by those who specialize in the scientific study of a particular area of study of natural reality. In Chapter 6, I show that his views of the various theories of optics draw on the specific scientific approaches. However, as is often the case in Book II, Rāzī proceeds by clarifying certain metaphysical assumptions in the Aristotelian view, as we have already seen above with regard to the case examples of quality and body. In this way, Rāzī seems to bring the *falāsifa* into conversation with the scientists in Book II. In Chapter 6, I argue that his objection to the Aristotelian view of perception as involving form-transference and form-impression is based on new developments in optics. Here, Rāzī cites the authority of the great optician and scientist, Ibn al-Haytham (d. 1040).

However, Rāzī is not a working scientist. Rather, he attempts to interpret the philosophical consequences of the scientific results established by Ibn al-Haytham. This, I argue, leads to Rāzī's development of a philosophical theory of perception that departs from the Aristotelian theory of form-transference or *simulacra*. As such, Rāzī will reassess the nature of our knowledge of complex quiddities and suggest that it is more dependent on mental processes than is permitted by Avicenna's theory of mental forms. I will not determine whether philosophy or science comes first here, but it is quite clear that Rāzī pays close attention to the cutting edge of scientific developments. Moreover, his epistemological and logical programme permits him to admit such scientific results and to pursue, on that basis, philosophical alternatives that radically depart from the *falāsifa*.

The following are points that can be noted from Book II of the *Mabāhith* and the *Mulakhkhaṣ*, which suggest that Rāzī explores new scientific directions in a serious manner. Given the length of Book II, I provide the most salient problems that I have thus far found, though I cannot explore even these points in any detail here. The following problems are raised in Book II:

1. In considering the question of the “natural” place of a body, Rāzī seriously considers the thesis of Thābit b. Qurra (d. 901) who argues, against the Aristotelian position, that larger bodies attract smaller bodies. Indeed, Rāzī speaks on Thābit’s behalf to respond to a number of objections. Rāzī finds that a number of problems remain on each side and states that this requires resolution (*yajib an natafakkara fī ḥall hadhi al-shukūk*).³¹⁶ What is significant here is that considering both possibilities as viable options is entirely consistent within his system and can, theoretically, lead to shifts in philosophical or cosmological views. No prior or overarching principles will tip the scale in favour of any particular avenue of scientific inquiry.
2. As mentioned, Rāzī attempts to construe the nature of the continuity of body or extension in a manner that does not posit the metaphysical postulates of indivisibles or form and matter.
3. Rāzī does not view the celestial realm as being necessarily incorruptible and eternal, though the spheres exhibit constant motion.

³¹⁶ Rāzī, *Mabāhith*, II, 71.

Rāzī raises a number of objections to the view that celestial bodies are essentially different from sublunary bodies.

4. He affirms the possibility of multiple worlds.³¹⁷ Indeed, Rāzī will use the notion of possible worlds to object to the necessity of the natures of the elements.³¹⁸

5. As will be discussed in Chapter 6, Rāzī finds arguments for abstractness or immateriality of the soul inconclusive. He states that we are only entitled to affirming our “self-consciousness”. This bears consequences for the role of abstraction and immateriality in approaching the study of natural phenomena, as well as for psychology.

Regarding the history of Rāzī’s philosophical works, Eichner has examined aspects of their influence on post-classical thinkers. The *Mulakhkhaṣ*, in particular, was seminal to the development of a number of works in the later philosophical tradition, such as Athīr al-Dīn al-Abhārī’s (d. 1265) *Hidāyat al-Ḥikma* and al-Kātibī al-Qazwīnī’s (d. 1276/1277) *Ḥikmat al-ʿAyn*, which received numerous commentaries and glosses. Although we know very little of the philosophical value of such works, a notable development in them is the restructuring of the various parts and categories as topics of philosophical study. One of the advantages of viewing the structure of Rāzī’s works as informed by a larger philosophical agenda is that the subsequent history of philosophical works in the post-classical period (specifically those that depart from the structure of Aristotelian sciences)

³¹⁷ *Mabāḥith*, II, 152.

³¹⁸ *Mabāḥith*, II, 150.

can be made more intelligible. That is, such post-classical thinkers can be viewed as extending and recasting philosophical problems on their own terms.

I return now to the relation of the *Mabāḥith* and the *Mulakhkhaṣ* to the *Maṭālib*. Shihadeh has noted that, in the *Mulakhkhaṣ*, Rāzī rejects the notion advanced by the *falāsifa* that the highest pleasure can be attained through philosophical or rational investigations. Rāzī states:

We do not deny rational pleasure, nor that it is stronger than other [pleasures]. But this [i.e., that rational pleasure is stronger] is not provable by logical proofs (*al-adilla al-manṭiqiyya*). Nevertheless, not all that cannot be proved in this way should be rejected, for if someone tries to point out (*ḥāwala al-dalāla* °*alā*) the tastes of things or their smells, it would not be possible for him (*la-ta* °*adhdhara dhālika* °*alayhi*), even though sense perception (*al-ḥiss*) affirms their [existence] (*yashhabu bi-ithbātihā*). These rational pleasures are of the same kind[...].³¹⁹

Rāzī, here, directly invokes the results of his logical programme, quite precisely in the manner that I have suggested above. That is, even the sensible simples, which are subject to the rule of *Indefinability of Sensibilia*, have some noumenal quiddity that is beyond the phenomal quality affirmed by the senses. The lesson he takes from this is that we cannot rationally affirm or deny the position of the *falāsifa*.³²⁰ This corroborates my view of the *Mulakhkhaṣ* and the *Mabāḥith* as attempting to set out a metaphysically neutral space.

Here, the metaphysical neutrality extends even to the theological notion of human

³¹⁹ Rāzī, *Mulakhkhaṣ*, fol. 172a-172b. Cf. Shihadeh's treatment of the passage in "From al-Ghazālī to al-Rāzī," 36.

³²⁰ Rāzī states here that the charitable interpretation of the *falāsifa*'s approach (*wa-l-ẓāhir min ḥāl al-ḥukamā*...) is that they take the arguments (*al-wujūh*), which he analyzed before his conclusions made above, simply as exhortations (*al-mushawwiqāt*) and not as logically rigorous proofs.

perfection and salvation. That is, philosophy proper, as set out in the *Mabāhiṭh* and the *Mulakhkhaṣ*, does not presume to deal with such matters. Here, the measure of neutrality is based on his logical analysis.

However, Rāzī ventures here a suggestion regarding human perfection, which is quite remarkable. That is, he provides an interpretation of rational perfection that is based on an inductive argument (*al-istiqrāʿ*) regarding the nature of sensible phenomena. I cannot examine this argument in full here. However he makes a few brief points that are of interest. He states that there is a tendency towards perfection that is observable by induction and there are various degrees of perfection in the world (*marātib al-kamāl*). He also states that “knowledge of God is only obtained by human intellects by means of [our] knowledge of His acts (*afʿālihi*), and the more one knows of His acts and the more complete one’s grasp of His wisdom, the more complete is one’s love for Him and the more complete is one’s pleasure in loving Him.”³²¹ Rāzī does not expand here on these points. But it should be noted that the context here is that these are not absolute or logically rigorous proofs.³²²

Although he offers this alternative account of perfection in Book II, it seems to be placed better in Book III. In fact, in Book III, particularly of the *Mabāhiṭh*, Rāzī has one chapter in the final section devoted to prophecy. The chapter argues why there must be a prophet (*fī annahu lā budda min al-nabī*). Significantly, Rāzī does not invoke the discussion of miracles, which in *kalām* works, including in his *Nihāya* and *Arbaʿīn*, are the proofs for prophecy. Here, Rāzī is addressing the question of why there needs to be a prophet at all. Again, I will not go into the details of the argument. What is important is

³²¹ Ibid., 172b.

³²² Indeed, Rāzī goes on to prescribe practical, rather than rational or spiritual methods to attain a deeper knowledge of such matters.

that Rāzī draws a connection between the perfection or order of the world in general and the requirement that human society needs to be perfected. His discussion is an indication that if the known characteristics of a prophet lead to the perfection of worldly order, then, just as Providence does not neglect the elements of natural order, he would not neglect the perfection of human society. I will return to tie up the discussion in the *Mulakhkhaṣ*, after first discussing a few points in the *Maṭālib*.

In the *Maṭālib*, Rāzī advances a proof for prophecy that he states departs from the previous approaches that depend specifically on the notion of miracles.³²³ Here, Rāzī expands on the few brief points he made in the *Mabāḥith* and develops the notion of the prophet as the perfecter of morality and social order. Here, Rāzī invokes induction again and points to the very structure of the natural order. For example, he states that we know inductively that there are three primary types of natural things: minerals, plants and animals. And we know that animals are more perfect than plants, and that the latter are more perfect than minerals. That is, there are degrees of perfection observable in nature. However, humans can be more perfect than all the natural kinds, but can also be worse than them all. That is, unlike the natural kinds, individual of the species of humanity can differ with regard to the perfection of their kind, even to great extremes. If, however, a perfect human is the most perfect instance of a natural kind, then there must be some further thing that would maintain the perfection of the species generally. This, at least, is the argument in sum.

What is important here is that the argument expands on what was stated in the *Mabāḥith*. Moreover, Rāzī repeats throughout the work a point echoed in the

³²³ Rāzī, *Mabāḥith*, 8, 103-108.

Mulakhkhaṣ, “The more one knows the acts of God, the more complete one’s knowledge of Him is.” Shihadeh has suggested that Rāzī “downgrades” the role of the study of natural reality or the sciences in his later philosophical theology, particularly the *Maṭālib*. That is, Rāzī does not believe that knowledge of natural reality or creation helps to achieve spiritual perfection. I believe Shihadeh suggests this because there is no separate section devoted to physics in the *Maṭālib*, as he notes. However, there are lengthy books devoted to time, place, body, eternity and origination, and on celestial and sublunary bodies. In fact, these parts constitute the bulk of this theological work. However, what Rāzī does in the *Maṭālib* is to press all these discussions of topics of natural philosophy into the service of theological knowledge. Indeed, the entire book is explicitly restricted to theology (*al-‘ilm al-ilāhī*), as the title states.

What Rāzī does in the *Maṭālib* is to expand topics proper to Book III of the *Mabāḥith* and the *Mulakhkhaṣ*. The study of natural phenomena in Book II that were dealt with systematically and neutrally according to his logical programme are now brought into the service of spiritual insight and perfection. This is very clear, for example, in his discussions of time and the celestial intellects. That is, he sees that insight into them could yield great spiritual advancement. In general, Rāzī seems to follow his inductive and quantitative approach to problems here as well. For example, he states regarding proofs for the existence of God that if multiple proofs are added to a persuasive proof (*al-iqnā‘ī*), one’s belief can be strengthened to the extent of being certain (*al-jazm wa-l-yaqīn*). He states, “Dialectic can replace demonstration in providing certainty.”³²⁴ Rāzī quite clearly does not mean the kind of certainty required by the Aristotelians. Rāzī

³²⁴ Rāzī, *Maṭālib*, 1, 239.

takes the same approach in his argument regarding the nature and order of the celestial spheres and intellects.

However, at the same time, he will invoke verses to strengthen his case and often appends a number of scriptural sources to bolster his list of proofs. It is clear that this philosophized but dialectic theology is not necessarily aimed at negating, or even advancing from, his views in the *Mabāḥith* and the *Mulakhkhaṣ*. Indeed, in a number of important places – such as the question of time and place – his position in the *Maṭālib* repeats his results in the *Mabāḥith* and the *Mulakhkhaṣ*. Moreover, his epistemological principles, especially the notion that we only have knowledge of phenomenal regularity (a point established in Chapter 6 building on the above analysis) are invoked in his discussion of prophecy and affirmed generally in his approach to the analysis of natural phenomena.³²⁵ Nowhere are his arguments based on a logical or deductive approach that proves the true natures of things. However, Rāzī is not being neutral here. Rāzī is exploring to what extent a dialectic and inductive approach, particularly to sensible phenomena, can prove useful to spiritual perfection.

I turn now to a final point regarding Rāzī's approach in the *Mabāḥith* and the *Mulakhkhaṣ*. Recent studies on Ghazālī show that Ghazālī developed a sophisticated alternative view of causality and cosmology.³²⁶ Indeed, there does seem to be close connections between Rāzī and Ghazālī. However, with regard to the study of natural phenomena, there is a clear difference. Rāzī's emphasis is on setting out an

³²⁵ Rāzī, *Maṭālib*, 9, 97-98.

³²⁶ Frank Griffel, *Al-Ghazālī's Philosophical Theology* (Oxford: Oxford University Press, 2009); Jon McGinnis, "Occasionalism, Natural Causation and Science in al-Ghazālī," in *Arabic Theology, Arabic Philosophy: From the Many to the One: Essays in Celebration of Richard M. Frank*, ed. J.E. Montgomery (Leuven: Peeters, 2006), 441-463; Kukkonen, Taneli. "Possible Worlds in the *Tahāfut al-Falāsifa*: Al-Ghazālī on Creation and Contingency." *Journal of History of Philosophy*, 38 (2000), 479-502.

epistemological and logical programme for the study of natural phenomena, which arises out of his intense engagement with the Aristotelian theory of science. Rāzī's focus in most of Book II is on exploring the phenomenal nature of natural reality, and attempting to provide alternative views based on his epistemological principles. Ghazālī's focus however is ontological and, more specifically, Ghazālī wants to set out an alternative theory of causality or cosmology that is consistent with theological doctrine. However, these ontological problems are ones that Rāzī treats in Book III of the *Mabāḥith* and the *Mulakhkhaṣ* in a limited way, as we saw above.³²⁷ As suggested, one upshot of this “epistemological turn” that Rāzī advances is that it leaves the working scientist free to employ neutral methods and tools of inquiry. Rāzī's influence on the later intellectual tradition, however, is something that requires further study.³²⁸

³²⁷ This is not to say that Rāzī's approach was developed *ex nihilo* or in an intellectual vacuum. Rather, I believe a broader assessment of the intellectual history – which not only examines the context of *falsafa* and *kalām* but a wider scope of intellectual and scientific works and the interrelations between them – is required. It is notable that in many of his works, Rāzī addresses not simply the *falāsifa* and the *mutakallimūn*, but the ‘*ulamā*’ and *ḥukamā*’ in a more general manner. Indeed, these terms are included in a number of the titles of his works. Recent works have attempted to look seriously at philosophical and cosmological systems that are alternatives to those of the *falāsifa*. See Sabra, “*Kalām* Atomizism as an Alternative Philosophy to Hellenizing *Falsafa*.” In *Arabic Theology, Arabic Philosophy: From the Many to the One: Essays in Celebration of Richard M. Frank*. Ed. J.E. Montgomery. Leuven: Peeters, 2006, 199–272; Dhanani, *The Physical Theory*. One avenue that remains to be explored is the interaction between *kalām* and the scientific alternatives that were developed by working scientists like Ibn al-Haytham and al-Bīrūnī. The tradition of critique or aporias (*shukūk*) in the scientific tradition are parallel to the approach and intuitions of Rāzī in the *Mulakhkhaṣ* and the *Mabāḥith* with regard to the philosophical tradition.

³²⁸ Recent work on astronomy has shown that later astronomers do in fact follow a programme that avoids the assumptions imported from Aristotelian metaphysics. See for example, F. Jamil Ragep, “Freeing Astronomy from Philosophy: An Aspect of Islamic Influence on Science,” *Osiris* (2001), 49–71. It should be noted that I do not suggest that Rāzī is enthusiastic, or even optimistic, about empirical or scientific research. He may primarily be interested in “hard science” only insofar as he can derive philosophical results that resolve his problems with Aristotelian philosophy. My analysis in Chapter 6 suggests that he is certainly interested in the philosophical results. His attitude towards hard science, however, requires investigation. See also A. I. Sabra, “Science and Philosophy in Medieval Islamic Theology.” *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 9 (1994), 1–42.

Postscript: Logic, Instrumentality and Neutrality

In late antiquity (from the 3rd to the 5th century AD), Aristotelian commentators cast the question of the relation of logic to philosophy primarily in terms of whether logic was an instrument (*organon*) or a part of the philosophical sciences, a problem that had originated in differences between Peripatetic and Stoic views of logic and dialectic.³²⁹ In fact, understanding the precise philosophical role of logic in the eyes of the ancient commentators involves considerations that go well beyond this particular dispute, but I shall focus here on specific issues that relate directly to the problems we raised earlier.³³⁰

The commentators viewed a set of Aristotle's works, which they called the *Organon*, as providing a systematic treatment of logic.³³¹ The books of the *Organon* consisted of the following works studied in this order: *Categories*, *De Interpretatione*, *Prior Analytics*, *Posterior Analytics*, *Topics*, and *On Sophistical Refutations*. The justifications advanced by the late-antique commentators for its order and unity are worth reviewing. Logic, they deemed, was primarily about demonstration, which was treated in the fourth book, i.e., the *Posterior Analytics*. The three preceding works were viewed as preliminary to the *Posterior Analytics* because they examined three elements involved in demonstrations: terms, propositions, and syllogisms.³³² *Categories*, *De Interpretatione*, and *Prior Analytics* were thus viewed as treating terms, propositions, and syllogistic form

³²⁹ See Richard Sorabji, *The Philosophy of the Commentators, 200-500* (Ithaca, N.Y.: Cornell University Press, 2005), I, 31-32; Katerina Ierodiakonou, "Aristotle's Logic: An Instrument, not a Part of Philosophy?", in *Aristotle on Logic, Language and Science*, ed. N. Aveglis & F. Peonidis ((1997), 33-53.

³³⁰ On this see especially A. C. Lloyd, *The Anatomy of Neoplatonism* (Oxford: Clarendon Press, 1990), 1-85.

³³¹ Though this did not mean that they ceased debating whether or not logic is an instrument of philosophy. The debate turned from problems between Peripatetic and Stoic views to problems relating to the reconciliation of Aristotle and Plato.

³³² Sorabji, *Commentators*, 31-32.

respectively. The order of these works was grounded in the semantic relations of these elements. That is, singular terms were studied first since they make up the more complex linguistic items, propositions, which are next in order since they in turn make up a syllogism. The semantic theory of the preliminary works was rooted in the innovations of Porphyry, whose *Isagoge* served as an introduction to the *Categories*. Importantly, the commentators agreed that the *Categories* served as the proper introduction to logic and philosophy as a whole, even if they differed as to what precisely the *Categories* was about. That is, it was widely disputed whether the singular terms studied in the *Categories* were simply linguistic items (terms), concepts, concrete objects, or some combination thereof. This ambiguity with respect to the precise semantic content of the objects studied in the preliminary works, particularly the *Categories*, naturally raised several questions about the nature of logic, especially to what extent the semantics of the *Organon* requires extra-logical commitments, a point we return to shortly.

In the Islamic world, the approach of the ancient commentators to the *Organon* provided the general context for the study of Aristotelian logic.³³³ Although Avicenna inherits this general approach, he diverges from his predecessors in a number of apparent ways. Avicenna considers the question of whether logic is an instrument or a science ultimately inconsequential, but he is worried by a number of confusions that might arise in related discussions, including, for example, mistaken notions concerning the subject-matter and parts of logic. More significantly, Avicenna seems to be the first philosopher

³³³ Although of course his *Rhetoric* and *Poetics* came to be added to the *Organon* as its last two books. See Deborah Black, *Logic and Aristotle's Rhetoric and Poetics in Medieval Arabic Philosophy* (Leiden: E.J. Brill, 1990); Maroun Aouad, Marwan Rashed, "L'exégèse de la *Rhétorique* d'Aristote : Recherches sur quelques commentateurs grecs, arabes et byzantins", *Medioevo* 23, 1997, 43-189.

since late antiquity to question the status of the *Categories* in the *Organon*.³³⁴ By contrast, Avicenna's more immediate predecessors, Abū al-Faraj ibn al-Ṭayyib and al-Fārābī, posit the *Categories* as the first of the books studied in logic. Ibn al-Ṭayyib, for example, states that the first book of the eight books of logic (i.e., the *Organon*) is the *Categories* (*kitāb qāṭīghūrīyās*) that “treats the subject-matter (*mawḍūʿ*) of logic which are simple terms that refer to the highest genera (*al-ajnās al-ʿāliya*).”³³⁵ Fārābī also includes the *Categories* as the first book of logic in his *Enumeration of the Sciences*.³³⁶ In another treatise, he adds, “Of those [books] [one] learns the parts of a premise used in a demonstrative syllogism (*burhān*) in his book on definition named *Categories*.”³³⁷ This statement follows Fārābī's general discussion of what precedes the study of philosophy and more immediately what precedes and follows the study of the science of demonstration (*al-Burhān*). In justifying the order of those works that are “preliminary” to demonstration, Fārābī roughly follows the logic of the commentators.³³⁸ Indeed, in much of this, Avicenna's Islamic predecessors seem to follow the Greek commentators closely. Importantly, Ibn al-Ṭayyib and Fārābī take a particular stance on what the first book of logic is about. The *Categories* is not simply about *terms* but about *things* and

³³⁴ See A. Sabra, “Avicenna on the Subject Matter of Logic,” *Journal of Philosophy*, 77 (1980), 746-764. See for example Avicenna, *Madkhal*, 15-16, 21-24. The problem has a long history, see for example sources translated in Sorabji, *Philosophy of the Commentators*, 56-60.

³³⁵ Abū al-Faraj ʿAbd Allāh ibn al-Ṭayyib, *Tafsīr Kitāb al-Maqūlāt*, ed. and trans. by Cleophea Ferrari (*Der Kategorienkommentar von Abū l-Farag ʿAbdallāh ibn aṭ-Tayyib*) (Leiden: Brill, 2006), ʿ (the Arabic text is paginated by the Arabic-Indic numerals).

³³⁶ Fārābī, *Iḥṣāʾ al-ʿUlūm*, ed. ʿAlī Bū Maḥmūd (Beirut: Dār wa-Maktabat al-Hilāl, 1996), 45.

³³⁷ Fārābī, *Risāla fī mā yanbaghī an yuqaddam qabla taʿallum al-falsafa*, in *Alfārābī's philosophische Abhandlungen*, ed. F. Dieterici (Leiden: E. J. Brill, 1890), 52. It is peculiar that Fārābī seems to refer to the *Categories* as the book on definition. I am unaware of any precedent for this.

³³⁸ This, of course, contrasts with the views of modern interpreters of Aristotle who view the books of the *Organon* in a different light. Even those who consider the books of the *Organon* as united in some way take the *Categories* and *De Interpretatione* as leading up to the *Topics* rather than the *Analytics*. See for example Miles Burnyeat, *A Map of Metaphysics Zeta* (Pittsburgh: Mathesis Publications, 2001), 106-111; Stephen Menn, “Metaphysics, Dialectic and the *Categories*”, *Revue de Métaphysique et de Morale* 100 (1995), 311-337.

more specifically about the most general kinds of things there are. As Ibn al-Ṭayyib states, the *Categories* is about “simple terms that refer to universal *things* constituting the highest genera according to first imposition (*al-waḍʿ al-awwal*) [i.e., the assignment of a meaning of a term] *and* as things are in themselves (*al-umūr bi-ḥasbihā*).”³³⁹ In offering this view of the *Categories*, Ibn al-Ṭayyib explicitly states that he is following the view of Iamblichus, who opposes but synthesizes the views of Alexander (existent things), Ammonius (mental concepts), and Porphyry (linguistic terms). The qualification, “in themselves”, seems to add much to the semantic content of simple terms as treated in the *Categories*. That is, simple terms do not refer by first imposition to things or signify concepts – a position Rāzī, for example, would be comfortable with – but involve both insofar as they pick out the primary kinds of things that furnish the world.³⁴⁰

Avicenna agrees that the *Categories* is about terms that refer to the most general kinds of things that encompass or apply to all existents (*tahwī al-mawjūdāt*).³⁴¹ But precisely because of this, Avicenna is led to question the status of the *Categories* as constituting a proper part of logic.³⁴² He argues in I.1 of his own book on the categories

³³⁹ Ibn al-Ṭayyib, *Tafsīr*, ١٨.

³⁴⁰ Of course, this need not necessarily be the case. For example, Porphyry’s actual view has been interpreted as involving all three items as well (i.e., terms, concepts, and things) without committing to a deeper ontology of forms or essences. Here, his theory would be based on a view of concept formation and abstraction that deals directly with sensible things. In any case, it is not important how neutral Avicenna’s predecessors saw their semantics as being, for reasons that will become clear below, but it does suggest that the semantic theory can be quite powerful, and more powerful than Rāzī would allow. The role of collection and division in providing definitions that do not simply *distinguish* the definiendum from other things but locate its essence suggests this. With regard to the ancient commentators, A. C. Lloyd suggests that the semantic theory required for definition is minimal and can be seen simply as a part of elementary Boolean set theory; see *Anatomy*, 8-9. On Porphyry, see S. Ebbesen’s reconstruction in “Porphyry’s Legacy to Logic”, in R. Sorabji, *Aristotle Transformed: The Ancient Commentators and their Influence* (London: Duckworth, 1990), 141–171. Cf. Lloyd, *Anatomy*, 36-75. Lloyd provides a reconstruction that attributes to Porphyry an even more neutral semantics.

³⁴¹ Avicenna, *al-Shifāʾ, al-Mantiq, al-Maqūlāt*, ed. G. Anawati, M. al-Khuḍayrī, & A. F. al-Ahwānī (Qum: Maktabat Āyat Allah al-ʿUẓmā al-Marʿashī al-Najafī, 1405 AH), 6.

³⁴² Though whether this amounts to a real divergence in views of logic awaits a fuller assessment. It is curious that Avicenna’s discussion seems to indicate that this was perhaps a matter raised before him. See

in *al-Shifāʾ* that if the *Categories* were included in logic, it should only play a minor role, namely by *positing* the categories rather than *proving* them (i.e., proving the completeness of the list of categories, the exclusivity of each category and so on).³⁴³ The proof of the natures of existent things (*ṭabāʾi^c al-mawjūdāt*), that is, the highest genera and their states (*aḥwāl*), is something one can “only seek to grasp fully (*bi-l-istiṣāʾ*)” by arriving at the level of science called First Philosophy.”³⁴⁴ In his view, one can in theory move directly from the discussion of the five predicables in the previous book (that is, his *Madkhal*, which is a significantly expanded version of Porphyry’s *Introduction* to the *Categories*) to the study of definitions, judgments and syllogisms in the following books.³⁴⁵ For Avicenna, then, a thorough investigation of the categories is a task that falls on the metaphysician and not the logician.³⁴⁶ However, what this precisely means for him

Maqūlāt, 7. His point however may be interpreted as arguing that his predecessors’ “aversion” to viewing the categories as about things rather than terms indicates that it should not have a full role in logic. Still, it is clear that Fārābī, for example, discusses the nature of the categories in other works like *Kitāb al-Ḥurūf*, suggesting that, like Avicenna, there is a posited version at the beginning of logic and a scientific study of the categories later. See Stephen Menn, “Al-Fārābī’s *Kitāb al-Ḥurūf* and His Analysis of the Senses of Being”, *Arabic Sciences and Philosophy* 18 (2008), 68. On Avicenna, see Sabra’s analysis, which corroborates the points made above though he provides only brief remarks regarding the role of the *Categories* (“Avicenna on the Subject Matter of Logic”).

³⁴³ For example, he states: “The one who authored (*wāḍiʿ*) this book did not do so for the purpose of instruction (*taʿlīm*) but on the basis of positing and imitation (*al-waḍʿ wa-l-taqlīd*)...the aim of this book is for you to believe by postulation and acceptance (*iʿtiqād^{an} mawḍūʿ^{an} musallam^{an}*) that there are ten things which are the highest genera that encompass [all] existents and to which singular terms refer, and to know that one of those [categories of the highest genera] is substance and that the remaining nine are accidents, without demonstrating for you that the nine are accidents.”

³⁴⁴ Ibid.

³⁴⁵ Avicenna is, however, conciliatory towards the tradition and advises the reader not to get too excited on the matter and call the *Categories* an “imposter” (*dhakhīl*) in the topic of logic. That is, he says one can follow the traditional ordering of the *Organon* provided one takes into account his provisos. See *Maqūlāt*, 6. Following the traditional manner of exposition is something he does in a number of places; see for example *Madkhal*, 43, 65.

³⁴⁶ Curiously, however, Avicenna proceeds in the following sections of his *Maqūlāt* to discuss, often extensively, ontological problems relating to the nature and adequacy of the ten Aristotelian categories. Moreover, in the later books, such as the *Metaphysics*, Avicenna refers back to the discussions in the *Maqūlāt* (see especially Books II and III of the *Metaphysics*, where Avicenna discusses substance and accidents). How precisely Avicenna had intended the two works to be related is a matter that awaits further study. Some of these topics in the *Maqūlāt* have been examined by Allan Bäck who suggests that Avicenna attempts to solve ontological problems regarding, for example, the nature of relations and Aristotle’s “four-fold” distinction. In addition to these, Avicenna discusses numerous other questions such as the mutual

with regard to the semantic parts of logic is a point we shall return to after discussing Rāzī.

Rāzī is aware of Avicenna's view of the *Categories* and his comments on the matter are of significance. I will focus on remarks in his *Sharḥ al-Ishārāt*. In the logic section of that work, Rāzī refers to the *Categories* in connection with this brief point made by Avicenna: "So logic is a science in which kinds of inferences (lit.: movements; *intiḳālāt*) from things that obtain in the mind of a person to things that [one] seeks to obtain and the states (*aḥwāl*) of those things (*umūr*)..."³⁴⁷ Rāzī comments specifically on Avicenna's point, i.e., "the *states* of those things", and interprets those states as relating to quiddities in the mind, i.e., the state of a quiddity as being subject, predicate, genus, differentia and so on. Rāzī then states, "As for *teaching* the natures (*ḥaqā'iq*) of those things [i.e., genera, differentiae, and so on], it is found in the *Categories* (*Kitāb al-Qāṭighūrīyās*)...and since the Shaykh believes that the *Categories* is not a part of logic, he of course states that logic investigates inferences and the *states* of things from which inferences [proceed] and did not state that logic investigates those *things* in which those states occur."³⁴⁸ That is, logic concerns our knowledge of inferences and those states of things insofar as they relate to inferences and not insofar as they relate to things as they are, i.e., their natures.³⁴⁹ None of this is immediately suggested in Avicenna's brief

exclusivity of substance and accident, the number of categories, the nature of accidents, defining the nature of the types of qualities, and the nature of primary and secondary substances, which, as discussed below, clarify his positions in metaphysics. See Bäck, "Avicenna on Relations and the Bradleyan Regress", in *La tradition médiévale des catégories (XII^e-XV^e siècles)* eds. Joël Biard and Irène Rosier-Catach (Paris : Peeters, 2003), 69-84 and his "The Ontological Pentagon of Avicenna," *The Journal of Neoplatonic Studies*, 2 (1999), 87-109.

³⁴⁷ Rāzī, *Sharḥ al-Ishārāt*, I, 18.

³⁴⁸ Ibid.

³⁴⁹ This and the following discussion invoke the problem of the proper subject-matter of logic, but I shall leave that aside to avoid straying too far from our primary concern in this chapter.

remarks in the *Ishārāt*; Avicenna does not in fact mention the *Categories* anywhere in the logic part of the *Ishārāt*.

In the next section, Avicenna provides a brief pointer that concerns how simple terms become a part of composite (linguistic) items. Avicenna states that the logician needs to know simple terms *not in every way but in whatever way composition might properly occur to them*. Commenting on this seemingly harmless qualification, Rāzī provides the analogy of the builder of a house who need only seek out the singular items – i.e., brick, wood, etc. – insofar as they are the parts that compose a house. He states that the builder need not know whether the bricks or wood are made of indivisible parts or matter and form. He then adds,

If you have understood that, know that those who include the *Categories* in logic, argue that logic investigates the composition of singular terms *in a specific manner*, so it is necessary to know those singular items which are the highest genera. But the Shaykh rejects this by [stating] that one who investigates composition (*tarkīb*) must investigate those aspects that are prepared to receive composition (*taʿlīf*), and here that is the investigation of their generality [i.e., being a genus], differentiability, essentiality, accidentality, subject-hood and predicate-hood. As for the investigation of the essences of those things, their natures, how they divide into their species, and their propria, this falls outside of logic. Indeed, the

logician does not benefit from that whatsoever except insofar as he will be able to provide numerous examples for every topic.³⁵⁰

Rāzī's discussion seems to draw on Avicenna's *Maqūlāt* and *Madkhal*. Rāzī's point that logic concerns the states of quiddities in the mind corresponds to points made in the first few paragraphs of I.1 of the *Maqūlāt* regarding what was discussed in the *Madkhal*. Moreover, it is telling that the reference to *aḥwāl* or states as applied to singular terms invokes for Rāzī, as shown above, the question of the status of the *Categories*. *Aḥwāl* is what Avicenna uses in his discussion in the *Maqūlāt* regarding those aspects of singular terms that fall outside of or within logic; for example, he states, "Singular terms have other *aḥwāl*, which is their referring to existent things in one of the two modes of existence which we clarified when we introduced the subject-matter of logic [i.e., in the *Madkhal*] and there is no necessity [for the logician] to know those [*aḥwāl*]." ³⁵¹ These other states, specifically of quiddities in the mind and *in re*, are discussed in metaphysics and elsewhere. Even Rāzī's point that the *Categories* may serve a purpose in enabling the logician to provide examples corresponds to a line in the *Maqūlāt* that states the same. ³⁵² As shown on numerous occasions above, this provides further evidence that Rāzī's understanding of Avicenna is not limited to the *Ishārāt* and that he draws on Avicenna's other works, especially the *Shifā'*. Below, we shall show stronger evidence that Rāzī was well acquainted with the *Maqūlāt* and other books of the *Shifā'*, which he drew on in his own works as well as in his commentary on the *Ishārāt*. Moreover, it should be stressed

³⁵⁰ Ibid., 20.

³⁵¹ Avicenna, *Maqūlāt*, I, 1, 4.

³⁵² Ibid.,

that Rāzī was familiar with these debates in the *falsafa* tradition, even if the depth of that familiarity needs assessment.

Returning to Avicenna, his position on the *Categories* seems to diverge from the accounts of Ibn al-Ṭayyib and Fārābī.³⁵³ But, for a number of reasons, it is unclear what Avicenna's concerns about separating logic from the investigation of metaphysical problems really amount to. I focus here on what might be termed "external" problems to Avicenna's exposition of logic, that is, problems that concern the neutrality of logic to the extra-logical commitments of Aristotelian philosophy, such as form-matter analysis.

First, Avicenna's exposition of logic seems committed to a number of matters that would make a non-Aristotelian such as Rāzī uncomfortable. One example of this is Avicenna's discussion in *Demonstration* of how genus and species relate to the matter and form of a thing, which imports the hylomorphic analysis that Aristotle reserves for his discussions in *Metaphysics* and elsewhere. As Miles Burnyeat has argued, Aristotle consciously excludes any reference to form-matter theory in the works of the *Organon*, not because the works predate the theory, but because of Aristotle's insistence on the neutrality of logic to particular domains of inquiry.³⁵⁴ Perhaps more surprisingly,

³⁵³ However, it is crucial to note that the history of this debate needs investigation before we can be certain that there is in fact a disagreement, or at least one that is non-trivial. Avicenna does not refer to the views of his predecessors in depth as does Ibn al-Ṭayyib, but he does draw more generally on their attitudes towards the *Categories* to support his own view. He states for example that "the astute logicians" find it repelling to discuss the nature of existent things in this book and that the original version of Aristotle omits the metaphysical discussion of the categories, presumably suggesting that it is meant only to posit or illustrate examples of the categories rather than to prove them (see *al-Maqūlāt*, I, 1, 7). His point of course may simply be that his predecessors' "aversion" to viewing the categories as about things rather than terms indicates that it should not have a full role in logic. Still, it is clear that Fārābī, for example, discusses the nature of the categories in other works like *Kitāb al-Hurūf*, suggesting that, like Avicenna, there is a version set out at the beginning of logic and a metaphysical study of the categories later, though it is not clear whether Fārābī would have seen them as "posited" in any way. See Menn, "Al-Fārābī's *Kitāb al-Hurūf*," 68.

³⁵⁴ Burnyeat argues that adopting Aristotle's logical method did not necessarily commit one to more specific views arrived at in Aristotelian physics or metaphysics, as is often assumed. Though his "logical" approach did not exclude ontological matters entirely, Aristotle's original aim was to set out a neutral tool

Avicenna raises questions relating to form and matter as early as the *Madkhal*, that is, that part of logic that deals with the semantics of singular terms and, more specifically, terms important in the composition of definitions. With regard to differentia, for example, Avicenna discusses the constitutive nature of “rationality” (i.e., *nutq* and not simply being a subject of the attribute “rational” or *nātiq*) which involves a number of ontological issues raised regarding the “natures” of things in V,1 and elsewhere of *Ilāhiyyāt*, as discussed in detail shortly below.³⁵⁵ He states, “This [type of the differentia, i.e., the real differentia (*khāṣṣ al-khāṣṣ*)] is like the rationality of man, for when the power that is named ‘the rational soul’ [i.e., the substantial form] joins with matter, and the animal then becomes rational, [the constituted individual] is prepared to receive knowledge, skills...”³⁵⁶

It is important, however, not to prejudge the matter and particularly so if we consider that Avicenna often chooses to balance between the “accretions” of the received Peripatetic tradition and his own view of how philosophy ought to be structured.³⁵⁷ Despite these seemingly extra-logical intrusions, the evidence suggests that Avicenna was

for philosophers to use on a reasonably wide range of philosophical problems. According to Burnyeat, it was certainly, and intentionally, neutral with regard to form-matter analysis, which is central to discussions in his physics and metaphysics. In the same way, Avicenna may indeed have been trying to work out a *relatively* neutral logic. His various attempts at separating his own concerns regarding the *Categories* illustrate some awareness of the problem. For a developmental account of Aristotle’s views, see D. Graham, *Aristotle’s Two Systems* (Oxford: Clarendon Press, 1987).

³⁵⁵ See McGinnis, “Logic and Science,” 174-178.

³⁵⁶ See *Madkhal*, 75. Form-matter analysis is also seemingly raised in his discussion of genus and species as well, see *Madkhal* 53, 56-57. However, these discussions need not necessarily imply a heavy-duty form-matter analysis and might just be ways of illustrating aspects of the essential/part versus accidental/non-part nature of the distinctions.

³⁵⁷ That is, we need a better grasp of the philosophical context, specifically how and to what extent Avicenna desires a neutral system vis-à-vis his predecessors. The commentators in fact continued to debate ontological matters, like the status of universals ante-rem, in re and post rem, in their commentaries of Porphyry’s *Introduction*.

trying to work out a relatively neutral logic.³⁵⁸ Whatever the case, this does not seem to matter because Rāzī demands a logic that is significantly more neutral than what Avicenna is ready to offer, as we saw above. Though Rāzī would certainly expect neutrality with respect to a full-fledged form-matter analysis, his primary objection concerns epistemology, specifically regarding the semantics of definitions, and not the ontological import of the logical discussions – though ontological concerns also came up in his discussion of universals particularly in the *Mulakhkhaṣ*. In the *Maqūlāt*, for example, Avicenna raises the question of whether “mortal” or “walking” in contrast to “rational” is the constitutive differentia of a thing or one of its non-constitutive concomitants (*lawāzim*), a solution for which he stresses should be sought elsewhere (i.e., this again is a matter for metaphysics). Avicenna is concerned here with specific cases of potential “overlap” (*tadākhul*) between constitutive and accidental differentia and not with the nature of differentiae *per se*.³⁵⁹ Rāzī, however, applies the problem more generally to the possibility of arriving at real differentiae at all or, more broadly, to our ability to locate essentially constitutive properties of things as set out in real definitions.

³⁵⁸ In addition to his discussion of *Categories*, on numerous occasions in the *Madkhal*, he points to matters that are to be investigated further in metaphysics (see for example *Madkhal*, 72). The intrusions can be explained in a number of ways. In I.12 of the *Madkhal*, Avicenna clarifies the relationship between logical, natural and intelligible universals. Thus when Avicenna discusses natures, he expects the readers to know where and how ontological imports enter the logical discussion. Another alternative explanation is that the form-matter analysis was neutral enough to include a spectrum of ontological views that only ranged from Platonist to Aristotelian.

³⁵⁹ Specific questions regarding division need to be sorted out elsewhere but the role of division itself is central to logic and specifically definitions. This is clear even in I.1 of *Maqūlāt* where in addition to those “states” applying to singular terms that are investigated in the higher sciences, Avicenna mentions a number of states that fall within logic, including the method of division that allows one to “acquire” what is unknown by definition. Proper division, he states, moves from genera to species by means of differentia, preserving the proper order. This certainly does not commit one to a full-blown form-matter analysis but, from an epistemological perspective, it seems to commit one to a relatively strong version of representative realism.

Part II: Ontology, Epistemology & Psychology

Chapter 5

Against Aristotelian Metaphysics: Essences, Form, and Matter

In this chapter, I examine Rāzī's discussion of the quiddity (*māhiyya*) in Chapter 2 of Book I of the *Mulakhkhaṣ* and the *Mabāḥith*. I begin with his first section (*faṣl*) in Chapter 2 (specifically *Mabāḥith* I.2.1) devoted to the quiddity and its “concomitants” (*lawāḥiq*).³⁶⁰ My analysis of the text aims to show that I.2.1 accurately summarizes the primary points in V.1 of the Avicenna's *Ilāhiyyāt* of the *Shifā'*.³⁶¹ However, Rāzī's summary is not meant to provide a neutral rehashing of Avicenna's text. Rather, Rāzī carefully appropriates those elements in Avicenna's discussion that are consistent with his own view, particularly in relation to his epistemological and logical programme as outlined above, and excises or qualifies those elements that he views as problematic or irrelevant to the problem of quiddity. Moreover, Rāzī adds a passage of his own that departs radically from anything found in Avicenna's text. The passage will make clear,

³⁶⁰ As we shall see, *lawāḥiq*, here, corresponds to Avicenna's notion of those mental and extra-mental properties that apply to the quiddity in itself (which he discusses especially in V.1 of the *Shifā'*) and not the more specific sense of “concomitants” or *lawāzim* which was used by Rāzī in our above analysis, i.e., the extra-mental properties of a structured universal.

³⁶¹ As noted above, Avicenna uses the phrase “*umūr ʿāmma*” or “common things” in the title of V.1. But Avicenna here seems to mean universals of different kinds (universals simpliciter, genus, differentia, species, so on) and their properties (i.e., things that apply universally). Rāzī's use of *umūr ʿāmma* is quite different. It corresponds more to a discussion of “transcendentals”, though his approach diverges from the medieval scholastic discussion in the Latin world because it is not driven primarily by problems of Aristotelian metaphysics. See Chapter 4 above for more on the role of Book I and *umūr ʿāmma*. See Jorge J. E. Gracia, “The Transcendentals in the Middle Ages: An Introduction”, *Topoi* 11 (1992), 113-120.

contrary to Avicenna's implied position in V.1, that properties are not predicated of the quiddity in itself in the manner of *per se* predication. I then turn to a number of questions relating to Aristotelian form-matter analysis and especially as it applies to parts of the definition, namely, the genus and differentia. Rāzī here will argue more generally against form-matter analysis.

In his philosophical summa, *al-Mabāḥith al-Mashriqiyya*, Rāzī begins his analysis of quiddities with problems that closely parallel those raised in V.1 of Avicenna's *Ilāhiyyāt* of the *Shifā'*, which includes a discussion of Avicenna's threefold distinction of quiddity in itself, quiddity *in intellectu*, and quiddity *in re*.³⁶² In fact, aside from the final paragraph which begins with "Know that..." ("wa-*ʿlam anna...*"), Rāzī's chapter reads much like a summary of the central themes of Avicenna's considerably longer chapter, even to the extent that Rāzī's wording and examples closely match those of Avicenna (e.g., *farasiyya*, *insāniyya*, *lā bi-sharṭ* and *bi-sharṭ-lā*). The primary points Avicenna raises in V.1 can be summed up as follows: (1) distinguishing quiddity in itself from universality and other concomitants (paragraphs 1-4); (2) (sophistical) questions regarding the positing of quiddity in itself and (logical) responses (paras. 5-14); (3) an objection stating that the affirmation of quiddity in itself entails affirming its separate (*mufāriq*) existence and two responses to the objection (paras. 21-27 and 18); (4) the relation of quiddity in external things to quiddity in itself, and different aspects of

³⁶² Avicenna discusses the triplex distinction of quiddities in a number of other places, as noted in Part 1. See Marmura, "Quiddity and Universality in Avicenna," in *Neoplatonism and Islamic Thought*, ed. P. Morewedge (New York: State University of New York Press, 1992), 77-87; *ibid.*, "Avicenna's Chapter on Universals in the *Isagoge* of his *Shifā'*", *Journal for the History of Arabic Science*, 4 (1980), 239-251.

quiddities *in intellectu* (paras. 28-30).³⁶³ In paragraphs 15 to 20, Avicenna summarizes and recasts the preceding discussion, while anticipating in paragraphs 17 and 18 solutions to the objection raised in paragraph 21. Rāzī's discussion provides an apt and systematic summary of the central points that Avicenna raises in V.1.³⁶⁴ The nature of his summary suggests that he was intimately familiar with the text of V.1 and that he recognized its philosophical nuances.³⁶⁵

Still, Rāzī's abridgment diverges from Avicenna's treatment in a number of significant respects. There are, for example, several striking omissions and additions. First, Rāzī entirely omits the discussion of the *universal* (*al-kullī*) as dividing into three kinds, and the examples of each kind, which Avicenna sets out in the introductory paragraph of the chapter. Further, Rāzī omits most of the ontological and psychological points that Avicenna raises in paragraphs 28 and 29, and distances himself implicitly and explicitly from the latter's points, as we shall see. The first omission might simply be a matter of brevity, but there are reasons indicating that Rāzī intends more by leaving out Avicenna's tripartite division of universals. Rāzī, for one, discusses universals, and

³⁶³ Avicenna, *Metaphysics*, 148-157 (the paragraph numbers I refer to are those marked in Marmura's edition cited above); Cf. Avicenna, *al-Najāt*, ed. °Abd al-Rahmān °Umayra, vol. 2 (Beirut: Dār al-Jīl, 1992), 71-73.

³⁶⁴ (1*) Like Avicenna in (1), Rāzī distinguishes a quiddity *qua* quiddity from concomitants such as unity, plurality, and non-existence, pp. 139 to 140 (ln. 1-9). However, he does not discuss the division of universals nor does he use the terms universality (*kulliyya*) as does Avicenna in the introductory paragraphs.

(2*) Rāzī discusses the precise questions raised to problematize quiddity in itself, using the same example as Avicenna: (1) Is horseness (qua horseness) A or not-A?; (2) Is X one or many? (That is, two affirmatives that are contradictories only in potentiality). The response concerns whether one places the negation prior to or after reduplication in (1) and whether one responds at all in (2). See p. 140 (ln. 9-21) to 141 (ln. 1).

(3*) Rāzī raises the same objection regarding the denial of the separate existence of quiddities and provides that same responses, the first one being the solution Avicenna refers to (at para. 23, ln. 13) as the previously discussed solution found at paragraphs 18 to 19. See p. 141, ln. 2-17.

(4*) Rāzī devotes only one line to Avicenna's ontological and epistemological points raised especially in 28 and 29. See, p. 141 (ln. 24) to 142 (ln. 1).

³⁶⁵ As shown below, where Rāzī concurs with Avicenna, he generally follows the order of Avicenna's text, summarizing points quite faithfully, but he does rearrange the text once to make it more readable.

specifically their division, in his logical works. Indeed, in the *Mabāḥith*, Rāzī states explicitly that a number of chapters in Book I are connected to his analysis of related points in his works of logic.³⁶⁶ For example, in his conclusion to the chapter presently under discussion, Rāzī says that a better understanding of the problems regarding quiddities is obtained by supplementing what is mentioned in this chapter with what he has discussed in his logic. He makes a similar point at the end of his chapter on contingency and necessity.³⁶⁷ However, Rāzī's own division of universals differs significantly from Avicenna's, which suggests that the omission is not simply a matter of the proper division or treatment of topics; rather, it seems to be symptomatic of a deeper philosophical disagreement he has with Avicenna. In the following discussion, we will assess the division of universals in Avicenna and Rāzī before returning to Rāzī's more philosophically significant omissions and additions regarding the ontological and psychological points made in paragraphs 28 and 29. Further, the analysis of Avicenna's threefold division of universals will help illustrate some of the inherent tensions,

³⁶⁶ In the *Mabāḥith*, Rāzī refers to positions he has established in logic (*mā awradnāhu fī al-manṭiq*) on a number of occasions, but it remains unclear which work of logic he has in mind. He concludes his chapter on quiddity, which is the subject of this chapter, by stating that when one supplements what is mentioned in this chapter with what he has discussed in logic, then one will obtain a comprehensive understanding of all the problems regarding quiddity. He makes a similar point at the end of his chapter on necessity and contingency. The references indicate a relatively lengthy work. The most likely candidate is the expanded version of *al-Āyāt al-Bayyināt (al-Kabīr)*, whose survival remains uncertain. That there is such a work is suggested by Rāzī's reference to *al-Āyāt al-Bayyināt* in the logic of *Lubāb al-Ishārāt*, where he states one can find a complete discussion of mixed modal syllogisms in the former work. However, in the available version of *al-Āyāt al-Bayyināt (al-Ṣaghīr)*, Rāzī states that, although he will mention some points on the matter, a full discussion of mixed syllogisms is beyond the scope of this epitome (*mukhtaṣar*). In fact, the discussion of mixed syllogisms in the *Lubāb* is more extensive. This suggests that there is, or was, a lengthier version of *al-Āyāt al-Bayyināt*. The expanded version is also referred to by Ibn Abī Uṣaybi'a in *ʿUyūn al-Anbāʾ fī Ṭabaqāt al-Aṭibbāʾ* and Ḥajjī Khalīfa in *Kashf al-Zunūn*. Another possible candidate is *al-Manṭiq al-Kabīr*, multiple manuscripts of which seem to be extant. See references in M. Ş. Zarkān, *Fakhr al-Dīn al-Rāzī wa-Ārāʾuh al-Kalāmiyya wa-l-Falsafīyya* (Cairo: Dār al-Fikr, 1963), 86-87, 91.

³⁶⁷ Moreover, Rāzī references his logical discussion in various other places as well. For example, in his chapter on necessity and contingency, Rāzī warns of confusing logical contingency with contingency discussed here in philosophy. He states, "[Making clear] this distinction (*tafṣīl*) is necessary for investigating the reality of the necessary and possible thing." *Mabāḥith*, 1, 208. In his philosophical compendium, *al-Mulakhkhaṣ fī al-Ḥikma wa-l-Manṭiq*, he states: "Knowledge of this distinction will save one from many confusions (*shubuhāt*)." *Mulakhkhaṣ*, Berlin Staatsbibliothek Ms. or. oct. 629, fol. 55.

particularly from Rāzī's viewpoint, that are implicit in Avicenna's more fundamental distinction of the threefold status of quiddities.

To begin with the introductory discussion of universals in V.1 of *Metaphysics*, Avicenna divides universals, or general terms that signify universals, into those that refer to: (a) multiple individuals in actuality, e.g., 'man'; (b) multiple individuals in potentiality and possibility though there may be no actual instances of them, like 'heptagonal house' (dodecahedron in *al-Ishārāt* and icosahedron in *al-Madkhal*); and (c) only one individual in actuality though for reasons external to the term itself, like sun or earth (that is, the latter universal applies to many in itself but not more than one in actuality, potentiality or possibility). It is unclear whether Avicenna had intended this tripartite division to be rigorous or whether he meant the division simply to be a general illustration of the relevant kinds of universals. Nonetheless, it is the one that he adheres to in nearly all the works in which he does provide a division of universals.³⁶⁸ At first glance, the division seems to be formulated to exclude universals that have no instances at all, for example, those that refer to fictional or impossible entities. We might, however, include a fictional concept such as "phoenix" under a universal of type (b) since, like heptagonal house, it might *always* fail to refer to actual instances. Avicenna, however, describes fictional concepts or forms (sing.: *ṣūra*) as those that are impossible (*muḥāla*), which seems to mean that instances of, say, phoenix cannot possibly occur in the external

³⁶⁸ In *al-Ishārāt* Avicenna provides the same examples except that dodecahedron is given for heptagonal house and, moreover, each example is related explicitly to potentiality/actuality *and* possibility, with which I have supplemented the above account in *Metaphysics*. See *Sharḥ al-Ishārāt*, I, 45. The same division is found in the *Madkhal*, 26. It should be noted that discussion of these examples and division in *Demonstration* suggests that this is the division relevant to demonstrative knowledge and thus used in *Metaphysics* or alluded to in logic. He has a slightly different version in *al-Najāt*: he provides the examples of man and sun, which fall into a dyadic division of universals into those predicated of many *in existence* and those predicated of many as *permitted by estimation* (*fī jawāz al-tawahhum*). Still, what is permitted by estimation is not the instantiation of the universal simpliciter but the instantiation of more than one; see *Najāt*, 1, 12; same as in *Madkhal*, p. 28.

world.³⁶⁹ But (b)-universals are, as Avicenna indicates, those that are possibly instantiated.³⁷⁰ So if a phoenix is just as much a logical possibility as is a heptagonal house, in what sense then is the phoenix an impossible form?³⁷¹ Here a number of controversial, and largely unresolved, questions concerning Avicenna's notion of modality come into play.³⁷² But these will have to be set aside. They are, in fact, the very philosophical problems regarding logical and "physical" modality that have long troubled interpreters of Aristotle.³⁷³ What is significant for our discussion is the status of

³⁶⁹ Avicenna states: "If the imagination did not intervene, a form opposed to the real would not arise at all in the intellect." J. Michot, "L'Épître sur la disparition des formes intelligibles vaines après la mort d'Avicenne," *Bulletin de Philosophie Médiévale*, 29 (1987), 157.29-30 (critical edition and French translation; hereon *Letter on the Soul*; translations are my own); cf. *Demonstration*, I.6, 26. D. Black has argued that knowledge of fictional entities poses a number of problems within the larger context of Avicenna's philosophical system. With regard to his psychological epistemology, Avicenna's explanation of the existence of fictional forms *in intellectu* seemingly conflicts with his views on abstraction. That is, the standard view commits Avicenna to holding the independence of the intellectual faculty in acquiring universals from the activities of the faculties of estimation (*wahm*) and imagination. Although abstraction prepares the mind to receive the universals, the cause and source of the universal itself is the Active Intellect. D. Black, "Avicenna on the Ontological and Epistemic Status of Fictional Beings", *Documenti e studi sulla tradizione filosofica medievale*, 8 (1997), 425–453. *Letter on the Soul*, 155.10-11; 156.19-21. This seems to accord with his position in *Demonstration*, noted above, that such universals have no real ontological status and thus only nominal definitions can be given of them (see *Demonstration*, I.6, 26). This, then, accords with the Aristotelian position that only (physically) existent things have essences, a position Averroes accuses Avicenna of rejecting by positing the quiddity in itself. See Stephen Menn, "Farābī in the Reception of Avicenna's *Metaphysics*: Averroes against Avicenna on Being and Unity," in *The Arabic, Hebrew, and Latin Reception of Avicenna's Metaphysics*, ed. A. Bertolacci & D.N. Hasse (Berlin: de Gruyter, 2012), 51-96.

³⁷⁰ Unless Avicenna means one-sided possibility (he uses *jā'iz* in *Metaphysics* and *imkān* and *quwwa* in *Pointers*), which is unlikely particularly considering the formulation in *Pointers*.

³⁷¹ The secondary division that Avicenna provides is of individual terms that pick out universals insofar as those universals are predicated of particulars either in existence or as posited by estimation. "Man" and "sun" serve respectively as examples for this division.

³⁷² Avicenna's definition of (b)-universals that seems to permit unactualized possibilities undermines the principle of plenitude: that is, all that is possible must exist *in re* at some point. But is he committed to some weaker version of the principle of plenitude? What, moreover, is the relation between logical modality and Avicenna's (metaphysical) use of modal terms in texts like *Metaphysics* I.5? With regard to heptagonal house and phoenix, the distinction between artifact and species is important in the Aristotelian context. An artifact is contingent on human will, and on the final cause of the action (i.e., a mental form), while the existence of the species is not. With Avicenna, in the context of emanationism, the two may be distinguished in that the species is contingent ultimately on divine will. Here, there is the sticky issue of the role of Divine Will in Avicenna; see Jules Janssens, "Creation and Emanation in Ibn Sīnā," *Documenti e Studi sulla Tradizione Filosofica Medievale*, 8 (1997). 455 - 477.

³⁷³ Seminal works on Aristotle's views on modality, plenitude, and temporality are: J. Hintikka, *Time and Necessity: Studies in Aristotle's Theory of Modality* (Clarendon Press, 1973); S. Waterlow's *Passage and Possibility: A Study of Aristotle's Modal Concepts* (Oxford: Oxford University Press, 1984).

Avicenna's notion of the quiddity in itself. As suggested above, Avicenna never seems to refer to *māhiyya* when referring to fictional or impossible entities. He does refer to (mental) form, *ṣūra*, or even conception (*taṣawwur*), and suggests that we apprehend fictional entities in a derivative or fabricated manner, rather than through the process of psychological abstraction.³⁷⁴ All this suggests that Avicenna keeps to the Aristotelian line that essences or quiddities apply primarily to real substances, despite his distinction between essence in itself and existence, a position reinforced in his discussion of unreal entities in *Demonstration*.³⁷⁵ In this light, Avicenna's division of universals can be read as illustrating those universals that correspond to proper or real quiddities, and hence excluding non-existent or impossible items. That is, Avicenna could certainly provide a more comprehensive division, but the context suggests, to Avicenna, that the relevant division is the threefold division.³⁷⁶ Avicenna's point that universality is a property that is external to the quiddity in itself but which occurs to quiddities in the mind, expounded in V.1, seems to presume that we are talking about *real* rather than fictional quiddities. Thus adding fictional entities in the initial division of universals may be confusing from an Avicennan/Aristotelian perspective. If this is so, Avicenna would need to distinguish what is *real* from existence *in re* and existence *in intellectu*, since the quiddity can be *real* or fictional, irrespective of its being viewed as externally or mentally instantiated. I do not wish to resolve the matter here but, in the context of Rāzī's analysis of V.1, it can be

³⁷⁴ Avicenna states: "If the imagination did not intervene, a form opposed to the real would not arise at all in the intellect." See n. 369. Avicenna's theory of abstraction will be discussed in the next chapter.

³⁷⁵ See, *Demonstration*, I.6, 26, and above.

³⁷⁶ That Avicenna provides the same division in logic is perhaps significant in the context of Rāzī's critique and logical programme. The Aristotelians view logic as preparatory for the higher philosophical discussions, so notions specific, say, to metaphysics were introduced, particularly by the commentators, as long as it was noted that such matters are not properly studied in logic, as discussed above.

noted that Avicenna seems to indicate such a distinction by invoking emanationism.³⁷⁷ In the *Madkhal*, Avicenna states,

T19

In general, it may be that the intelligible form (*al-ṣūra al-ma^cqūla*) is a cause (*sabab*) in a certain way (*bi-wajhⁱⁿ mā*) for the obtaining of the form that is found in individuals (*li-ḥuṣūl al-ṣūra al-mawjūda fī al-a^cyān*). And it may be that the form that is found in individuals is a cause in a certain way of the intelligible form, that is, [the intelligible form] only obtains in the intellect after it obtains in individuals. Because the relation (*nisba*) of all existent things to God and his angels is [like] the relation of the artifacts which we have to the creating soul [*al-naḥs al-ṣāni^ca*], that which is in the knowledge of God and his angels contains by way of the *reality* (*ḥaqīqa*) of what is known and perceived of natural things, is existent before multiplicity (*al-kathra*), and every intelligible [thing] from it is one entity (*ma^cnā wāḥid*) and then to these entities there occurs existence in multiplicity, so that [the entity or *ma^cnā*] obtains in multiplicity and [the entity] is not a unity [when it obtains] in [multiplicity] in any manner whatsoever.³⁷⁸

Here, Avicenna seems to want to distinguish existence *in intellectu* (or specifically in the human intellect) and existence *in re* (or more accurately in individuals) from the

³⁷⁷ Avicenna, *Madkhal*,

³⁷⁸ Avicenna, *Madkhal*, 69.

existence or reality that may be said to apply independently of the two. In a passage in paragraph 28 of V.1, Avicenna will invoke a parallel distinction between *al-wujūd al-ilāhī* (or *al-ṭabīʿa* simpliciter) and *al-wujūd al-ṭabīʿī*.³⁷⁹ We will return to Avicenna's points in this passage in our analysis of Rāzī's abridgement of it. With regard to **T19**, Avicenna speaks of existence in individuals (i.e., *al-aʿyān* or concrete reality), which seems to be distinct from the reality (*ḥaqīqa*) that precedes multiplicity. And both are distinct from existence *in intellectu*. On the face of it, then, the binary distinction between existence *in re* and existence *in intellectu* seems to get complicated within a broader ontological context. In any case, we are getting ahead of ourselves, since there are several important distinctions Avicenna makes in V.1 that need to be considered before assessing these problems. It might be noted, however, that Rāzī's terminology will depart from Avicenna's, signaling a more fundamental divergence in their ontological views.

In his commentary on the logic of Avicenna's *Ishārāt*, Rāzī points out that Avicenna's tripartite division of universals might be expanded to include a fourth type: phoenix, that is, any universal whose instances do not obtain in existence whatsoever. Rāzī, however, does not state that such universals are impossible, nor does he deny their impossibility. He simply states that universals such as "phoenix" are that of which not a single instance obtains in existence.³⁸⁰ Here, Rāzī seems to view Avicenna's (b)-universal, which Avicenna describes in the *Ishārāt* as a universal that applies to multiple individuals in potentiality and possibility (*bi-l-quwwa wa-l-imkān*), as one that will be actualized at some point although there are no current instances, for otherwise there would remain no clear distinction between (b)-universals and the extra kind of universals

³⁷⁹ Cf. Menn and Wisnovsky, "Yahyā ibn ʿAdī's *Essay on the Four Scientific Questions*".

³⁸⁰ *Sharḥ al-Ishārāt*, 1, 45.

that Rāzī suggests adding.³⁸¹ In any case, following his suggestion to add a fourth category, Rāzī points out: “In sum, terms referring to effects in the soul (*al-āthār al-naḥsāniyya*) that are not connected to external existents are [certainly] universals, even if one [individual instance] of those conceptions does not come to be in [external] existence.”³⁸² There is no hint in Avicenna’s text of matters relating to psychology. Rāzī seems to raise this point to underscore the tensions that arise from Avicenna’s division of universals. The force of Rāzī’s statement suggests that he is affirming a point that contravenes Avicenna’s position, (or, at least, a point that might be inferred from Avicenna’s division). In fact, Rāzī’s reference to “effects on the soul” evokes Avicenna’s discussion of the status of fictional forms and the role of the soul in producing universals of fictional entities, which can be found outside of the text he comments on here in the logic of the *Ishārāt*. Avicenna states in his *Letter on the Soul* regarding the fictional form of phoenix: “If the imagination did not intervene, a [universal] form opposed to the real would not arise at all in the intellect.”³⁸³ In the treatise, Avicenna is at pains to explain the intelligibility and universality of such forms, given his commitments to several psychological principles central to his theory of abstraction. The treatise also makes explicit how such problems are related to his ontological commitments. Avicenna states, for example, that, “It is *not possible* for these forms to exist in the eternal and perpetual things and the active intellects,” a point which echoes Avicenna’s discussion in **T19**.³⁸⁴ Because of the problems that fictional entities pose to Avicenna’s ontological and psychological system, his consistent omission of fictional universals in his tripartite

³⁸¹ This suggests he views Avicenna as holding to the principle of plenitude.

³⁸² *Sharḥ al-Ishārāt*, 1, 45.

³⁸³ *Letter on the Soul*, 157.29-30

³⁸⁴ *Ibid.*, 156.17-18.

division of universals is probably the result of a deliberate choice. Rāzī's commentary might be viewed as an intervention, opposing the encroachment of such ontological and psychological matters on the logical discussion, though this is speculative, at this point. That following discussion, however, provides evidence to corroborate this interpretation of what Rāzī is attempting to do in his commentary.

Whatever the case, Rāzī's own division of universals differs significantly from that of Avicenna. In the *Mulakhkhaṣ*, Rāzī provides a more exhaustive categorization that rests on the relations that hold between a universal, the modality of its instantiation, and the size of its extension. Significantly, potentiality and temporality have no role in Rāzī's division of universals as they do in Avicenna's. Moreover, the modality of the instantiation of a universal is treated differently. Rāzī divides universals into six:

- (1) impossibly existent (the partner of God);
- (2) possibly existent but its actual existence is unknown (a wall made of rubies);
- (3) a universal with [only] one instance which is necessary (God);
- (4) a universal with [only] one instance, even if other instances are possible (sun);
- (5) a universal with finite multiple instances (planets);
- (6) a universal with infinite instances (man).³⁸⁵

Rāzī's division of universals is more expansive than that of Avicenna. The principles of his division seem to differ as well. Most significant are (2) and (4). Avicenna regards universals like "sun" as necessarily having only one instance. That is, based on a necessitarian and emanationist view of the Ptolemaic astronomical system, he considers the occurrence of multiple suns as a cosmological impossibility. By stating that multiple

³⁸⁵ *Maṭīq al-Mulakhkhaṣ*, 25-26.

individuals in this category of universals can possibly obtain, Rāzī might be viewed as pointing to his own cosmological views. As discussed previously, and further below, Rāzī does not reject the Ptolemaic astronomical model from a phenomenalist perspective. However, he criticizes the metaphysical and physical assumptions of emanationist attempts at explaining the model's underlying causes and nature.

Rāzī's second category seems to correspond to Avicenna's (b)-universals.³⁸⁶ The question of which examples to use for unactualized possibilities has a long history that reaches back to Late Antiquity.³⁸⁷ But what is important here is how Rāzī interprets this category of universals. To Avicenna's (b)-universal, Rāzī adds the crucial qualification that the actual instantiation of (2)-universals is strictly a matter of our knowledge of their instances, and not related to causal or cosmological considerations that might further qualify their modality. That is, the category is meant to include *all* possible entities that, as far as we know, have no instantiation. With the qualification "is not known" (*lā yu'raf*), Rāzī is likely suggesting that all such possibilities are equal with regard to generation, which is consistent with positions he takes elsewhere on possibility and necessity (though the picture gets complicated since Rāzī distinguishes between mental possibility and objective possibility, as discussed below). Moreover, if we look back to his comments in *Sharḥ al-Ishārāt*, it would seem that Rāzī would place fictional universals, such as "phoenix" under universals of type (2). Avicenna could, of course,

³⁸⁶ Perhaps 'wall of rubies' is meant to add factors and constraints beyond just the mere will to make something, as would seem to be the case with Avicenna's heptagonal house.

³⁸⁷ Avicenna's substitution of heptagonal house for phoenix was already a departure from previous commentarial practice and many later authors in the Latin world revert to the phoenix, quite likely because they were aware of actual heptagonal edifices. According to a *ḥadīth* cited by al-Mas'ūdī (d. 957) and referring to pre-Islamic times, the 'anqā was created by God with all sorts of perfections but became a plague and was eliminated by some pre-Islamic prophet. In this version of the legend it becomes an extinct species. Perhaps for this reason, the 'anqā was avoided as an example of a non-existent by Rāzī. See Thérèse-Ann Druart, "Avicennan Troubles: The Mysteries of the Heptagonal House and of the Phoenix," *Topicos* (forthcoming).

accept the more systematic categorization offered by Rāzī, since his definition of universals does not exclude such a division. But Avicenna declines to do so, probably because it would require him to set his metaphysical concerns aside. The above discussion suggests that Rāzī is quite sensitive to such concerns.

Several unresolved questions raised by the above discussion need to be resolved by examining more substantive problems, particularly those raised by Rāzī's omissions and additions relating to paragraphs 28 to 30 of *Metaphysics* V.1. We now turn to Rāzī's analysis.

Quiddities: "Without Condition" versus "With the Condition of Nothing"

In this section I begin by focusing on some ontological distinctions that Avicenna raises in his discussion of quiddity in chapter V.1 of the *Ilāhiyyāt* and which are designed to complicate his threefold distinction of quiddities, particularly in the context of responding to a "Platonist" adversary of his.³⁸⁸ That is, Avicenna wants to maintain, contrary to a platonizing argument he raises in V.1, that the quiddity in itself is real, or corresponds to a "nature", without committing to the stronger thesis that it exists separately of its instances. In a sense, then, the primary problem in V.1 is the debate between Aristotelian realism and the particular brand of Platonism of these unnamed adversaries, who appear committed to the reality of separate forms. Avicenna's aim, as we will see, is to simply point, in a general manner, to aspects of how the quiddity in

³⁸⁸ On the background of Avicenna's predecessors, see Menn and Wisnovsky, "Yahyā ibn ʿAdī's *Essay on the Four Scientific Questions*." Marwan Rashed argues that Avicenna has a specific group of platonizing philosophers in mind (specifically Yahyā b. ʿAdī and his students); see his article, "Ibn ʿAdī et Avicenne: sur les types d'existants", in *Aristote e i suoi esegeti neoplatonici. Logica e ontologia nelle interpretazioni greche e arabe* (Atti del convegno internazionale, Roma, 19-20 ottobre 2001), ed. V. Celluprica & C. D'Ancona (Napoli: Bibliopolis, 2004), 107-171.

itself, which corresponds to the definitional properties of a thing (irrespective of the thing's existence), can be viewed as having a corresponding object – or, more broadly, an epistemological and ontological ground – in external and mental reality. Avicenna, as discussed above, distinguishes the characteristics that apply to a quiddity in mental existence from those characteristics that apply to a quiddity in external existence. The quiddity in itself, however, is viewed irrespective of such characteristics. In V.1, Avicenna considers, in a general manner, how each of the two different modes of existence – i.e., existence in the mind and existence in individuals – has unique aspects (*anḥāʾ*) or properties. Central to his analysis of such questions, as we will see, is his distinctions of “*lā bi-sharṭ shayʾ*” (without the condition of anything) and “*bi-sharṭ lā shayʾ*” (with the condition of nothing), as applied to the quiddity in itself, the quiddity *in re* and the quiddity *in intellectu*. As we will see, Rāzī, not being either an Aristotelian or Platonist, will attempt to reframe the discussion on his own terms.

Though Avicenna's most explicit discussion of the distinctions that appear to complicate his threefold distinction is made towards the end of V.1 (i.e., in paragraph 28 quoted below), he already posits similar distinctions at paragraphs 16 to 18.³⁸⁹ The primary distinction in these paragraphs is between quiddities in themselves (e.g., *ḥayawān*) and quiddities “with” some thing (e.g., *ḥayawān wa-shayʾ*).³⁹⁰ He divides the latter type, i.e., quiddities with a superadded property, into multiple aspects including

³⁸⁹ Avicenna never states outright and simply in V.1 that there are three aspects (*iʿtibārāt thalāth*) of quiddities as he does in the *Madkhal*. This might suggest that the distinction is perhaps more suited for introductory logic than metaphysics, where it gets more complicated. Still, in both the *Madkhal* and his *Maqūlāt* he notes the ontological aspects of a quiddity in itself, as noted above in **T19**. See *Madkhal*, 66-68; *Maqūlāt*, 38-39.

³⁹⁰ To refer to quiddity in itself, Avicenna uses “*al-manẓūr ilā dhātihi bi-mā huwa huwa*”, “*al-insān bi-mā huwa insān*”, “*iʿtibār al-ḥayawān bi-dhātihi*”.

those “considered” as being *in re* and *in intellectu*.³⁹¹ Avicenna adds that a quiddity, which exists in mental or external reality, with a superadded property – i.e., a quiddity plus something extra – is a thing that has the quiddity in itself as a part (*ka-l-juzʿ*).³⁹² Avicenna means, here, that the mental or external instance of a quiddity, for example a certain concrete horse, is somehow *constituted* by a quiddity in itself, horse-ness, along with the appropriate superadded properties, a point we discussed above in the context of his logical discussions. In paragraph 18, he puts this more explicitly:

T 20

It is possible to consider ‘animal’ in itself (*bi-dhātihi*), even if it is *with* another, because its essence (*dhātuhu*) [though] *with* another remains itself. So its essence belongs to itself by itself, while its being *with* another is an accidental matter that occurs to it or is some concomitant of its nature (*ṭabīʿa*), as [is the case with] animality and humanity. *This aspect [of a quiddity as being in itself] is prior in existence to the animal that is [taken] as an individual with accidents or as a universal existing in re or in the mind in the manner that the simple is prior to the composite and the part prior to the whole.* And with this existence (*wujūd*), it is neither a genus

³⁹¹ It is important to note that Avicenna stresses the intentional nature of such superadded qualities as indicated in his use of such terms as *bi-ʿtibār*, *min jiha*, and *manẓur ilayhā*. He often uses the term “*tuqārīnu*” or “coinjoins with” or “*zāʿid*” to refer to the properties that apply or conjoin with the quiddity in itself. I shall use the term “superadded” to translate Avicenna’s various terms for this notion.

³⁹² He states: “It is known that if it is animal plus something, ‘animal’ is in both as a part [constitutive] of both.”

nor species, nor individual, nor one, nor many. Rather, it is with this existence animal only (*faqat*) and human only.³⁹³

Here, Avicenna explicitly assigns a certain reality to the quiddity in itself, which seems to conflict with his statements made earlier in the chapter that the quiddity in itself possesses only its definitional properties irrespective of existence.³⁹⁴ We shall soon return to how Avicenna will more precisely distinguish between the various kinds of existences.

Rāzī summarizes the above passage quite closely. However, he places his summary of 18 to what corresponds in place to Avicenna's paragraph 23, which follows a "feeble" problem raised in 21. The problem was presumably by some of Avicenna's contemporaries or immediate predecessors who tended to platonize universals. The opponent in 23 argues the following: (1) animal *qua* (*bi-mā huwa*) animal does not exist *in* individuals, but (2) animal *qua* animal exists, and thus (3) animal *qua* animal exists separately (*mufāriq*) from individuals. As noted above, Avicenna refers his reader in paragraph 23 to paragraph 18 for a solution to the first premise of this platonizing argument, specifically (1). Here, Rāzī is simply making the text more readable by reorganizing the order of these points that Avicenna raises. In paragraph 23, Avicenna states that the argument his opponent provides for (1) is based on the following error: "[T]he belief that that which exists with respect to 'animal', if it is a certain [concrete] animal (*ḥayawān^{an} mā*), is not the nature (*tabī^ca*) of animality considered in itself [and] without any further condition (*lā bi-sharṭ*) existing in it."³⁹⁵ The discussion in paragraph

³⁹³ The translation is my own.

³⁹⁴ See paragraph (4) in Marmura.

³⁹⁵ I am reading "considered in itself [and] without any further condition" (*mu^ctabarat^{an} bi-dhātihā lā bi-sharṭ ākhar*) as a qualifying *ḥāl* clause.

18, and specifically the point that the quiddity in itself is a part of a quiddity *in re*, presumably provides an answer to the error that a quiddity in itself is *not* in individuals. We will return to Avicenna's response shortly, but note that the question chiefly concerns the relation between a quiddity in itself and a quiddity *in re*; the quiddity *in intellectu* does not figure significantly into Avicenna's response to the platonizing argument.³⁹⁶ This, of course, makes sense, in this context, since the dispute between a Platonist and an Aristotelian will center on the correspondence and reducibility of universals to individuals. The reducibility of universals to mental or linguistic entities, i.e., nominalism of some form, is rejected by both camps.

Avicenna's language in V.1 is fairly consistent and it will do us good to take stock. First, Avicenna rarely uses *māhiyya* in this chapter and prefers to provide examples of quiddities in their abstract form, e.g., animality and humanity. For quiddity in itself, the qualifying term, "in itself", is rendered by a variety of phrases, including *fī nafsihā*, *bi-dhātihā*, *faqāṭ*, and *bi-ma huwa huwa* (which usually qualifies an example of a universal term). In V.1, Avicenna analyzes the threefold distinction with respect to nature (*ṭabīʿa*), specifically when discussing relations between a quiddity in itself and *in re*. A quiddity in itself, like animality and humanity, corresponds to the substantive "nature" (*ṭabīʿa*), as his usage clearly shows in the above passages and throughout the chapter (see, for example, paragraph 28 cited below). By contrast, a quiddity *in re*, which he usually describes as "a certain X" (e.g., *ḥawayan^{an} mā*), is properly referred to by a general term – i.e., "human" rather than the abstract term 'humanity' – but qualified with

³⁹⁶ Historically, the ontological problem of universals as debated between Aristotelian realism and Platonism did not generally deal with the problem of the mental status of universals. See Gabriele Galluzzo, "The Problem of Universals and its History. Some General Considerations," *Documenti e studi sulla tradizione filosofica medievale*, 19 (2008), 335-369.

the derivative adjectival form “natural” (*ṭabīʿī*), i.e., “natural human” (*al-insān al-ṭabīʿī*) or “natural thing” (*al-shayʿ al-ṭabīʿī*).³⁹⁷ Quiddities *in intellectu*, on the other hand, are referred to in a variety of ways including “intelligible form” (*al-ṣūra al-ʿaqliyya*) and quiddities “in the soul/mind/intellect” (*fī al-naḥs/al-dhihn/al-ʿaql*). A quiddity *in intellectu* is not qualified by any form of the term “nature” in Book V. Avicenna’s use of terms in the manner described above is also followed generally in the following chapter of Book V, though he will simplify by distinguishing “nature” or *ṭabīʿa* on its own from its occurrences with other properties, like *al-ṭabīʿa al-kulliyya* or *al-ṭabīʿa al-mawjūda fī al-ʿyān*.³⁹⁸

With regard to the challenge from the platonizing interlocuters, Avicenna’s crucial distinctions are those introduced at paragraphs 26 and 27, between quiddities “without the condition of anything” (*bi-lā sharṭ shayʿ*) and quiddities “with the condition of nothing” (*bi-sharṭ lā shayʿ*).³⁹⁹ The distinction underscores the point about the existence of abstract universals. Quiddities without condition (*bi-lā sharṭ*) are not abstracted (*mujarrad*) from all superadded properties or concomitants and so they can be said to correspond to those quiddities that are *with* another. On the other hand, he states that the quiddity with the condition of nothing applies only to what is in the mind, since otherwise the statement that “There are quiddities with the condition of nothing” would affirm the *external* existence of Platonic forms, which is impossible.

Avicenna says that the quiddity without any condition can be taken with or without qualification, i.e., there is no necessity attached to the condition. Construed thus,

³⁹⁷ See, for example, paragraphs 16 (“this is that which is *al-insān al-ṭabīʿī*”) and 28 (“that is *al-shayʿ al-ṭabīʿī*”).

³⁹⁸ See, for example, V.2, paragraphs 5, 7, and 9.

³⁹⁹ Paragraphs 16 to 17 in effect set out the threefold distinction.

a quiddity in itself and a quiddity *in re* would both seem to fall under quiddities without condition.⁴⁰⁰ As Avicenna reiterates throughout this chapter, the error lies in the opponent's failure to notice the logical distinction between stating "S is not P" and "S is a not-P". The former negation applies to the assertion and thus is a simple denial of a predication; the latter is a metathetic negation (*'udūl*), that is, an affirmative predication of a negated predicate.⁴⁰¹ Construed thus, for any quiddity in itself S, "S is not P" read as a *bi-la shart* should entail the denial of all properties (e.g., S is not P₁, S is not P₂, S is not P₃...) that might be applied to the quiddity S. However, Avicenna admits that definitional properties do apply to S, so the extension of *shay'* in *lā bi-shart shay'* is presumed to be limited to those things that are relevant to the discussion, i.e., existence in concrete or mental reality. However, there is a way of construing Avicenna's logical distinction without referring to such contextual considerations. That is, as noted in our discussion of the Aristotelian theory of predication, the proper kind of predication that applies in an Aristotelian science, and *a fortiori* in metaphysics, is essential or *per se* predication. If we construe "S is P" here as a *per se* predication (specifically an *el*-predication as discussed above) – i.e., "S is essentially P" where S is a proper essence and P is a constitutive property or part – then the *lā bi-shart* can be construed as simply denying external or accidental properties of the quiddity S. Reading the assertion as a *per se* predication prevents the denial of definitional properties, since it is impossible, on the Aristotelian

⁴⁰⁰ As suggested by Avicenna's phrasing: "For this reason, it is necessary that there is a distinction maintained between our saying, 'Animal qua animal (*bi-mā huwa ḥayawān*) is separate (*mujarrad*) without the condition of anything else' and our saying, 'Animal qua animal is separate/abstract with the condition of nothing else.'"

⁴⁰¹ On Fārābī's views of metathesis, see al-Fārābī, *Commentary and Short Treatise on Aristotle's De Interpretatione*, trans. and ed. F. W. Zimmermann (London: Oxford University Press, 1981), 98. Zimmermann notes that Fārābī's view of metathesis resembles the "Theophrastus' theory" of metathesis.

view, to deny that a constitutive part is predicated of the essence.⁴⁰² Avicenna's formulations in V.1 support this interpretation. For example, he states, "As for 'animal' abstracted without the condition of anything else (*lā bi-shārt shay' ākhar*), it has existence in individuals (*al-a'yān*) since it is *in itself and in its reality* (*fī nafsīhi wa-fī ḥaqīqatīhi*) without the condition of anything else, even if it has a thousand conditions that conjoin with it (*yuqārinuhu*) externally (*min khārij*)."⁴⁰³ The phrase "*fī nafsīhi wa-fī ḥaqīqatīhi*" quite clearly is meant to indicate that the predication is of the essence and is meant to contrast with "*min khārij*" – that is, the predication of properties external to the essence. Thus, Avicenna states in response to the platonizing argument which asserts that "animal" is either particular or common to many: "Rather, if 'animal' is considered *qua* 'animal' and from the perspective of its animality, it is neither 'particular' nor 'non-particular', which is [the same as] 'common'. Indeed, both can be denied of it, because with regard to its animality it is 'animal simpliciter' (*ḥaywān faqat*)."⁴⁰³ Several other passages in V.1 underscore the same point. Avicenna, of course, can presume *per se* predication in V.1 because his only opponents, the platonizers, accept essential predication.

On the other hand, a quiddity "with the condition of not or nothing", construed as "S is essentially a not-P", seems to affirm all non-P properties of S *per se*, in which case the affirmation of any P of S would lead to an impossibility, a result that is denied by Avicenna. That is, P, or properties external to S (such as being 'common', 'specific', 'in an individual' and so on), can, on the Aristotelian view, apply to S, but not necessarily. Curiously, however, Avicenna states that the quiddity with the condition of nothing can

⁴⁰² Here, the predication would be "by way of" rather than "in answer to" the quiddity, as Avicenna noted above.

⁴⁰³ Paragraph (26).

only be equated with mental forms. That is, the metathetic negation seems to be context specific, since, without qualification, the negation should also exclude ‘existence in the mind’, which as Avicenna states is also external to the quiddity. Here, for some reason, Avicenna restricts the set which ‘not-P’ seemingly should pick out (i.e., all external properties). Perhaps he does so in order to be able to view mental forms as abstract or *mujarrad* in some way (i.e., pure intelligible forms are abstracted from all such external properties and are identical, in some sense, with the quiddity in itself). Whatever the case, Rāzī will take him to task for restricting *bi-sharṭ lā* in this way, as we shall see.

As noted, Avicenna’s response can be seen as addressing a fundamental ontological problem regarding universals that reaches back to late antiquity and beyond. In fact, the core point of the “platonizing” argument, asserted in (1) and argued for subsequently, can be viewed as expressing the fundamental problem of universals, one that concerns the extreme realist just as much as it does the nominalist: What corresponds in reality to our general concepts or terms?⁴⁰⁴ The opponent of course thinks he can resolve the problem by positing separate universals, but Avicenna, who wants to reject the extreme realism of that view, needs to explain his own view of universals, which presumably would be some form of moderate realism that accords with the Aristotelian position. Importantly, however, Avicenna focuses on the relation between the quiddity in itself or the “nature” and the quiddity *in re* (that is, as being *in* an individual or many individuals at once). Avicenna takes this approach to assessing the problem in V.1 because it is based on the assumption of “natures” or “essences” that he shares with his

⁴⁰⁴ As the opponent states: “If animal qua animal were existent to [i.e., in] this individual, it would either be particular or not particular to it. But if it were particular to it, animal qua animal would not be existent in (*fī*) it or be it [itself], but rather [it would be] some animal (*hayawān mā*) [i.e., a particular animal and not a universal essence].” Paragraph 21.

(platonizing) opponents. That is, the problem for both sides is sorting out how constitutive natures exist and not the very notion of speaking of universals as constitutive natures. As we shall see, Rāzī approaches the question in a very different manner. But let us first see how Avicenna speaks of constitutive quiddities specifically in V.1.

Avicenna's distinction between quiddities without condition and with the condition of nothing is aimed at permitting one to speak of quiddities as not being separate entities – separate that is from those quiddities instantiated *with* other concomitants, specifically quiddities *in re*. This point aims at neutralizing premise (1) of the platonizing argument. As such, the only case in which a quiddity in itself is truly separate is when it is abstracted in the mind. However, Avicenna needs to clarify the status of the quiddity in itself and precisely how it is to be viewed as being a constitutive part of a quiddity *in re*. In paragraph 28, Avicenna provides one of his more direct statements:

T 21

Thus, “animal” taken with its accidents is the natural thing (*al-shayʿ al-ṭabīʿī*), whereas what is taken in itself (*al-maʿkhūdh bi-dhātihi*) is the nature (*al-ṭabīʿa*) whose existence is said to be prior to natural existence (*al-wujūd al-ṭabīʿī*) in the way that the simple is prior to the composite, and [what is taken in itself] is that whose existence is specified (*yakhuṣṣ*) as being divine existence (*al-wujūd al-ilāhī*) because the cause of its existence, insofar as it is animal, is said to be the providence (*ʿināya*) of God, exalted be He. As for its [i.e., “animal”] existing with matter and accidents and [with] this individual,

even if it is by virtue of God's providence, this is due to (*bi-sabab*) the particular nature (*al-ṭabīʿa al-juzʿiyya*). Just as "animal" with respect to existence has aspects (*anḥāʾ*) beyond [just] one, so likewise it has [multiple aspects] in the intellect (*fī al-ʿaql*).

This passage recalls the same points that Avicenna raised earlier in V noted in **T20** (and even in **T19** from the *Madkhal*), though he puts things in much clearer terms. Here, we return, in effect, to the threefold distinction but it takes on a number of complexities. As noted, Avicenna points to the more complicated discussion of the ontological problems involved in his theory of natures or essences as discussed in later chapters of Book V. We will return to some of these problems, particularly as they relate to form and matter, but there are several points that should be noted here. First, the threefold distinction in this passage looks something like this: (i) the nature (*al-ṭabīʿa*; animal taken in itself), which is in some way ontologically prior and constitutive of those composite things *with* natures; (ii) the composite natural thing (*al-shayʾ al-ṭabīʿī*), which is a nature plus superadded properties obtaining *in re*; (iii) the mental form that corresponds to (i) and (ii).⁴⁰⁵ As shown above, Avicenna addresses the major problems raised in V.1 within this framework. Avicenna does not delve into the details of the relation between (i) and (ii) because the basic philosophical problems raised in V.1 do not push the question deeper into the investigation of the ontology of universals. Avicenna's subsequent chapters in V assess more closely the ontological aspects of universals, particularly those that correspond in some way to the parts of definitions. It should also be noted that Avicenna

⁴⁰⁵ Though clear enough, the correspondence of mental forms to (1) and (2) is made clearer in the rest of paragraph 28.

discusses more elaborately the ontological relations of the quiddity in these precise terms in the *Maqūlāt*, especially III.2, where he discusses secondary substances. We will return to aspects of these discussions below.

We return, finally, to Rāzī's discussion in the *Mabāḥith*, specifically the omissions and additions we spoke of earlier. As indicated, Rāzī cites the platonizing argument in V.1, with the full argument for premise (1) followed immediately by the two responses that Avicenna provides. However, Rāzī's summary of Avicenna's paragraphs 26 to 29 is extremely condensed and involves a number of terminological shifts. He states:

T 22

Know that it is true to say that "animal" without condition (*lā bi-sharṭ shayʿ*) exists in external [reality] (*fī al-khārij*). But it is not true to say that "animal" with the condition of nothing (*bi-sharṭ lā shayʿ*) exists in external reality, because with this condition it is abstract (*mujarrad*) and the abstract thing has no existence in external reality. Thus, the existence of "animal" with the condition of abstraction (*bi-sharṭ al-tajarrud*) is mental (*dhihnī*) and, with the condition of [there] occurring external accidents to it, its existence is in external reality. Both aspects (*iʿtibārāyn*) are superadded (*zāʿid*) to the essence (*al-ḥaqīqa*) and quiddity (*al-māhiyya*). But that which is taken in itself (*al-maʿkhūdh bi-dhātihi*) without regard to (*bi qatʿ al-naẓar ʿan*) abstraction and concomitance (*luḥūq*), and which is prior to both aspects in the way the

simple is prior to the composite, is said (*yuqāl lahu*) [to be] the divine thing (*al-amr al-ilāhī*), which is the essence or quiddity.

The most significant part of this chapter, which expresses Rāzī's own views most clearly, is found in the paragraph immediately following this quote, but there are a few remarks I would like to register regarding Rāzī's summary of Avicenna's threefold distinction. First, much of what is stated in Avicenna's corresponding paragraphs is excised, but Rāzī retains and underscores the primary distinctions Avicenna makes regarding the problem of universals: quiddity in itself (*bi-dhātihi*), quiddity without condition, and quiddity with the condition of nothing. However, unlike the preceding parts of Rāzī's summary, which stick quite closely to Avicenna's wording, Rāzī summarizes points in a more independent manner in this passage. There is as a result a subtle but clear shift in the terminology of the discussion. One salient aspect of this shift is his repeated use of *fī al-khārij* ("in external reality") which is counterposed with *fī al-dhihn* ("in the mind").⁴⁰⁶ Avicenna does not use *fī al-khārij* at all in the corresponding paragraphs in V.1 and instead uses the phrase, "*fī al-ʿyān*". In fact, Avicenna generally avoids using the phrase *fī al-khārij* for the instantiation of quiddities. One reason this might be is that *fī al-khārij* indicates the independent existence of space (i.e., absolute space) which conflicts with the Aristotelian definition of space.⁴⁰⁷ More importantly, from our above discussion, it is clear that Avicenna divides external existence into existence in individuals and existence (or

⁴⁰⁶ For reasons suggested below, he seems to prefer *fī al-dhihn* to *fī al-ʿaql*.

⁴⁰⁷ Not only in *Metaphysics* V, but in similar places in the *Maqūlāt* and the *Madkhal* as well, Avicenna does not use *fī al-khārij* but *min al-khārij*: *Madkhal*, 15, ln.1, ln. 22, ln. 9; 23, ln.11, ln. 14, 15; 34, ln. 6; *Maqūlāt*, 18, ln. 11; 19, ln. 11, ln. 14; 92, ln. 8, 9,11,17.; 93, ln. 1,16; 94, ln. 14,16,17. Important philosophical points are raised in McGinnis, "A Penetrating Question", 56-69.

reality) that is “prior” to specific instantiations. Avicenna does, however, say that quiddities are *in* the mind or soul.

Interestingly, Rāzī summarizes the entire discussion (indeed the entire chapter) without any reference to “nature” (*tabīʿa*), which as we saw was central to Avicenna’s discussion of the problem of universals. Avicenna’s treatment throughout (especially from paragraph 18 on) refers to the substantive “nature” that is equated with the abstract term, e.g., animality, or a universal term with a qualification like *bi-mā huwa* and its paronym “natural” as a way of distinguishing between quiddities in itself and those existing in individuals (*fī al-ʿayān*). Rāzī not only omits nature but also drops any reference to the abstract universal (e.g., animality) or *qua*-clauses in these passages. He simply refers to the universal as a general term, such as, “horse” or “animal”.

What the above changes suggest, I believe, is that Rāzī agrees with Avicenna’s opposition to the platonizing argument but rejects the ontological commitments alluded to in Avicenna’s reference to natures. Rāzī thus retains the primary points regarding the problem of universals, while sanitizing the rest of the discussion from the ontological overtones. That is, Rāzī agrees with the minimal claims that there are no abstract universals (a point he argues in numerous places, as will be noted shortly) and that universals simply correspond to their instances in the external world (cf., for example, **T7**). Thus, we need only use the general term “human” as a universal, which picks out a mental concept, and maintain its correspondence to external instances without any reference to a “natural human” or “humanity”, i.e., whatever might require a nature. For Rāzī, the primary distinction is between that which obtains in external reality versus that which is in the mind. Thus, when Rāzī refers to the quiddity in itself, he consistently ties

the notion to intentional terms, such as *i^ctibār*, which underscore the mind-dependence of the distinction. Moreover, it should be noted that in the one line that Rāzī devotes to paragraph 28, where Avicenna most expressly sets out his ontological points, Rāzī alludes to his rejection of Avicenna's position. That is, Rāzī's use of the passive voice of the verb *qāla* ("he said"), such as the passive past tense form '*qīla*', usually implies distancing oneself from the stated position. What Rāzī seems to be saying is: "Such natures are allegedly said to possess divine existence."

This might be reading too much into Rāzī's choice of words. And the point is not integral to my overall argument that Rāzī wishes to make programmatic changes here, since there is clearer evidence that he opposes Avicenna on all these points. However, if that evidence stands, as will be shown in the subsequent discussion, I think it suggests that, especially in the *Mabāḥith*, Rāzī can be quite a subtle writer. This is perhaps one reason why his positions in the *Mabāḥith* and other works are sometimes misunderstood by his commentators.

A few additional points need to be made. First, Rāzī does not simply condense and marginalize the ontological elements of Avicenna's discussion in paragraphs 26 to 29. Rāzī completely excises the psychological and epistemological points that Avicenna makes as well, especially in paragraph 28, where Avicenna discusses the different "aspects" of the existence of quiddities in the mind. Similar to what I have argued above with regard to Avicenna's ontological commitments in *Ilāhiyyāt* V, Rāzī's omission could be related to the fact that Rāzī strongly opposes Avicenna's theory of abstraction and mental forms. So just as Rāzī omits nature, he omits the mention of mental forms (sing.: *ṣūra*), which for Avicenna correspond to the natures of natural things. As

discussed in the next chapter, mental representation for Rāzī does not correspond to the natures of things but to their phenomenal properties, so Rāzī opposes the talk of mental forms. All this, it can be noted, is consistent with the epistemic and logical programme that I discussed in Part I.

If we turn to Rāzī's first chapter on quiddities in the *Mulakhkhaṣ*, which corresponds to the chapter under discussion from the *Mabāḥith*, several points emerge. The *Mulakhkhaṣ*, being a compendium, provides a much shorter treatment than the *Mabāḥith*. However, the *Mulakhkhaṣ* focuses on a number of the central points discussed above, including the distinction based on the logical distinction between quiddities without condition and quiddities with the condition of nothing. Importantly, Rāzī raises a problem regarding the formulation of *bi-sharṭ lā shayʿ*. With the condition of nothing, that is, with the predication of a metathetic negation (i.e., "S is a not-P") he states that it is clear that the quiddity cannot exist in individuals.⁴⁰⁸ But he states,

T23

As for in the mind (*fī al-dhihn*), we do not hold this [position]. Even if we did hold to it, the quiddity in this case would still not be abstract (*mujarrad*) because its being in *that* mind [i.e. a particular mind] is a concomitant (*lawāḥiq*). Indeed its being abstract is a concomitant...by this the error of the widely held position (*al-mashhūra*) that quiddities become abstracted in the intellect (*fī al-ʿaql*) has been exposed.⁴⁰⁹

⁴⁰⁸ He does not provide a reason and states this is obvious. It is clear that the reason as discussed above is because any instantiation is *with* a qualification or some superadded property.

⁴⁰⁹ Rāzī, *Mulakhkhaṣ*, fol. 48b-49a.

Rāzī is strictly construing the metathetic negation, “with the condition of nothing”, strictly so as to exclude all concomitants. The position that he states he does not hold is the one that posits mental forms, which we encountered earlier when surveying Rāzī’s logical system. As discussed in Chapter 6, he argues against mental forms in the *Mabāḥith* as well, though he does not make an explicit connection to “with a condition of nothing” in his chapter on quiddities in the *Mabāḥith* as he does here in the *Mulakhkhaṣ*. This passage in the *Mulakhkhaṣ* indicates why Rāzī wants to exclude Avicenna’s discussion of mental forms, and the attendant psychological distinctions, in Rāzī’s summary in the *Mabāḥith*. The passage in the *Mulakhkhaṣ* also corroborates the terminology of the *Mabāḥith*, particularly in omitting references to “nature” and in opposing *fī al-khārij* and *fī al-dhihn*. It should be noted that he uses *fī al-‘aql*, and not *fī al-dhihn*, specifically when referring to his opponents’ position of abstract forms. In general, Rāzī expresses his views more explicitly in the *Mulakhkhaṣ* than he does in the *Mabāḥith*.

The parts we have thus far assessed of Rāzī’s chapter on quiddity in the *Mabāḥith* generally follow V.1 of Avicenna’s *Ilāhiyyāt*. In the final paragraph, however, Rāzī sharply departs from Avicenna:

T 24

Know that the distinction between these two aspects, which is to take a thing *with the condition of not* (*bi-sharṭ lā*) and take a thing *without condition* (*lā bi-sharṭ*), only becomes apparent (*yaẓhar*) in view of (*bi-*

⁴¹⁰ *ʿitibār*) the concomitants (*lawāzim*) of quiddity. However, this distinction will not become apparent [solely] in view of the quiddity itself (*nafs al-māhiyya*) or in view of its parts, for if you attach a qualification (*qayd*) to the essence (*ḥaqīqa*) or exclude a qualification of it, the essence changes and becomes another essence. Therefore, whatever signifies the essence and its constituents (*muqawwimāt*) always signifies [it] *with the condition of not*. On the other hand, that which signifies the concomitants of essence by a signification of entailment (*dalālat al-iltizām*), then in this case it sometimes signifies *with the condition of not* and at other times *without condition*, and so judgment differs in these two aspects (*ʿitibārayn*) in this context.⁴¹¹

From the perspective of Avicenna's Book V, the passage is puzzling. Perhaps most puzzling is the problem at hand: recognizing the distinction between a quiddity *bi-sharṭ lā* and a quiddity *lā bi-sharṭ*. It is an epistemological point foreign to Avicenna's treatment. That is, Avicenna posits the distinction but the question of its recognition is not one that arises, or would arise, in the context of his analysis. Recall that Avicenna

⁴¹⁰ *Iʿtibār* often expresses the consideration of an aspect of a thing, which implies both mind-dependence as well as some independent reality of the object of thought. This is the case where he discusses, for example, the position of those who say that time is *iʿtibārī*, i.e., its reality is reducible to some other external phenomena (namely motion) but does not itself possess external existence. Time exists in the mind or by judgment in a manner that is reducible to an externally existing thing. Thus, *iʿtibārī* in this sense excludes things fabricated by the mind or imagination (i.e., that which is *wahmī*) or posited by the mind (i.e., that which is *farḍī*). At other times, it simply refers to a distinction in, or an aspect of, a thing. Here the usage seems to emphasize the side of mental activity. See Rāzī, *al-Maṭālib al-ʿĀliya min al-ʿIlm al-Ilāhī*, vol. 5 (Beirut: Dār al-Kitāb al-ʿArabī, 1987), 9-20; *Mabāḥith*, 1, 755-768.

⁴¹¹ *Mabāḥith*, 1, 142. Cf. Avicenna, *Metaphysics*, V.7, 181, where the latter discusses *iltizām* (external entailment) versus *taḍammun* (internal signification, i.e., the implication of a part of a thing that a term refers to). However, the context differs and the discussion presumes Avicenna's earlier discussion of essential definitions, which as shown below, Rāzī rejects.

discusses the question of correspondence between mental forms, which are abstract with the condition of not (*bi-sharṭ lā*), and external instances of quiddities (*lā bi-sharṭ*).⁴¹² A mental form *qua* universal corresponds in virtue of its real definition to its instances, and Avicenna has already suggested that a quiddity *in re*, to which the mental form corresponds with the condition of not (*bi-sharṭ lā*), *constitutes* the individuals as a part. Recall that such a quiddity can be viewed as a quiddity in itself plus concomitants and accidents. As such, the question of signification does not arise; it was clear that “animal” or ‘animality’ referred to an essence as picked out by a real definition. The acquisition or recognition of such essences pertains to the method of definition as discussed in logic.

As the tone of the passage suggests, Rāzī is raising and addressing a problem. His point – that the quiddity in itself and its constituent parts will not make the essence more apparent to you – seems to invoke his analysis of real definitions, as discussed in Chapter 3. But what precisely is the problem that he wants to address? Recall that the distinction between *bi-sharṭ la* and *lā bi-sharṭ* does not make particular logical sense unless Avicenna assumes that the conditions apply to *per se* predications. Let us return to the examples, “S is not P” and “S is a non-P”, and read them with the two conditions but without essential predication. As noted above, “S is not P” would be a denial of all members of the set {S is P₁, S is P₂, S is P₃...}, while “S is non-P” would be a metathetic negation amounting to the assertion that all members of the set {non-P₁, non-P₂, non-

⁴¹² He states, “In the intellect, there is the form of the abstract animal, which is [abstracted] in the manner of abstraction that we have mentioned. An in this respect, it is called an intelligible form. There is also in the mind the form of animal with respect to what corresponds (*muṭābiq*) in the mind according to one specific definition to many concrete instances. As such, the one form would be related in the mind to a plurality. In this respect it is a universal, being an intention in the mind whose relation to whatever animal you take does not differ. In other words, whichever [of these instances you take] whose representation is brought to the imagination in any state—the intellect thereafter abstracting its pure meaning (*mujarrad ma‘nāhu*) from accidents—then this very form is realized for the mind.” *Metaphysics*, V.1, 156 (Marmura’s translation with changes).

$P_3 \dots$ } is predicated of S. But, then, the latter is logically equivalent to denying that every member of $\{P_1, P_2, P_3 \dots\}$ is predicated of S (if one holds to the principle of the excluded middle), which is precisely to say “S is not P”. In other words, no logical distinction can be recognized or maintained between *bi-sharṭ lā* and *lā bi-sharṭ* unless we presume that the distinction applies *only* to *per se* predication. This is precisely Rāzī’s point in **T24** and it is important that he registers this point in his first chapter on the quiddity. Although Rāzī worked in subtle ways in his abridgement of Avicenna’s text in V.1, he wished to assert his own position that, in his philosophical analysis, he does presume *per se* predication and, in turn, the theory of demonstrative knowledge. Moreover, **T24** alludes to his own theory of structured universals as his reference to *lawāzim* and signification indicates. That is, universals are simply those pre-scientific concepts that are picked out or signified by ordinary language terms. Moreover, such terms cannot be spoken of by reference to their constituent parts, but by their *lawāzim* or *āthār*, as Rāzī noted previously in logic.

Let us turn briefly to the nature of the *Mabāḥith*, and address the question of how Rāzī’s analysis there proceeds in a different manner from how it proceeds in the *Mulakhkhaṣ*. As noted, Rāzī voices his own views more clearly in the *Mulakhkhaṣ* than he does in the *Mabāḥith*. One explanation is that the *Mulakhkhaṣ* was written later, when Rāzī had become more assertive and independent.⁴¹³ Before this hypothesis can be verified, the precise chronology of his works needs to be established more accurately. In any case, the *Mulakhkhaṣ*, as far as we know, was not written long after the *Mabāḥith*. A more likely explanation can be found if we consider the nature of each work. That is,

⁴¹³ Shihadeh provides this suggestion. See *Teleological Ethics*, 8.

Rāzī's *Mulakhkhaṣ* was written with a logic section, whereas the *Mabāḥith* was not. As such, we often find that the *Mulakhkhaṣ* directly references the points established in logic. For example, in his chapter on quiddity, as we saw, Rāzī discusses the *structuring property* of universals (*al-hay'ā al-ijtimā'iyya*). As far as I can see, in the *Mabāḥith*, Rāzī does not explicitly refer to the structuring property. Indeed, as we noted, the *Mabāḥith* refers the reader to some work on logic that he has written, but he does not, and unlike the *Mulakhkhaṣ* cannot, directly reference concepts established in logic. Indeed, there is no equivalent in the *Mulakhkhaṣ* to the somewhat allusive discussion of *per se* predication in T24 of the *Mabāḥith*, because his more explicit views on the matter are already made in the preceding logic section of the *Mulakhkhaṣ*. As we saw above, it is primarily in the logic section of the *Mulakhkhaṣ* that Rāzī expounds his view of structured universals. The logic in the *Mulakhkhaṣ* allows Rāzī to quickly and directly refer to his foundational positions, whereas in the *Mabāḥith* he needs to work his own views subtly into his analysis of what he sees as the standard view or the view of Avicenna. As noted above, Rāzī focuses much attention on explicating and problematizing received philosophical views. Of course, the *Mabāḥith* is exponentially longer, so Rāzī can afford to be rather subtle there, which is not possible to do in a short work such as the *Mulakhkhaṣ*.

In addition to such considerations, we noted that Rāzī wants to be somewhat allusive in the *Mabāḥith*. He certainly expected an intelligent audience, but he also seems to have wanted the intelligent reader to work out the consequences of his positions. For example, in his chapter on abstract or separate substances (*al-jawāhir al-mujarrada*), he states, “And this section is our discussion and it comprises [a number of] hints (*rumūz*)

and points (*nukat*) [so that] whoever invokes the preceding principles [i.e., that he has established] [will] by these [hints] grasp and obtain the truth that is necessarily entailed by them. But we have left them hidden so that only those worthy of [such knowledge] will obtain [knowledge of] them.”⁴¹⁴ Here, Rāzī is nice enough tell us directly, but it seems to me that a good deal of his analysis in the *Mabāḥith* presumes this methodology. That is, understanding much of what Rāzī means to assert *in propria persona* presumes a systematic understanding of the various positions or hints he lays out in the work. It is clear that entire chapters are simply aimed to explicate the view, say, of the *falāsifa*, as we shall note below. In any case, more systematic analyses of the *Mabāḥith* are required to determine how it proceeds.

Returning to Rāzī’s discussion, it was noted that he condenses Avicenna’s ontological point regarding the “divine existence” of the nature (*tabīʿa*), which is prior to its individual existence just as the simple is prior to the composite. Rāzī did not explicitly voice his objection to the position in II.1 of the *Mabāḥith*. Of course, his denial of *per se* predication might be viewed as part of a general rejection of the views of the *falāsifa*. In any case, later in the chapter Rāzī does indicate his disagreement with the view and what it implies. Before that, it might be noted that in the *Mulakhkhaṣ*, Rāzī notes his disagreement with the view expressed by Avicenna in the *Madkhal* and noted in **T19** above, regarding the existence of the quiddity prior to multiplicity in the higher intellects. Rāzī states,

T25

⁴¹⁴ Rāzī, *Mabāḥith*, 2, 460.

Of that which is prior to multiplicity, they [falsely] believe (*za^camū*) that it is the intelligible form [obtaining in] the separate emanating [things] (*al-mufāraqāt al-fayyāda*). But if the quiddities exist, the common factor that [obtains] between the individuals is that which is with multiplicity. Then a universal abstracted concept (*ma^cnā*) obtains in the mind of the individual, when he observes them [i.e., the individuals] through perceiving them. That is what is [meant by] after multiplicity.⁴¹⁵

Here, Rāzī attempts to map the division of universals into *ante rem*, *in re*, and *post rem* made traditionally by the commentators onto his own view of the common factor (*al-qadr al-mushtarak*).⁴¹⁶ Rāzī distances himself from the position that assigns reality to the quiddity *before* existence. That is, his own view starts when he states, “But if the quiddities exist...”. Recall that Rāzī had formulated his notion of the structured universal as applying in existence, as opposed to Avicenna who attempted to separate properties that apply in existence from those that apply to the quiddity in itself. As we shall see, he will criticize the position of the prior existence of the quiddity from another perspective. Here, it is not clear that **T25** is meant to accurately render Avicenna’s position specifically and Rāzī does not refer to him by name. It should be noted that Rāzī seems to refer here to the process of abstraction. In the next chapter, we will examine how his position on abstraction differs from Avicenna’s.

⁴¹⁵ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 71-72.

⁴¹⁶ See Sorabji, *The Philosophy of the Commentators*, 3, 135.

Returning to the *Mabāḥith*, in the 14th section of Chapter 2, Rāzī discusses the characteristics of the differentia. He lists a number of points usually listed by the Aristotelians. In the ninth point, he states:

T 26

Since it has been noted that the genus is dependent in its existence on the differentia, it is impossible for the differentia to be dependent on [the genus] due to the impossibility of a circular regress. Rather, [the differentia] must be independent of [the genus]. [Since] everything that inheres (*kullu mā kāna ḥāll^{an}*) in a thing is dependent on a substrate (*maḥall*), the differentia that divides the genus, and which is constitutive (*al-muqawwim*) of the species, cannot inhere in it [i.e., the genus]. On this [interpretation], there is no problem in making the rational soul the differentia of “animal”; rather, the problem is making the nutritive power (*quwwat al-numūw*), and its like, the constitutive differentia of body – and the same holds of the corporeal animal soul (*al-naḥs al-ḥayawāniyya al-jismāniyya*) – because these attributes (*ṣifāt*) require substrates which are bodies, and the substrate is prior in existence to the inhering [attribute]. That which is prior in existence to a thing cannot be an effect (*ma^clūl*) of it. We have postponed solutions to this [problem], which we will mention in the chapter on the relation of matter to form (*ta^calluq al-mādda bi-l-ṣūra*). Perhaps the truth is to hold that the object of attribution

(*al-mawṣūf*), regardless of whether it is the cause (*‘illa*) of an attribute of its effect, is the genus and the attribute (*al-ṣifa*) is the differentia. But if we hold that, then the distinction no longer holds (*baṭala al-farq*) between the division of the genus by the differentia and the division of the species by the proprium. We will mention the view that we take (*ikhtiyār*) on this matter in the chapter on the relation of matter to form.⁴¹⁷

Rāzī’s discussion evokes his analysis of genus and differentia in logic, discussed in Part I. In particular, this passage recalls Rāzī’s view of the *madhhab* of Avicenna in **T12** regarding the differentia’s being a cause of the species.⁴¹⁸ Rāzī stated there that in his own *madhhab* the differentia may or may not be the cause. Here, in Book I of the *Mabāḥith*, Rāzī connects the problem to ontological questions raised in Aristotelian metaphysics, and specifically the question of form-matter analysis. Here, form-matter analysis does not simply concern the question of the nature of the corporeal body (aspects of which we noted above), but more broadly the systematic ontology of Aristotelian metaphysics. That is, Rāzī recognizes that the nature of sensible things in “metaphysics”, particularly their genus and differentia as interpreted by Avicenna, correspond in some way to matter and form. Even more, he realizes that important aspects of Aristotelian metaphysics hinge on the view that substantial forms (e.g., *ṣūrat al-numūw*, *al-naḥs al-*

⁴¹⁷ Rāzī, *Mabāḥith*, 1, 161-162.

⁴¹⁸ See McGinnis, “Logic and Science,” 174-178.

hayawāniyya) causally and fundamentally explain natural phenomena.⁴¹⁹ In **T26**, Rāzī distinguishes between those forms that may be viewed as existing independently of a substrate (e.g., the rational soul which, on Avicenna's view, can exist separate from matter) and those that cannot. The latter are forms such as, "the nutritive power" or "the animal soul", which correspond, in these cases, to the parts or matter of concrete sensible entities (though they are construed as forms at a lower level, i.e., prior to obtaining the final substantial form that constitutes an infima species, as will be clarified shortly). Such forms or properties, however, cannot exist apart from bodies. As such, they cannot be the constitutive differentia of some (indeterminate) body, since "body" does not exist without being a particular kind of body, e.g., "animal", "plant", and so on. The details of the problem require an analysis of Avicenna's view of substantial forms. No detailed study of Avicenna's theory of substantial form, or form-matter analysis broadly construed, has been undertaken. Here, I will not attempt to provide a comprehensive analysis. Rather, I will focus on Avicenna's discussion of form and matter as it relates to our previous discussion, particularly in terms of the distinction between *bi-sharṭ lā* and *lā bi-sharṭ*. I will focus on texts that Rāzī was familiar with.

Avicenna discusses the relation of the genus and differentia to matter and form in the *Ilāhiyyāt*, *Demonstration*, and his *Maqūlāt*. In V.3 of the *Ilāhiyyāt*, Avicenna applies the distinction between *bi-sharṭ lā* and *lā bi-sharṭ* to genus. Before discussing V.3, I turn to a number of important distinctions that he makes in the *Maqūlāt* I.3, which corresponds to Aristotle's discussion in *Categories* 2 of the fourfold distinction (i.e., *said-of/not-said-of* versus *present-in/not-present-in*) discussed in the preliminary analysis.

⁴¹⁹ On the causal relation between the human soul and body, see for example: Thérèse-Anne Druart, "The Human Soul's Individuation and its Survival after the Body's Death: Avicenna on the Causal Relation between Body and Soul," *Arabic Sciences and Philosophy*, 10 (2000), 259-273.

Avicenna complicates the fourfold distinction by examining the different ways in which the attribute (*ṣifa*) can be viewed as applying to the subject of attribution (*mawṣūf*) (for *mawṣūf* I will use substrate here). The discussion abstracts somewhat from linguistic predication, which as we saw was Aristotle's approach, and as such considers "attributes" and "substrates" rather than the more basic categories of subject and predicate. Avicenna provides a fivefold distinction along with the following examples:

1. The essence (*dhāt*) of substrate "obtains" (*istaqarra dhātuhu*) as a subsisting item (i.e., is determinate) and then the attribute (*ṣifa*) occurs to the substrate externally (*talḥaquhu khārijat^{an} ʿanhu*) like an accident or *lāzim* (e.g., "Man is white" or "Man is risible").
2. The substrate is determinate but the attribute is a part of the subsistence (*juzʾ min qawāmihi*) of the substrate and not external to it (e.g., "Man is animal").
3. The substrate is not determinate (*lā yakūnu qad istaqarra dhātuhu baʿd*), but the attribute applies to make it determinate (*li-tuqarrira dhātahu*), but is not a part of the substrate (e.g., prime matter and form).
4. The substrate is indeterminate but the attribute that applies is a part constituting its existence (e.g., "Substance" as predicated of "body", which applies to "animal").
5. The substrate is indeterminate and the attribute does not apply to it in virtue of its essence but due to the occurrence of some (other) attribute that determines the substrate (e.g., "absolute body" of which "movable" or "in a place" is predicated).

The central notion that Avicenna introduces into the discussion of predication is the "determinacy" and "indeterminacy" of the subject or substrate, which is how I have

translated his use of the various forms of the radical *q-r-r* (primarily *istaqarra* and *taqarrara*). Avicenna attempts to assess how the substrate's determinacy corresponds to various kinds of attributes. Here, what is presumed is Aristotelian form-matter analysis. Categories 4 and 5 will be particularly important to our discussion. In these cases, Avicenna attempts to assess the nature of an "indeterminate" subject when one predicates certain kinds of attributes of it. Avicenna makes a number of points regarding the five categories above. Most importantly, he states that the only case in which the substrate is *not* a proper subject for an attribute is Category 3, because, in his example, the form is *not* a part of it but still constitutes or causes prime matter. Category 3 is an *external constitutive property* or *cause* rather than, say, an internal constitutive part or external non-constitutive property and so violates the division of properties into internal and external kinds. Though "rational" or "animal", in "Man is rational/animal", are causally connected in constituting "man", they do so only insofar as they are parts of man. It is important to note, however, that, though he excludes Category 3, Avicenna wants to assert that "indeterminate" things or matter can be proper subjects of predication, as in Categories 4 and 5. In other words, even though such substrates are, on the Aristotelian view, indeterminate things (i.e., they require a further form or constitutive cause to be determined), they can constitute proper subjects or substrates. For example, in Category 4, we say the "Body is substance." But body here is not absolute, but rather that which applies to (absolute) animal. That is, it is determinate insofar as it is a part of the definition of animal. But as Avicenna states, there is no absolute body that obtains in concrete existence; rather, concrete bodies have many external and accidental properties. Nevertheless, "substance" is predicated of body (which is a part of the animal) as a part

of body. This, of course, recalls our discussion of the Aristotelian genera lines and hierarchy, e.g., substance-body-living-moving. In each genera line, one can pick out a property superordinate to the genus or species and which is constitutive of the species but is itself indeterminate prior to the entire chain of properties being determined or constituted.⁴²⁰ Such entities are constituent parts of a lower genus and ultimately a species. As such, Avicenna's concern is to assess how the parts of a definition correspond to the objects of definition. However, he does not specifically address the relation of genus and differentia to form and matter.

However, in III.2 of the *Maqūlāt*, where Avicenna discusses primary and secondary substances, several distinctions regarding the ontological nature of substances are raised. However, I shall focus on specific points regarding the differentia and the substantial form. Avicenna states,

T 27

The differentiae can be meant to [apply to] the form (*al-ṣūra*), such as rationality (*nuṭq*). But these are not predicated of Zayd or °Amr, even though they are substances (*jawāhir*). And there is no relation (*muqāyasa*) between them [i.e., differentiae as forms] and individuals or species with regard to universality and specificity, rather [the relation] is [that] of simplicity to complexity, since they are substantial forms (*al-jawāhir al-ṣūriyya*) of them [i.e., individuals and species] insofar as their particulars and their universals have this exact relation. If they are related to composites,

⁴²⁰ Allan Bäck views such properties as being “monadic”. See his “The Ontological Pentagon of Avicenna,” 87-109.

insofar as they are simples, they are prior [to the latter] in terms of the priority of the principle to that which possesses the principle (*qidmat al-mabda' ʿalā dhī al-mabda'*).⁴²¹

The crucial distinction here is between the logical universal, “rational” or *nāṭiq*, and the ontological substance, “rationality” or “*nuṭq*”. He states that *nāṭiq*, which is a paronym of *nuṭq*, is that which possesses *nuṭq* (*shay' dhū nuṭq*). As such, the relation between the logical term “rational” to, say, individuals, is the relation of a universal to its particulars. However, the relation of the substance, *nuṭq*, to the individuals or the species, is the relation of the simple to the composite. This point evokes our discussion above of Avicenna’s ontological points in V.1 (especially in **T20**). Here Avicenna identifies the simple quiddity with the differentia taken as the substantial form. He states moreover that these are “abstract” or “separate” differentiae and are prior in substantiality. He states: “If the abstract differentiae (*al-fuṣūl al-mujarrada*) which are [substantial] forms are related to the natures of the species composed of them, they are prior in substantiality in virtue of precedence (*qidma*), but are not prior in substantiality with regard to perfection (*kamāl*).”⁴²² It is not clear how precisely Avicenna views their abstractness or their priority. It might be suggested that given his points in the *Madkhal* and the *Ilāhiyyāt*, Avicenna sees such abstract substances as universals that obtain in the separate intellects. On this interpretation, they are prior to individuals in the same sense that the mental forms in the mind of a craftsman are prior to the artifacts he creates.⁴²³ Moreover, this

⁴²¹ Avicenna, *Maqūlāt*, 101.

⁴²² Ibid., 102

⁴²³ This does not necessarily imply priority in existence, and Avicenna never suggests that substantial forms are prior in existence.

would also explain how they are simples whereas their concrete instances are composite. In fact, it might be recalled that in the *Madkhal*, Avicenna drew the very same analogy in relation to the quiddity in itself and multiplicity (see **T19**). In any case, the precise interpretation of the substantial form, and its relation to individuals, as was noted, is one of the most debated problems in Aristotelian scholarship. How Avicenna might be attempting to resolve such problems, particularly in the context of the commentarial tradition, requires a more thorough treatment. Although, in Book III, Rāzī will problematize the notion that quiddities in the intellects are instantiated through some emanative process, his arguments here do not draw on those cosmological questions.

Now that we have discussed the relation between the differentia and form, we turn now to Avicenna's discussion in V.3 of the relation between genus and matter. Here Avicenna will clarify his discussion in the *Maqūlāt* I.3 in the context of definitions. He states,

T 28

In the same way, if “animal” is viewed as animal with the condition that it is not in respect of (*bi-sharṭ an lā yakūn fī*) having [nothing] in its animality but corporeality (*jismiyya*), nutritive power (*taghaddⁱⁿ*), and sensation (*ḥiss*), and for the [properties] occurring after [these properties] to be external to [animal], then it is not perhaps too far to say that it is the matter (*mādda*) of “human” or a substrate and its form is the rational soul.

Here, Avicenna applies the *bi-sharṭ lā*, which he applied in V.1 only to the quiddity in itself (and to mental forms), to the matter or substrate of the species that is brought into actuality by the substantial form.⁴²⁴ The substantial form here is the differentia, “rational soul” (or *nuṭq* as he also refers to it here), taken as the substantive. Significantly, this relation falls under Category 3, above, and so the substantial form or “rational soul” is not predicated of “anima” viewed as the matter made up of corporeality, nutritive power and sensation. The relation then of the various levels of indeterminate properties to the substantial form, is the relation of the corporeal form to prime matter. Hence, the form-matter analysis can be applied at every point, starting from the determinate individual of a species back up the genera/differentiae line until one arrives at the highest genus.

Rāzī understands what underlies the Aristotelian view of the essential properties or attributes of an essence are the causes or forms of a thing. Given this, Rāzī’s point in **T26** is to note that the Aristotelian view requires a precise understanding of the relation that holds between matter and form, since the form-matter analysis of universals will hinge on it. Rāzī had already noted, in the logic of the *Mulakhkhaṣ* (see **T13**), Avicenna’s *madhhab* of form-matter analysis. There Rāzī stated that Avicenna considered the final differentia as the first cause (*al-‘illa al-ūlā*), and the highest genus as the final effect. Without using form-matter language in logic, this nicely captures Avicenna’s position that the differentia is the substantial form of the matter that is constituted by the ordered properties of the genus, from the most proximate genus to the highest.

As discussed above, Rāzī refers us to his discussion of the relation of matter to form, which is found in his chapter on the constituents of the corporeal body or the

⁴²⁴ Here Avicenna equates the logical genus with the genus *bi-lā sharṭ*. Avicenna also provides the example of body, which if taken *bi-sharṭ lā* is the matter of anything that obtains subsequent to it and determines it.

substantiality of bodies (*tajawhur al-ajsām*). In a number of sections of the chapter, Rāzī's discussion proceeds in a manner that accounts more generally for the relation of form to matter, and not just the relation of corporeal form to prime matter. Rāzī's analysis spans many pages and many sections on a number of topics that are closely interrelated, an investigation of which is beyond the scope of this study. A few points, however, can be noted. There is a section (*faṣl* 12) specifically on the relation of prime matter to form. In this chapter, Rāzī broadly assesses the dependency relation between form and matter and not specifically as form and matter relate to body. In this section, Rāzī seems not to be speaking *in propria persona*. Rather, he is attempting to formulate, problematize and resolve the Aristotelian position. Here, Rāzī seems to be forced to interpret the Aristotelian position by incorporating the theory of emanation.⁴²⁵ In any case, it is important that this section follows his discussion in **T15** regarding his fundamental problem with form-matter analysis: that form-matter analysis conflicts with the fundamental epistemological and logical principles that ground his theory of structured universals, specifically in that form-matter analysis posits noumenal properties. Recall that Rāzī emphasized in the *Mabāḥith* the epistemological point that we do not “grasp” or “sense” (*lā nashʿur*) the essence of continuity or the essence of moisture; rather, we know it through its effects or concomitants (*lawāzim*). In the *Mulakhkhaṣ*, Rāzī notes that the properties set out in the Aristotelian definitions of body are “obscure concepts” (*taṣawwurāt ghāmiḍa*), at least in relation to the pre-scientific notion of body. In this, we have, already, Rāzī's response to the problem. At the end of section 8, Rāzī states, “Even if in our view (prime) matter has not been affirmed [by proof], those who affirm it discuss

⁴²⁵ At least, when it specifically applies to prime matter and corporeal form.

its characteristics, so we will also discuss those [characteristics] so that our book will include all of what is said on each topic.”⁴²⁶ Section 11 on the relation of matter and form follows this statement.

However, Rāzī does discuss his own views in section 13, which concerns “affirming the natural forms” (*al-ṣuwar al-ṭabīʿiyya*), by which he means the elemental forms (i.e., fire, air, water, earth). Previously, Rāzī notes that no proof has been offered establishing that the elements are restricted to four. Here, he is interested in examining whether the elements are forms or attributes. He notes in response to an objection that by “form” he means what was stated earlier, as being that which inheres in matter and is the cause of its constitution in the manner he described (this corresponds to Category 3 above in the *Maqūlāt*). Rāzī then states:

T 29

Know that what we have obtained by proof (*dalīl*) is that these accidents (*aʿrāḍ*), such as place, quality and so on, are related to powers existing in the body which are sustained things (*maḥfūẓat al-dhawāt*) that return the bodies to these qualities when there is no coercive force or impediment. As for whether these [latter] things are constitutive forms or accidental properties, this is something that has not been established by demonstration (*burhān*). What is more likely (*al-aqrab*) to me is to not make these things causes of bodies and to not consider them forms, but rather [to consider them as] accidents.⁴²⁷

⁴²⁶ Rāzī, *Mabāḥith*, 2, 53.

⁴²⁷ *Ibid.*, 66.

A full understanding of Rāzī's position here requires an analysis of his discussion of qualities in his section on accidents. However, a few general remarks can be made. First, by rejecting forms and other principles of Aristotelian metaphysics, Rāzī is not forced to reject all explanations of natural phenomena. Importantly, his explanations of phenomena can be probabilistic from an epistemological perspective and contingent from an ontological perspective, since his explanatory model need not presume necessary causal relations. Perhaps his use of *dalīl* here as opposed to *burhān* is meant to indicate the lower epistemic threshold that Rāzī requires. Indeed, although Rāzī's broader analysis cannot be explored here, it might be noted that his method of establishing the nature of such powers is inductive and quantitative, the latter in the sense that the more proofs the stronger the position. As such, Rāzī can, at least in theory, attempt to construct an alternative approach to explaining regular "causal" natural processes, one that does not posit noumenal entities such as forms.

Chapter 6

Rāzī's Theory of Knowledge: Representation, Optics, and Phenomenal Regularity

In this chapter I examine a number of central concepts in Rāzī's theory of knowledge. In the foregoing analysis, we saw that Rāzī objects in logic and elsewhere to the theory of mental or intelligible forms (*al-ṣūra al-ʿaqliyya*). Though he raises a number of direct and indirect objections to the theory, he does not state more precisely how one should interpret intelligible forms. He did indicate in the *Mulakhkhaṣ* that what he has in mind is Avicenna's theory of abstract intelligible forms which are grounded in the latter's psychological theory of abstraction, as discussed previously. Presumably, Rāzī expects his reader to know the Avicennan theory. However, Rāzī provides a nuanced analysis of the Avicennan theory of intelligible forms and abstraction in his *philosophical* discussions. The analysis of his interpretation(s) of, and objections to, the Avicennan theory will be important for us to understand Rāzī's own theory of knowledge.

In the *Mabāḥith* and the *Mulakhkhaṣ*, Rāzī discusses his own theory of knowledge in the first part (*jumla*) of Book II, and specifically in the subsection that treats qualities (*kayfiyyāt*). Given our discussion in Chapter 4 regarding the structure of these philosophical works, Rāzī views knowledge as a phenomenal object of analysis, that is, as falling under the phenomenal accidental category. One might expect the theory of knowledge to be better placed in Book I, which discusses general ontological problems.

Rāzī does, however, refer to his chapter on knowledge in the first chapter of Book I, which treats “mental existence” (*al-wujūd al-dhihnī*). There he simply discusses the distinction between mental and external existence and raises objections to the theory of mental existence. Rāzī provides a number of arguments *for* mental existence and points out that the full verification (*taḥqīq*) of this chapter will be dealt with in his treatment of the intellect (*al-ʿaql*) and the intelligible (*al-maʿqūl*).⁴²⁸

The chapter in question concerns knowledge and its attributes (*aḥkāmihi*), and it is subdivided into three parts: knowledge (*ʿilm*), the knower (*ʿāqil*) and the known (*maʿqūl*). Rāzī begins this enormous chapter by rejecting the Avicennan theory of the “impression” of the form of the object of knowledge in the knower (*intibāʿ sūrat al-maʿlūm fī al-ʿālim*). In the *Mulakhkhaṣ*, Rāzī uses the term “*ḥuṣūl*”, i.e., the obtaining of forms in the mind.⁴²⁹ In the following, I will examine the problem of the impression (*intibāʿ*) of forms from an epistemological as well as psychological perspective. I argue that Rāzī has two sets of problems in mind in rejecting the Aristotelian theory of form-transference or impression. The first set of problems, which I classify broadly as epistemological, relates to the Avicennan theory of mental forms and includes the problems involved in Avicenna’s theory of abstraction and faculty differentiation. I consider the second set of problems to chiefly concern psychology. Rāzī discusses the psychological problems in the second part of Book II, specifically in his chapter on psychology (*ʿilm al-naḥs*). My analysis focuses on Rāzī’s philosophical positions on

⁴²⁸ This is a lengthy section (62 pages of the cited edition). He refers here to “*kitāb al-ʿaql wa-l-maʿqūl*” but there is no such book. He is clearly referring to his chapter on knowledge, which is divided into three parts: *ʿilm*, *ʿālim* and *maʿlūm*, the latter two of which he later refers to as *ʿāqil* and *maʿqūl*. He begins the chapter on knowledge with “we have made clear in the chapter on existence that a quiddity conceived by the intellect (*al-māhiyya al-maʿqūla*) has an existence in the mind. Here we clarify [this point] further.” *Mabāḥith*, 1, 439-501.

⁴²⁹ Rāzī, *Mulakhkhaṣ*, fol. 77b.

optics and sense perception. Rāzī will oppose *inṭibāʿ* in optics, which is the basis of the Aristotelian/Avicennan theory of intromission. I will argue that Rāzī's own views on optics will have wider ramifications in his epistemology. Moreover, I argue that his development of the theory of structured universals was, at least in part, inspired by his views of developments in optics. I will begin by examining his approach to the Avicennan theory of knowledge. I focus on the core issues that motivate Rāzī's rejection of Avicennan epistemology. Rāzī's main objection to the Avicennan theory focuses on how the Avicennan theory seeks to explain our knowledge of external sensible objects.⁴³⁰

Rāzī asserts his own position in his chapter on knowledge, but thus far I have only stated that he opposes the Avicennan theory. His first five chapters focus on opposing various aspects of the Avicennan theory of knowledge, including *inṭibāʿ*, unification of the knower and the object of knowledge (*ittiḥād*), and the theory of the Active Intellect (*al-ʿaql al-faʿāl*). In the sixth section of the chapter, Rāzī discusses the “verification of the true position on knowledge” (*taḥqīq al-qawl al-ḥaqq*). The section, however, is rather disappointing. It is less than a page of the printed edition and provides only a general discussion. His primary point is that knowledge is, or requires, a relational state (*ḥāla idāfiyya*) that obtains between the object of knowledge and the knower. Moreover, the relation is a property or state that obtains in addition to the concept or form in the mind. That is, the mental form cannot itself fully explain knowledge. Here, Rāzī, I believe,

⁴³⁰ Rāzī's opposition to Avicenna's psychology and his development of a systematic alternative is a clear departure from Ghazālī. See, for example, Frank Griffel, “The Introduction of Avicennan Psychology into the Muslim Theological Discourse: The Case of al-Ghazālī (d. 1111),” in *Intellect and Imagination in Medieval Philosophy*, ed. M. C. Pacheco and J. F. Meirinhos (Turnhout: Brepols, 2006), 571–582. This can in part be explained by the fact that Rāzī seeks to advance a philosophical and scientific alternative, as opposed to Ghazālī. Ghazālī provides primarily a critique of *falsafa* and where he does attempt to construct an alternative view, it usually specifically concerns theology or mysticism. See Frank Griffel, *al-Ghazālī's Philosophical Theology* (Oxford: Oxford University Press, 2009); Richard Frank, *al-Ghazālī and the Ashʿarite School* (Durham, NC: Duke University Press, 1992).

marks out a general problem or position and expects his reader to work out the consequences of his theory starting from his views on various problems relating to the theory of knowledge.⁴³¹ Rāzī's aim in stating that knowledge is relational is not to define knowledge. In the *Mulakhkhaṣ*, Rāzī states more clearly that knowledge itself cannot be defined in a manner that accords with his epistemological principles. But Rāzī wants to assert that the relational property applies to, or is explanatorily required, by whatever it is that we call knowledge. In the following, I will examine some aspects of why he might want to do so. My aim is to set out a general view of the fundamental components of his theory of knowledge. Moreover, I argue that Rāzī's departure from the Aristotelian theory of knowledge, and the development of his epistemological programme in logic, was influenced by his interpretation of new scientific theories of perception and optics.

It is quite evident that Rāzī has a number of problems with the theory of knowledge expounded by the *falāsifa* and in particular the views of, or at least those attributed to, Avicenna. Here, we turn to Rāzī's commentary on Avicenna's position in the *Sharḥ al-Ishārāt*, where Rāzī fleshes out a number of points that are not fully apparent in the *Mabāḥith*. In *Sharḥ al-Ishārāt*, Rāzī does not generally assert his own positive philosophical views. That is, he attempts to work within the interpretive assumptions of the Aristotelian and Avicennan system, even when he raises various objections to it. One of the more critical parts in *Sharḥ al-Ishārāt* is Rāzī's commentary on knowledge or perception in the third *Namaṭ*. Importantly, Rāzī recognizes that there are diverging interpretations of Avicenna and often adopts or allows what can be described as a charitable reading. It seems that for this reason Rāzī often refers to the

⁴³¹ As noted above, Rāzī does this in a number of places in the *Mabāḥith*.

prevalent or “standard” view (*al-mashhūr*) when discussing Avicenna’s positions in the *Ishārāt*. Rāzī, however, is quite harsh when he sees what he takes to be basic inconsistencies in Avicenna’s theory.⁴³²

Rāzī’s commentary on *Namaʿ* III is quite long and deals with numerous problems relating to Avicennan epistemology and psychology. Before beginning our analysis, I shall list a few points that summarize some of Rāzī’s central concerns:

1. Knowledge of the universals of sensible entities is not based on the reception of the forms.
2. Forms do not help us explain how concepts identify the essences of things, i.e., how concepts represent (*tamaththul*), or correspond (*muṭābaqa*), to objects.
3. Perception and knowledge do not differ fundamentally according to levels of abstraction. There are problems and inconsistencies with principles of faculty differentiation.
4. There is no strict distinction between a sensible form and an intelligible form.

Avicenna begins the section with a “pointer” stating that “perception (*idrāk*) of a thing is for its essence (*ḥaqīqatuhu*) to be represented (*mutamaththila*) in the perceiver.”⁴³³

In his commentary, Rāzī focuses on the question of *tamaththul* and demands an investigation into the nature of representation as it applies to intelligible forms.⁴³⁴ That is, Rāzī does not consider any of the various interpretations of what, according to the *falāsifa*, constitutes an explanation of representation, from the theory of unification to the

⁴³² See for example *Sharḥ al-Ishārāt*, 2, 228-229.

⁴³³ Rāzī, *Sharḥ al-Ishārāt*, 2, 216.

⁴³⁴ *Ibid.*, 235.

theory of the Active intellect.⁴³⁵ He begins by asking whether what is meant by representation is an identical copy (*mathal*) or a likeness (*mithāl*): if the former, all its external qualities should hold of its instantiation in mental existence, which is impossible.⁴³⁶ If it is merely a likeness, then in which way precisely does it correspond to its quiddity? Rāzī states, for example, that the picture of a man is a likeness of the actual man, but it only resembles a man in shape and color and differs in every other way.⁴³⁷

⁴³⁵ Recent scholarship has shown to what extent Avicenna's psychological epistemology is dependent on principles of abstraction, which provides a corrective to the view that Avicenna's epistemology and psychology is primarily explained by the role of the Active Intellect. The advantage of the recent approach is that it takes the many pages Avicenna devotes to the process of abstraction seriously. Still the recent approaches have to synthesize Avicenna's theory of abstraction with the role that he explicitly assigns to the Active Intellect (the works of McGinnis and Hasse offer two excellent, though somewhat diverging views on how to synthesize the two aspects of Avicenna; see the works cited below). Rāzī seems, in a similar manner, to wrestle with the two aspects of Avicenna's theory, though he generally treats abstraction and the Active Intellect as two self-contained but important components of Avicenna's system. Indeed, Rāzī's position is to take Avicenna on abstraction seriously, and he clearly distinguishes between abstraction and emanation in Avicenna. For example, in *Sharḥ al-Ishārāt*, in the Fourth *Mas'ala* of his commentary, Rāzī states that the discussion of the Active Intellect would be an intrusion on the discussion of the *human* faculties and cognition. The Active Intellect is mentioned because it is the cause of the human soul and the cause of it moving from potentiality to actuality (not to mention the analogy with fire in Avicenna's commentary on the Verse of Light in one of Avicenna's lemmas). Before this, Rāzī comments on Avicenna's theory of abstraction without any reference to emanation and the Active Intellect. At the same time, Rāzī does not neglect positions in the rest of the chapters in the Third or Seventh *Namaṭ*. For example, he discusses Avicenna's reasoning for why there is no material/natural store for intelligibles and that intelligibles are not stored in a body; and whether the cause of knowledge must possess that knowledge (i.e., an actualized intellect, *'aql bi-l-fi'l*), and whether it must be immaterial. That is, Rāzī sees Avicenna as requiring the Active Intellect to explain other aspects of human knowledge of universals, of which the Active Intellect is the immaterial cause. See Dag N. Hasse, "Avicenna on Abstraction", in *Aspects of Avicenna*, ed. R. Wisnovsky (Princeton, NJ: Markus Wiener Publishers, 2001), 39-72; J. McGinnis, "Making Abstraction Less Abstract: The Logical, Psychological, and Metaphysical Dimensions of Avicenna's Theory of Abstraction", *Proceedings of the American Catholic Philosophical Association*, 80 (2007), 169-183; Meryem Sebtı, "Le statut ontologique de l'image dans la doctrine avicennienne de la perception", *Arabic Sciences and Philosophy*, 15 (2005), 109-140; Jules Janssens, "The Notions of *Wāhib al-Ṣuwar* (Giver of Forms) and *Wāhib al-ʿAql* (Bestower of Intelligence) in Ibn Sīnā," in *Intellect and Imagination in Medieval Philosophy*, ed. Pacheco and Merinhos (Turnhout: Breplos, 2006), 551-562. See also points raised in M. Marmura, "Some Questions regarding Avicenna's Theory of the Temporal Origination of the Human Rational Soul," *Arabic Sciences and Philosophy*, 18 (2008), 121-138.

⁴³⁶ Then it would not be a copy but a likeness. Moreover, Rāzī views Avicenna as rejecting the notion that existence is homonymous, at least with respect to mental versus external existence. See *Mabāḥith*, II, 386-7. Note in his discussion of knowledge in Book II of the *Mabāḥith*, in the First *Faṣl*, where he discusses the position of mental forms, Rāzī raises this same puzzle and refers to the section on *'ilm al-naḥs* in the second volume discussed below.

⁴³⁷ Rāzī, *Sharḥ al-Ishārāt*, II, 235. See also *Mabāḥith*, II, 386. Rāzī argues that Avicenna's position is problematic because he holds to a requirement of (representative) mental forms but rejects unification (*ittiḥād*) between the knower and the object of knowledge; he argues this is inconsistent. *Sharḥ al-Ishārāt*, 2, 228.

However, before he begins his actual commentary on Avicenna's lemma, Rāzī provides a lengthy preliminary discussion of a number of general points. First, following Avicenna, he discusses the distinction between knowledge of objects that are not externally existent and those that are externally existent.⁴³⁸ With regard to those that are externally existent, Rāzī states that one cannot simply posit intelligible forms to explain the knowledge of the latter as one posits them for, say, mathematical objects. Crucially, the reason he gives for this is a possible alternative theory regarding sense perception. Rāzī focuses here on the general Aristotelian principle that the sense faculty becomes *like* the object of knowledge. He states that knowledge of extra-mental sensible objects requires obtaining (*huṣūl*) knowledge of those things through the senses. But this does not necessarily imply that we receive their forms, because, Rāzī states, "It is possible to say that those [instances] of perception (*al-idrākāt*) consist in the connection or relation (*ta'alluq*) of the sense faculties to the [objects]. So sight is the relational state [*ḥāla idāfiyya*] that obtains between the faculty of sight and the observed thing in external [reality] *without the form of the observed thing being impressed (tanṭabiʿ) upon the faculty of sight.*"⁴³⁹ Rāzī goes on to say, "Know that some people have denied that obtaining perception or apperception (*shuʿūr*) is dependent on the quiddity of the object of perception (*māhiyyat al-mudrak*) obtaining in the perceiver."⁴⁴⁰ Rāzī thus seems to be hinting at some alternative theory or theories of perception that are available. Indeed he states that these "people" have provided general proofs for these positions as well as specific ones for each faculty. The general proof states that to attribute (*ittiṣāf*) X to Y is

⁴³⁸ Note here that the same terminological pattern we found in the *Mabāḥith*, i.e., that Avicenna uses *fī al-aʿyān (al-khārijīyya)* and Rāzī *fī al-khārij*, can be found in this section.

⁴³⁹ Rāzī, *Sharḥ al-Ishārāt*, II, 218.

⁴⁴⁰ Ibid., 219.

to say no more than that X obtains as an attribute (*ṣifa*) of Y. Thus, the argument suggests that if we obtain the intelligible form of a quiddity, say heat, we will possess the attribute and thus be hot. This, of course, might be viewed as a rather unfair representation of the Aristotelian view.⁴⁴¹ As such, Rāzī provides three objections which state why the *falāsifa* do not need to commit to such consequences.⁴⁴² First, he states that the quiddity of the thing is simply a representative likeness (*mithāl*) of it and thus does not have all its properties. Second, fire, for example, is not that which burns, but that which burns if it obtains in *external* reality. Third, by knowing a thing's *quiddity*, we simply mean that we know the thing or have knowledge of it.

The second objection is important for our discussion. But it should be noted that in response to the first, Rāzī states that the distinction between a representative likeness and the quiddity or form of a thing needs clarification. Rāzī will discuss this question in further detail later in his commentary on Avicenna's pointer regarding perception mentioned above. To the second objection, Rāzī provides two responses. The first argues that the response only pushes the question back one order. That is, drawing on Avicenna's theory of *lawāzīm*, Rāzī states that if "burning" is the quiddity of the concomitant that necessarily applies to fire in external reality, then we *know* that the quiddity of 'burning' is the property that immediately follows from fire's external existence, in which case the quiddity of 'burning' obtains in the mind and thus will be burning. On this interpretation, the *falāsifa* do not budge from the position that forms are different from the actual essence of external sensible things, i.e., they are simply some

⁴⁴¹ Though, of course, it hits on a core principle that has troubled Aristotle's commentators, which states that the faculty of perception becomes *like* the object it perceives. See Sarah Broadie, "Aristotle's Perceptual Realism," *Southern Journal of Philosophy*, 31 (1993), 137-159.

⁴⁴² See the points made by Yahyā ibn ʿAdī in Menn and Wisnovsky, "Yahyā ibn ʿAdī's *Essay on the Four Scientific Questions*".

kind of representation of them. Second, Rāzī states that one can only hold to this version of the *falāsifa*'s position if one holds that mental existence is fundamentally different from external existence, but, he states, the *falāsifa* do not hold the view that they are fundamentally different.

Rāzī does not want to explain mental forms as abstract objects if it means in any way that they are separate or immaterial, which brings us to aspects of his psychological views. In his chapter on psychology in the *Mabāḥith*, Rāzī examines the proofs for the separate or immaterial nature of the human soul. Rāzī sets out the various arguments for the abstractness of the soul, particularly drawing on Avicenna's arguments in the psychology of the *Shifā'*.⁴⁴³ Still, rigorously following his epistemic principles, Rāzī concludes there that "these are some proofs we have found for affirming the separateness (*tajarrud*) of the soul and none of them has convinced us due to the puzzles (*shukūk*) that have been mentioned. So whoever can resolve them, let him provide a proof for them."⁴⁴⁴ Here, Rāzī's position is quite fascinating. He formulates the minimal claims that we are entitled to make about soul, which, on Rāzī's account, is simply the consciousness of our identity (*al-shu'ūr bi-l-huwiyya*). This consciousness however does not establish immateriality or materiality. Indeed, Rāzī sees problems with the *mutakallimūn*'s materialist reduction of the soul to parts or composites and the Galenists' view of the soul as a vaporous entity or a "subtle body" (i.e., *pneuma*). I will not discuss Avicenna's points on this further, since this requires a deeper study. Rāzī indicates that a proper

⁴⁴³ For Avicenna's arguments, see Deborah Black, "Avicenna on Self-Awareness and Knowing that One Knows," *Unity of Science in the Arabic Tradition: Science, Logic, Epistemology and Their Interactions*, ed. S. Rahman, T. Street, and H. Tahiri (Dordrecht: Springer, 2008), 55-73; cf. Thérèse-Anne Druart, "The Soul and Body Problem: Avicenna and Descartes," in *Arabic Philosophy and the West*, ed. Thérèse-Anne Druart (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1988), 27-49; Michael E. Marmura, "Avicenna's 'Flying Man' in Context," *The Monist*, 69 (1986), 383-395.

⁴⁴⁴ Rāzī, *Mabāḥith*, II, 387.

understanding of his positions and objections on this topic requires a comprehensive understanding of Rāzī's theory of knowledge.⁴⁴⁵ But this point adds another dimension to why Rāzī wants to resist the theory of mental forms. As we noted above, Avicenna, in the *Ilāhiyyāt*, maintains that mental forms are individual, since they apply to individual souls that inhabit individual bodies; but universal knowledge is fully abstract of material accidents. Rāzī, in accordance with his epistemic principles, wants to efface any fundamental distinction between universal knowledge and sensible or particular knowledge in his own epistemology and psychology.

Rāzī's position on the immateriality of the soul is a fundamental aspect of his own rejection of the Avicennan theory of abstraction and faculty differentiation. In the *Mabāḥith*, he states, "These are the levels of abstraction that Avicenna has elucidated for [each of] the faculties. But, according to the position (*madhhab*) that we have adopted, they are different kinds of perception that obtain in the self."⁴⁴⁶ Rāzī does, however, provide an extensive discussion of internal problems with the Avicennan theory, particularly, with the view that abstraction involves faculty differentiation in such a way that distinguishes between sensible knowledge and universal or intelligible knowledge – a concern which, as discussed, is rooted in some of Rāzī's central epistemic concerns. He discusses these problems in the psychology sections of the *Mabāḥith*, the *Mulakhkhaṣ*, and *Sharḥ al-Ishārāt*, which I will not examine here since I will be focusing on his own theory and not his interpretation of *falsafa* views. However, the "specific" problems raised by the "people" Rāzī refers to concern the specific senses, and also address some

⁴⁴⁵ Ibid., 382.

⁴⁴⁶ *Mabāḥith*, II, p. 428.

basic problems regarding the status of his differentiated faculties, particularly the imagination (*takhayyul*). I shall focus on his discussion of the sense of sight (*al-ibṣār*).

Rāzī states that a number of proofs show that sight is not dependent on the reception of the forms of observed objects. Here, he focuses particularly on refuting the mirror analogy. He draws on the positions of the discerning natural scientists (*al-muḥaqqiqūn min al-ṭabīʿiyyīn*) to argue against the analogy. His points here are not particularly illuminating in that they only provide arguments against the Aristotelian theory. That is, they do not, as far as I can tell, reveal much about Rāzī's own approach to optics, apart from the fact that he himself does not rely on the theory of form-reception. However, in the course of his analysis, Rāzī mentions a revealing point regarding the optical theory of his opponents. That is, he states that the form, or rather likeness (*shabah*; pl. *ashbāḥ*), of a thing that enters each eye must unite in the front ventricle of the brain at the point where the nerve systems meet, *multaqā al-ʿaṣbatayn*, after being transmitted through the separate optic nerves behind each eye. Otherwise, we would always see two likenesses for each observed thing. *Shabah*, which was translated into Latin as *simulacrum*, means a likeness or image of the object, which is how Avicenna defines it. What Rāzī states reproduces Avicenna's position in the *De Anima* of the *Shifāʾ*, where Avicenna states, in III.8, that "the first thing that the simulacrum (*shabah*) of the seen thing is impressed (*yanṭabiʿ*) on is the crystalline [of the two eyes] but sight does not occur in reality with that, otherwise one thing would be seen as two things, since there are two simulacra in the two crystallines."⁴⁴⁷ Avicenna goes on to say that the two simulacra unite where the optic nerves meet (*multaqāhumā*). Rāzī is well aware that this

⁴⁴⁷ Avicenna, *De Anima*, 151.

is Avicenna's position. Indeed, just before Rāzī ends his preliminary discussion, he quotes the words of Avicenna that I have cited, almost verbatim, from the *De Anima*.⁴⁴⁸ In all this, Rāzī knows very well that Avicenna holds that sensible forms are *likenesses* that are impressed on the sense faculty and are not simply the quiddities of things.⁴⁴⁹ Avicenna states in the preceding chapter of the *De Anima*: "We hold that the eye receives in itself a form (*ṣūra*) that is similar (*mushākila*) to the form (of a thing) in which that form occurs, and is not its very form."⁴⁵⁰ That is, Avicenna argues against the notion that the sense faculty actively separates or abstracts form from external objects, a position he states no one held. As indicated by his consistent use of *intibāʿ*, Rāzī knows that on the Aristotelian view the sense faculty is a passive recipient of forms. Avicenna uses the term *infīʿāl* to indicate that the sense organ or faculty is not an active agent. Why, then, does Rāzī raise all these questions, particularly regarding forms and representation, in his commentary on Avicenna? I believe it is to underscore the fundamental point of divergence between his theory of knowledge and sense perception and Avicenna's, even given the significant shifts that Avicenna makes to the Aristotelian theory.

Immediately following his discussion of sight and the mirror analogy, Rāzī returns to a point he set out earlier, namely, whether perception is simply the reception of forms of objects or not. Rāzī states that Avicenna is not always clear on the matter but that the best interpretation is that, above and beyond the reception of a form, perception requires the positing of a "relational state". The question revolves around problems with accounting for change in the visual perception of an object which dogged the Aristotelian

⁴⁴⁸ Rāzī suggests that it is from the *Shifāʾ*, see Rāzī, *Sharḥ al-Ishārāt*, 2, 233.

⁴⁴⁹ McGinnis has provided a comprehensive analysis of how Avicenna's theory begins with the likeness and ends with the abstracted intelligible form; see McGinnis, "Making Abstraction Less Abstract".

⁴⁵⁰ Avicenna, *De Anima*, 141.

intromissionist theory. For example, if our sight of an object involves the reception of the object's quiddity, why does sight of the *same* object change depending on external conditions? What about erroneous perception? These and other objections were problems that the Aristotelian intromissionists in optics had to deal with. As Hasse has noted, Avicenna early on in his career held the Aristotelian line that light is simply the actualization of the translucent medium insofar as it is translucent. That is, light does not exist, in the Aristotelian view, separate from the medium. Later on, in the *De Anima* and elsewhere, Avicenna takes a different stance. Light now is the quality of luminous bodies, which is transmitted to non-luminous bodies. By reformulating light in this way, Avicenna can better address objections to the problems arising from the form-reception theory.⁴⁵¹ For example, in III.7, Avicenna states that the nature of simulacra is itself dependent on the nature or brightness of the light. Avicenna still wants to maintain the Aristotelian theory in some way by positing the idea that the simulacrum is conveyed to the common senses and onward to the higher faculties (i.e., those of imagination, estimation and intellection), until finally the simulacrum is fully abstracted of accidental material properties and grasped as an intelligible form, when the true intelligible form is transmitted from, or actualized by means of, the Active Intellect.⁴⁵²

⁴⁵¹ D. N. Hasse suggests that Avicenna may have been influenced by Bīrūnī, with whom he had a correspondence on the problem of the Aristotelian definition of light. Avicenna's later theory is closer to Bīrūnī's position. See *Avicenna's De Anima in the Latin West: The Formation of a Peripatetic Philosophy of the Soul, 1160-1300* (London: Turin, 2000), 108-119.

⁴⁵² McGinnis has argued that what is transmitted from the Active Intellect is not the abstract forms themselves but accidental properties or, more specifically "intelligible accidents", such as universality. See McGinnis, "Making Abstraction Less Abstract", 173-174. This approach resolves a number of tensions between the role of abstraction and the role of the Active Intellect in Avicenna's system, and makes sense of why Avicenna takes abstraction so seriously. One question this raises, however, is whether intelligible accidents are the kinds of things or quiddities that, on Avicenna's view, *can* exist in the celestial intellects. Above, in the *Letter on the Soul*, it was noted that unreal or imagined forms do not exist in the Active Intellect. This seemed to imply that what does really exist are the true forms of natural things. It seems these further tensions require resolution.

Rāzī wants to underscore two points. One is that in acknowledging that form-reception has to take external conditions into consideration, specifically the “relational state” between the sense faculty and object of sight, he believes Avicenna has already rendered form-impression otiose. That is, we no longer need to posit form-impression in order to explain sense perception. This point I shall return to shortly, as Rāzī expands on it elsewhere. The second point is that Avicenna’s position is internally problematic. After stating that the positions of Avicenna conflict (*muḍtarib*), Rāzī suggests the charitable reading and states that Avicenna does try to account for relational states in his theory of sense perception, despite Avicenna’s neglect to examine the role of relational states in various texts. Rāzī then discusses the views of Avicenna’s “predecessors” (*al-falāsifa al-mutaqaddimūn*), particularly with regard to why they held that the quiddity of the object of knowledge obtains in the knower. Rāzī states that they did not hold that position without also holding that the object of knowledge becomes united (*yattaḥidu*) with the faculties of the knower. Rāzī believes that whoever holds to the form-reception theory must commit to the faculties’ becoming like or identical to the quiddity of the object of knowledge. Otherwise the quidditative theory cannot distinguish, say, the form of blackness that inheres in an external substrate, and the form of blackness that inheres in the mind. If they do distinguish the two, without holding to identification, this would not in fact be based on quiddities but likenesses. Rāzī also notes that on this view, one needs to also explain why percipient beings that receive forms *perceive* the form and why inanimate objects do not; rather, forms simply inhere in them. Significantly, this was an important problem that troubled many Aristotelian commentators.⁴⁵³ It seems that Rāzī

⁴⁵³ It is curious that Avicenna seems to be less troubled by this question than Rāzī. I have not found where

thinks that unification (or identification), which differs from the property of inherence, is meant to provide the required explanation.⁴⁵⁴ Rāzī notes that Avicenna affirmed unification in his earlier work *al-Mabda' wa-l-Ma'ād*, but vehemently rejected it in his later works, especially the *Ishārāt*. Rāzī states, “He then retracted his position on unification (*ittiḥād*) in this book and considers it a fabrication (*khurāfāt*). But combining the two positions is problematic (*mushkil*). Indeed, whoever holds that knowledge is the impression itself [of the form] must hold to unification, so that he can distinguish between the inherence of blackness in the soul and its inherence in a body. And whoever rejects unification must affirm that knowledge is something above and beyond (*amr warā'*) the impression [of a form].”⁴⁵⁵ As mentioned, Rāzī subsequently notes that later on Avicenna does indeed affirm that forms are simulacra. In this light, it should be noted that Rāzī simply intends to underscore certain tensions in Avicenna and the Aristotelian theory in the preliminary discussion.

Rāzī's discussion reduces the dispute between him and Avicenna about knowledge to one main point of contention: how precisely to interpret Avicenna's view of “representation”, which in the case of sight was the *shabaḥ* or simulacrum. When Rāzī finally arrives at Avicenna's first line quoted above which states that the quiddity is “represented” (*mutamaththila*), Rāzī states that an investigation into representation is required (*tastada'ī baḥṭh^{an} 'an al-tamaththul*). Rāzī states here that Avicenna has not provided a full answer to the question of the relation between the essence of a thing and

Avicenna tries to explain this. Perhaps, his notion of simulacra makes it clear that images are not forms, in which case Avicenna would still have to deal with explaining the Aristotelian theory of perception for all the other senses. See, for example, Aquinas' attempt at dealing with the problem in Robert Pasnau, *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997), 50-60.

⁴⁵⁴ It is notable that Broadie argues that Aristotle should be interpreted with this stronger thesis of identification, given Aristotle's commitments; see “Aristotle's Perceptual Realism”.

⁴⁵⁵ Rāzī, *Sharḥ al-Ishārāt*, 2, 229.

its likeness. I will not examine how Avicenna might respond to Rāzī's objections here. Avicenna's view is quite complex and he would have had the resources within his system to at least provide a rejoinder. However, it is not clear how Avicenna would have rendered it consistent with his more general Aristotelian commitments. I turn now to Rāzī's own view, specifically why he thinks the notion of form-impression (*inṭibā'*) is problematic and otiose.

It should be noted first that Rāzī, in *Sharḥ al-Ishārāt*, states clearly that his own preference is to view vision as simply the relational state that obtains *without simulacra being impressed on the eye*.⁴⁵⁶ However, given that Avicenna's theory relies on simulacra, Rāzī does not explain what an alternative theory of vision would look like, if we were to omit simulacra. Rāzī offers more on this problem in his other works.

In the *Mabāḥith*, Rāzī begins by distinguishing between three basic theories of vision. The first two are extramissionist theories (*aṣḥāb al-shu'ā'*) that can be broadly labeled as the "Euclidean" and "Galenic" views.⁴⁵⁷ Rāzī, like Avicenna in the *De Anima*, refutes the extramissionist theory. The Euclideans held that the eye emits rays made of corporeal material that forms a cone covering the area of vision. The Galenists held that the rays produced by the eye transforms the air outside of the eye so that it becomes an instrument by which the eye can see. The third view is the one formulated in precisely the same way that Avicenna formulates the intromissionist theory in the *De Anima*, i.e., that simulacra of objects are impressed on the crystalline of the eye by means of the transparent medium of air (*inṭibā' aṣḥbāḥ al-mar'īyyāt bi-tawaṣṣuṭ al-hawā' al-mushaff*

⁴⁵⁶ He states, "Hence, vision is an expression for (*'ibāratan 'an*) the relational state that obtains between the faculty of vision and the existent thing in external reality *without the forms of the object of sight being impressed on the faculty of vision or its substrate (maḥallihā)* [i.e., the crystalline]." *Sharḥ al-Ishārāt*, II, 218.

⁴⁵⁷ Lindberg, *Theories of Vision*, 44.

fī al-ruṭūba al-jalidiyya). Rāzī identifies the latter simply as the theory of impression (*inṭibāʿ*). In the *De Anima*, Avicenna proceeds by refuting the two extramissionist options and then affirming the third, i.e., the intromissionist option. In the *Mabāḥith*, Rāzī states, a number of times, that the extramissionist theory and the intromissionist theory do not exhaust all possibilities. More precisely, Rāzī states that extramission (*al-qawl bi-l-shuʿāʿ*) and the theory of impression (*al-inṭibāʿ*) do not comprise two contradictory positions such that the falsity of one entails the truth of the other. Rāzī here states that it is possible (*muḥtamal*) that sight is an apperception (*shuʿūr*) that is a relational state (*ḥāla idāfiyya*) which obtains, whenever all the necessary conditions of vision are met, without the eye emitting rays or forms being impressed on the eye.⁴⁵⁸ Again, Rāzī completes his analysis and critique of impression (*inṭibāʿ*) without expanding on what alternative theory might be proposed. He notes, towards the end, that most of those who hold to the theory of impression hold that vision is simply the impression of the simulacrum in the crystalline. But some maintain (*zaʿama*) that vision is a relational state that obtains with the condition (*mashrūṭa*) that the impressed form obtain (i.e., the form is a necessary but not sufficient condition), or they view the relational state as obtaining as an effect (*maʿlūla*) of the impressed form.⁴⁵⁹ Rāzī clearly prefers the intromission theory of vision but rejects the notion of impression and simulacra. It should be noted that Rāzī calls those who hold to the theory of impression the “simulacrists” (*aṣḥāb al-ashbāḥ*). Rāzī’s discussion here parallels his points in *Sharḥ al-Ishārāt*, specifically in that the proponents of intromission can be viewed as holding three distinct positions: (1) vision is simply the impression of simulacra or forms; (2) vision requires the impression of simulacra as well

⁴⁵⁸ Rāzī, *Mabāḥith*, II, 313.

⁴⁵⁹ *Ibid.*, 319.

as a relational state; (3) vision is simply a relational state. Importantly, in the *Mabāḥith*, Rāzī clarifies that he cannot disprove the possibility that simulacra are required in addition to the relational state; only that simulacra are not explanatorily required for a theory of vision.⁴⁶⁰ It should be noted here that Rāzī proceeds, once again, by carefully adhering to his epistemological principles: Rāzī does not deny the noumenal possibility that forms of some kind may be required in perception, but he does deny that forms are required at the epistemological and explanatory level. In any case, this brings us back to our initial problem of how to precisely construe intromission as an optical theory that only posits a relational state.

In a subsequent chapter, Rāzī discusses the problem of seeing two things when one crosses one's eyes. This is an objection raised against the *aṣḥāb al-ashbāḥ*, since they hold that the simulacra impressed on the crystalline unite in a higher faculty, so crossing one's eyes should not interfere with that process. Rāzī mentions a few potential responses that the *aṣḥāb al-ashbāḥ* might offer but Rāzī believes that the problem requires a definitive resolution if one affirms simulacra.

In the *Mabāḥith*, Rāzī does not have an independent section on the kinds or categories of sight. However, he does have a chapter on the “common sensibles” (*al-maḥsūsāt al-mushtaraka*). Rāzī's list of common sensibles reproduces in order and number that set out by Avicenna towards the end of III.8 of the *De Anima*: size (*al-maqādīr*), number (*al-a^cdād*), position (*al-awḍā^c*), motion (*al-ḥarakāt*), rest (*al-sakanāt*), shape (*al-ashkāl*), proximity (*qurb*), distance (*bu^cd*), and contiguity (*mumāssa*).⁴⁶¹ Rāzī

⁴⁶⁰ Ibid., 320.

⁴⁶¹ The only difference is that he switches the order of “number” (*al-a^cdād*) and “position” (*al-awḍā^c*), namely from second and third respectively in Avicenna, to third and second respectively. See Avicenna, *De Anima*, 159. Rāzī, *Mabāḥith*, 2, 330. On the common sensibles, see Aristotle, *De Anima*, 2.6.418a20-25;

summarizes the points that Avicenna raises regarding the real and accidental objects of perception. The common sensibles are not accidental, but they follow upon (*muqārīn*) the real sensibles. With regard to sight, Rāzī notes Avicenna's point that the primary and real object of sight is color, and that the common sensibles are perceived by means (*bi-tawaṣṣuṭ*) of color. Rāzī goes on to consider the other senses, as does Avicenna.

However, Rāzī returns to the question of sight after his summary of Avicenna and states, "In general terms (*bi-l-jumla*), the perception of sight of these things [i.e., sensibles] is stronger, even if its perception of them in most things also needs the assistance of a kind of inference (*bi-isti'ānatⁱⁿ minhu bi-ḍarbⁱⁿ min al-qiyās*)."⁴⁶² Avicenna does not mention *qiyās* or inference with regard to sight in the *De Anima*, or in any of his other major works. It is therefore not clear what Rāzī means here, and the *Mabāḥith* does not say any more on the matter.

In the *Mulakhkhaṣ*, Rāzī has an independent section on the objects of vision (*al-mubṣarāt*). He begins the section by providing the following list: light (*al-daw'*), color (*al-lawn*), surfaces (*al-aṭrāf*), size (*al-ḥajm*), distance (*al-bu'd*), position (*al-waḍ'*), shape (*al-shakl*), separation (*al-tafarruq*), continuity (*al-ittiṣāl*), number (*al-ʿadad*), motion (*al-ḥaraka*), rest (*al-sukūn*), smoothness (*al-malāsa*), roughness (*al-khushūna*), the transparent/translucent (*al-shafīf*), opacity/density (*al-kathāfa*), shade (*al-ẓill*), beauty (*al-ḥusn*), ugliness (*al-qubḥ*), similarity (*al-tashābuh*), and difference (*al-ikhtilāf*). Rāzī states after this:

3.1.425a14-b4. Avicenna and Rāzī probably use the plural forms so as to not confuse any of the sensibles with the categories and subdivisions of the categories. I have translated them in the singular form.

⁴⁶² Ibid., 332.

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There are other things that fall under these, such as order, which falls under position; writing and all imprints (*al-nuqūsh*), which fall under order and shape; straightness (*al-istiḳāma*), curvature (*al-inḥināʾ*), convexity (*al-taḥdīd*), and concavity (*al-taqʿīr*), which fall under shape; multitude (*al-kathra*) and sparsity (*al-qilla*), which fall under number; equality (*al-tasāwī*) and inequality (*al-tafāḍul*), which fall under similarity (*al-tashābuh*); laughter (*al-ḍaḥk*) and crying (*al-bukāʾ*), which fall under shape and motion; joyfulness (*al-bishr*), cheerfulness (*al-ṭalāqa*), graveness (*ʿubūsa*), and scowling (*al-taqīb*), which fall under shape and rest; moisture (*al-ruṭūba*) and dryness (*yabūsa*), because sight perceives moisture in the flowing (*saylān*) [of a body] and dryness [is perceived] due to the firmness (*a-tamāsuk*) [of the body].⁴⁶³

Avicenna does not provide a list like this of primary and secondary objects of sight in the *De Anima* or his other major works. However, in II.3 of the *Optics* of Ibn al-Haytham, the latter provides a list of 22 primary divisions of objects of sight, and lists them with the same terms (i.e., exact phrasing) and order of both the primary and secondary categories, with a few differences.⁴⁶⁴ I will note only the differences. First, in the primary list, after *ḍawʾ* and *lawn* Rāzī adds *aṭrāf* and *ḥajm* and then lists *buʿd* and *wadʿ*. After *ḍawʾ* and *lawn*, Ibn al-Haytham lists *buʿd* and *wadʿ* immediately and then lists *tajashshum* (extension or corporeality), *shakl*, and *ʿiẓam* (size). Rāzī does not include *tajashshum* or

⁴⁶³ Rāzī, *Mulakhkhaṣ*, fol. 154b.

⁴⁶⁴ Ibn al-Haytham, *Kitāb al-Manāẓir*, Books I-III, ed. A. I. Sabra (Kuwait: The National Council for Culture, Arts, and Letters), 230 (hereon referred to as *Optics*).

‘izām. The fourteen sensibles that follow are precisely those listed by Ibn al-Haytham in the same word form, with two minor exceptions. *Khushūna* precedes *malāsa* in Ibn al-Haytham’s list and also Ibn al-Haytham adds *zulma* (darkness) after *ḍill*, which Rāzī does not list. Ibn al-Haytham, like Rāzī, immediately moves on to discuss the secondary qualities, and like Rāzī states that these “fall under” those in the first list. Rāzī’s list in **T20** is the same in wording and order as that provided by Ibn al-Haytham, with even smaller differences. For example, Ibn al-Haytham adds that *ḍahk* and so on are the shaping (*tashakkul*) of the form of the face (*ṣūrat al-wajh*), and thus fall under *shakl*. There are several ways to explain some of the divergences. For example, Rāzī might not list *tajassum* because Ibn al-Haytham explains it as three-dimensional extension, which is what Rāzī seems to have in mind with *aṭrāf*, which he later states consists in point, line, plane, and *ḥajm*, which is magnitude or size. In any case, we have better evidence that Rāzī is getting the list from Ibn al-Haytham’s *Optics*. In his chapter on optics (*‘ilm al-manāẓir*) of his work *Jāmi‘ al-‘Ulūm*, which is a summary in Persian of the major principles and problems of forty sciences, Rāzī provides two lists (*do qism*) in the fourth section (*aṣl chhāram*). Rāzī provides, this time, the first list of Ibn al-Haytham, the only difference being that where Ibn al-Haytham lists *tajassum* Rāzī lists *miqdār*. Everything else is exactly the same. Although several terms are in Persian naturally, almost half preserve the Arabic words. Rāzī however abridges the second list more than he does in the *Mulakhkhaṣ*. But what is most significant is that Rāzī states explicitly, “These are the kinds of objects of sight as Ibn al-Haytham lists them in the *Optics (Manāẓir)*”.⁴⁶⁵

⁴⁶⁵ Rāzī, *Jāmi‘ al-‘Ulūm*, ed. S. ‘Alī Āl Dāwūd (Tehran: 2003-2004), 410.

This raises a major question regarding the history of Ibn al-Haytham's *Optics*. The established view of the *Optics* is that its manuscript did not arrive in the Islamic East, where Rāzī flourished, until the end of the thirteenth century.⁴⁶⁶ I will not attempt to deal with the problems of its manuscript history here. In any case, my claims do not concern the history of optics since I will not argue that Rāzī provides a fresh look at optics. I am interested in his philosophical views as they may relate to alternative scientific theories. The reference to Ibn al-Haytham in Rāzī's *Jāmī' al-'Ulūm* may be explained in a number of ways. For example, it could be the result of a scribal interpolation that was intended to suggest the source of Rāzī's list. In the following I examine several reasons why it is likely that Rāzī was drawing on Ibn al-Haytham's *Optics*. The discussion suggests that Rāzī was interested, from a philosophical perspective, in what has been recognized by historians of science as the unique contributions that Ibn al-Haytham advances in the *Optics*.

What is important for our analysis is that Rāzī notes a number of crucial points about objects of sight that relate to his rejection of the theory of simulacra and impression. First, following his list, he states that the only true and immediate objects of sight are color *and* light, and all the other properties are not true objects of sight. Avicenna does not state that light is an object of vision. Like Rāzī, Ibn al-Haytham states, in II.3, that the "forms" of color and light are the primary objects of sight.⁴⁶⁷ Rāzī then moves on to consider the question of whether color simpliciter (*lawn*) or a specific color (e.g., red, green, and so on) is perceived first. He provides arguments for the position that

⁴⁶⁶ A. I. Sabra states: "It is even more remarkable that no one in the Islamic world seems to have made effective use of Ibn al-Haytham's *Optics* until the end of the thirteenth century". See his "Optics, Islamic", *Dictionary of the Middle Ages*, vol. 9 (New York: Scribner, 1987), 240-247. See also Sabra's remarks in the Introduction to the *Optics*, 44.

⁴⁶⁷ 231-235.

lawn is perceived prior to a specific color. Ibn al-Haytham, following his list of objects of sight in II.3 and his discussion of light and color being the true objects of the sense of sight, moves on to consider the question of whether *lawn* or a specific color is perceived first and argues that *lawn* is perceived first.⁴⁶⁸ Rāzī then states the position that the perception of a particular color only ever occurs at a moment of time (*lā yakūnu illā fī zamān*). Rāzī provides the example of a top (*al-duwwāma*; i.e., a child's toy with colored markings) which is stripped at the top and spins quickly. Our sight sees what Rāzī describes as a “composite of all the [specific] colors [of the stripes]”. That is, we do not see the specific colors because the required instant of time to observe a particular color does not obtain. Ibn al-Haytham asserts this very position next in his own discussion. He states, “The perception of the quiddity (*māhiyya*) of a color only occurs in [an instance of] time” (*lā yakūnu illā fī zamān*).⁴⁶⁹ Ibn al-Haytham uses the same example of the top (*duwwāma*) to illustrate his point. Rāzī then provides a very brief discussion of how the secondary objects of vision are connected (or not connected) to the primary ones. This is a very brief overview that Rāzī provides of the points Ibn al-Haytham raises in his lengthy discussion of individual secondary objects of vision.

More important than the textual correlation is the philosophical significance that Rāzī seems to find in all this. Here, Rāzī's example of the top is particularly important. First, it should be noted that an instant of time is not an ontologically minimal part of time. Rather, this is what Ibn al-Haytham stipulates as the minimal length of time the eye needs to see an individual color (*zaman^{an} maḥsūs^{an}*), whatever that may be.⁴⁷⁰ More importantly, the example of the top is based on Ibn al-Haytham's unique theory of the

⁴⁶⁸ 236.

⁴⁶⁹ 238.

⁴⁷⁰ 239.

image or, as Sabra has called it, the “ordered form”.⁴⁷¹ That is, the perceived image of an object of sight is, first, a composite of colors which is produced by the one-to-one correspondence of points of color on the object to the interior surface of the eye, transmitted by straight rays from each point on the object. All other properties and forms of the object follow upon this initial color image. As Sabra states, “The theory maintained that ‘perception’/idrāk/comprehensio of any object in the field, and of all its visual properties (size, shape, distance and the rest), consisted in a mental reading of this color mosaic (which, alone, is said to be first ‘sensed’ or registered on the crystalline’s surface)...”⁴⁷² Again, it is important to note that the “points” involved are not ontological minima but posited to explain mathematically the correspondence of the image to the object and to explain what Ibn al-Haytham construes as the problem of “distinct vision”, to which we shall return.⁴⁷³ Rāzī’s discussion of the child’s top raises this point of “point-forms” (*nuqṭa*). He states that the problem is that each point of color is not maintained in rest for the minimal amount of time required to have sight of it (*zamān^{an} maḥsūs^{an}*).

The most important point regarding this discussion is that, in Ibn al-Haytham’s theory, the link between the immediate sight of a point-form color image and a fully and consciously perceived object of sight is a kind of inference (*bi-ḍarb min ḍurūb al-qiyās*). Recall that Rāzī, in the *Mabāḥith*, had stated that most things perceived by sight draw on a certain inference (*qiyās^{um} mā*). Importantly, Ibn al-Haytham’s entire discussion in II.3, which precedes the list that Rāzī reproduces, is the discussion of how inference (*qiyās*), discernment (*tamyīz*) and induction (*istiqrāʾ*) are required on the part of our mind to

⁴⁷¹ A.I. Sabra, “Ibn al-Haytham’s Revolutionary Project in Optics: The Achievement and the Obstacle,” in *The Enterprise of Science in Islam: New Perspectives* (Cambridge, Mass.: The MIT Press, 2003), 96.

⁴⁷² Ibid., 96.

⁴⁷³ See Sabra, “Ibn al-Haytham’s Revolutionary Project,” 96-99.

move from color images to intelligible perceptions. These are not conscious deductive inferences, but fast mental processes posited to account for what Ibn al-Haytham calls “distinct vision”. He states, “[V]ision is not achieved by pure sensation alone, and that it is accomplished only by means of discernment and prior knowledge...and that without discernment and prior knowledge sight would achieve no vision whatever nor would there be perception of what the visible object is at the moment of seeing it.”⁴⁷⁴

Rāzī is not particularly interested in the details, or in providing a comprehensive overview, of Ibn al-Haytham’s theory. Rather, he is interested in its philosophical significance, as suggested in his selective discussion. Indeed, it is notable that of all the problems in optics discussed in the vast *Optics* of Ibn al-Haytham, Rāzī chooses to discuss the specific issues regarding the objects of vision that Ibn al-Haytham assesses in II.3. As our above analysis suggests, Rāzī usually has a good reason for specifying problems. What Rāzī seems to achieve in the *Mulakhkhaṣ* by distinguishing the primary sensible of color and subordinating the rest to our immediate perception of the color image, is to suggest more precisely how one might undercut the role of simulacra and the impression of forms. Indeed, as Sabra notes, although Ibn al-Haytham uses “forms” (*ṣūra*) and “quiddity”, they have no philosophical import in Ibn al-Haytham’s system. In fact, a central point of Ibn al-Haytham’s argument in Book I is that form-reception is not a sufficient condition for knowledge. That is, Ibn al-Haytham views the problem exactly as Rāzī had, though Rāzī formulates and motivates the problem philosophically.

More significant, perhaps, are the consequences Ibn al-Haytham’s results bear on philosophical epistemology. As suggested in the quote above, Ibn al-Haytham believes

⁴⁷⁴ Translated by Sabra, “Ibn al-Haytham’s Revolutionary Project,” 104.

that vision, or more specifically image formation, is rooted in mind-dependent processes. That is, complex objects require mental inferences, which are dependent on physical constraints (like the minimal time required for sight to accurately perceive). More importantly, our conception of things is dependent in part on our previous experiences and how our faculties discern and organize our experiences. Ibn al-Haytham puts this premise to much use, for example, in his discussion of the errors of perception. This approach differs radically from the form-impression theory, which posits only the required number of experiences until an accurate likeness of the object is formed. That is, the theory of impression is based on the assumption that the objects our faculties pick out are in fact fundamentally distinct ontological objects. Now, Ibn al-Haytham does not explicitly discuss the metaphysical significance of his theory, but an immediate consequence of his theory is that our mental processes and experiences determine to some extent what our objects of perception are (and that these objects may not identify ontologically basic things).

Rāzī quite clearly understands the relevance here of Ibn al-Haytham's theory. It is not clear whether Ibn al-Haytham is Rāzī's primary or sole scientific inspiration, but the components of Ibn al-Haytham's theory does corroborate, and in fact directly parallel, Rāzī's epistemology. This applies not only to Rāzī's rejection of mental forms and noumenal properties, but also his positing that the primary objects of knowledge are sensible simples (see, for example, **T2**). On Rāzī's account, our knowledge of composites is based on our more basic and certain knowledge of simples. This, it will be recalled, cut out the third option of substantial simples, which correspond to the essences of things (and which in turn correspond to visual forms or simulacra). Moreover, Ibn al-Haytham's

theory, so far as it concerns Rāzī, only posits observable or phenomenal principles. Indeed, for this reason, Sabra calls Ibn al-Haytham's optics "a phenomenalist theory." What is remarkable here, and probably quite satisfying to Rāzī, is that one only needs to posit the vision of colors arranged in order and all other properties of things are explained as following from that starting-point. There is ambiguity about how much of this is mind-dependent, but that is entirely welcome to Rāzī. Recall that Rāzī's structured universals were simply those picked out by a language community. Here, there is a parallel between the intersubjective consensus of language and the mind-dependent processes required for concept formation. Recall that Rāzī held that the nature of naming things is beyond our grasp and thus does not concern him philosophically. Similarly, Rāzī does not go into the details of Ibn al-Haytham's psychology. Rather, Rāzī simply posits a certain kind of inference required to obtain sensibles that are clearly not the immediate objects of vision.

What Rāzī ultimately gains with Ibn al-Haytham as a positive philosophical position is, I believe, his claim that knowledge is simply a "relational state". In the *Mabāhith*, Rāzī announced the truth of this claim, as opposed to the theory of impression, but it was not clear why. He had in fact stated there that we posit mental forms of *objects* in the case of things that are not externally existent because there is nothing to which our ideas would otherwise correspond. However, Rāzī states that in the case of external existents, we need not posit forms but only a relational state. The simulacrum thus becomes the explanatory third wheel in Rāzī's philosophical analysis of the theory of sight. It is hard to understand what Rāzī would mean by all this, if we did not have Ibn al-Haytham's systematic theory of optics. In particular, to Ibn al-Haytham, perception is not simply sensation (or abstraction) but a constant comparison of present sensations with

past sensations and experiences. As such, vision is not simply the transmission of forms from the object to the knower, but a particular relation between the object and the “state(s)” of the knower.

In the following, I will explore some materials that will shed light on Rāzī’s position on concept formation, beginning with induction. I argue that his notion is based on a theory of perception of phenomenal regularity in the external world.

I begin here by discussing some points that Rāzī raises at the end of the logic of the *Mulakhkhaṣ*. In his discussion of demonstration in the *Mulakhkhaṣ*, he assesses premises that serve as the first principles for demonstrations.⁴⁷⁵ It should be noted that Rāzī often begins the discussion of demonstration by pointing out that logicians have prolonged their discussions here. His lack of interest in demonstrative theory, specifically in his independent works, is quite clearly connected to his resistance to Aristotelian essentialism and demonstrative knowledge, as discussed above. He suffices with the following as his view of demonstration, which is simply his view of deductive proof: “That which we state is that you have come to know from what preceded [i.e., in syllogistics] how the formulation (*tarkīb*) [of an argument] should be so that it is valid and productive. So we say that if those formulations apply to premises that are certain, then the syllogism is composed of certain premises in a manner whose formulation is known to be valid, and so the conclusion is entailed by it necessarily.”⁴⁷⁶ Significantly, Rāzī does not raise the discussion of the distinction between *innī* and *limmī* proofs (*quia*

⁴⁷⁵ Rāzī, *Manṭiq al-Mulakhkhaṣ*, 343.

⁴⁷⁶ Ibid.

versus *propter quid* proofs), which is central to Avicenna's approach to demonstrative science.

Following his discussion of first principles, Rāzī considers several problems raised by skeptics (*al-sūfistā'iyya*) that undermine the possibility of certain knowledge. Among the problems he raises are those that apply to our knowledge of everyday events (*al-ʿādiyyāt*). He provides the examples of our being certain that Zayd at time t^1 is the same Zayd at t^2 , and the classic *kalām* example of pots and pans turning into gold or wise men when one leaves one's home. The question he raises on behalf of the skeptics is how the intellect sometimes judges some things with a certainty that is similar to our certainty of first principles. But our knowledge of those things, such as that of everyday events, turns out to be susceptible to doubt, so such assertions (*jazm*) on the part of the intellect are no proof for the actual certainty of a principle. Rāzī argues that this point applies to the *falāsifa* as well as the *mutakallimūn* since, first, the *falāsifa*'s response requires accepting their (speculative) proofs and, second, such assertions obtain prior to our knowledge of demonstrative proofs. That is, if one begins with the assumption of such skeptical principles, one cannot obtain demonstrative knowledge. Thus, the objection is directed at our immediate certainty of such matters. Subsequent to listing the problems raised by skeptics, Rāzī responds with a blanket statement to the effect that any response to an objection against self-evident truths requires inferential arguments (*naẓar*) and would thus render what is self-evident inferential. However, Rāzī states that even if our assertion of such things does not require a refutation of skeptical problems, he will provide responses in a supplementary manner. Here he points to responses he provides to skeptical objections in his earlier work, the *Nihāya*.

Significantly, Rāzī suggests in the *Nihāya* that knowledge of everyday events in the world does provide *at least some sort of certainty*. This perhaps comes as a surprise considering that, just a few pages before, he refutes the certainty of knowledge derived from experience and induction, since it would require, for example, our assertion that God is not a Willing Agent (that is, certainty about causal events would rest on asserting the necessity of natural or secondary causes and effects). In the *Nihāya*, Rāzī is particularly interested in the problems raised by various categories of skeptics.⁴⁷⁷ The fourth objection advanced on behalf of the first category of skeptics, whom he refers to as the *lā-adriyya*, concerns the problem of our knowledge of ordinary events. The same examples discussed in the *Mulakhkhaṣ* are found here, though he provides another reason as to why this objection applies to the *falāsifa* as well. That is, the *falāsifa* cannot rule out with certainty the occurrence of a rare peculiar form (*shakl gharīb nādir*) in the heavens that would cause such erratic events.⁴⁷⁸

⁴⁷⁷ Rāzī divides skeptics into three broad categories: (1) *lā-adriyya* (whom he defines as those who refrain from asserting or denying anything); (2) *inādiyya* (those who assert that nothing exists or deny that there is anything real); (3) *indiyya* (those who claim that the truth or reality of things are determined by our beliefs and not that the truth of our beliefs are determined by their correspondence to reality). Each category is treated in this order, assigning most detail to (1) and the least to (3), fols. 18-23 in the *Nihāya*, after which he provides responses.

⁴⁷⁸ Rāzī is well aware that the orbs according to the *falāsifa* are eternal and changeless, as he subsequently discusses this position in the *Nihāya*. He is referring to Avicenna's acceptance of possible rare events in the world that we cannot necessarily explain or anticipate. In his discussion of the *reason-why* (*limmiyya*) that explains odd occurrences (*umūr gharība*) that contravene ordinary events (*khawāriq al-ʿāda*), Avicenna states as the third reason: "Celestial powers between [the heavens] and the mixtures of earthly bodies specified by positional conjunctions (*hayʾāt wadʿiyya*)... which is followed by the occurrence of odd effects (*āthār gharība*).” See *Sharḥ al-Ishārāt*, 2, 663. The form Rāzī refers to is perhaps the positional conjunctions that Avicenna mentions, since *shakl* and *hayʾa* hold similar connotations. Rāzī is speaking loosely, but the point does seem to hold in that our near certain knowledge of everyday ordered events, even according to the *falāsifa*, may be undermined.

His responses are relatively brief.⁴⁷⁹ In response to the fourth objection, specifically regarding the problem of identifying Zayd, Rāzī states, “What is perceived by the senses is the existence of this observed [individual], about which there is no doubt. As for this [individual] being the one observed yesterday, this is not a matter of what is perceived by the senses. So a mistaken [judgment] regarding it is not a mistake regarding sense perception. And this is the [same] response [that applies] to their statement that if we step out of the house, we admit the possibility (*jawwaznā*) that what is in it by way of pots and pans turn into learned men, because this possibility (*tajwīz*) (...) ⁴⁸⁰ regards the existence of a sensible thing but rather regards something that is not sensible, and so this is not a charge against [our knowledge of] objects of sense.”⁴⁸¹ The likeliest candidate I can propose for the illegible term is *yushakkikunā*, in which case a negation would have been left out.⁴⁸² In any case, from the preceding points, it is fairly clear what Rāzī intends to say: the possibility that one might consider in such cases applies only to something beyond the objects of sense perception. Importantly, what is not being debated here is when one finds certain sensible features of Zayd that leads one to suspect whether Zayd is in fact the Zayd you knew the day before. Nor are we considering the inability of our senses to distinguish between individual objects of sense perception that closely resemble each other. Rather, it is assumed that one possesses the conviction that Zayd is Zayd through sense perception, a conviction that engenders a level of certainty that we

⁴⁷⁹ Although he does not expand further, he refers to an even more expanded discussion in a work of his entitled *Kitāb al-Manāẓir*, which is apparently on vision, where he expands on problems of sense perception. I was not able to locate this source and it is unclear whether or not it is extant.

⁴⁸⁰ Illegible word of 5-6 characters.

⁴⁸¹ Rāzī, *Nihāya*, fol. 25.

⁴⁸² On line 13 of the same page, a similar form appears with the negation *lā*, which is clearly “*lā yushakkikunā fī*”. Although the *shīn* is not pointed, pointing is not consistent in the manuscript. Many unpointed instances of *shīn* can be found on the same page, for example: *shakhṣan* on ln. 5; *shūhida* on ln. 7; *shayʿ* on ln. 10.

normally obtain regarding everyday objects. The passage reveals an important point regarding Rāzī's overall epistemology: that he not only gives priority to what is afforded by sense perception over rational or speculative possibilities, but, consistent with his skepticism about metaphysical or essential knowledge of things, Rāzī does not rule out the possible occurrence of what contravenes, or goes beyond, our senses. In his view, our knowledge that is based on the phenomenal qualities of Zayd remains necessarily true at the level of everyday certainty. However, if beyond those phenomenal qualities change at some deeper level occurs, this requires a measure of proof that is beyond what we can rationally determine.⁴⁸³ Elsewhere Rāzī emphasizes the importance of our admission of this possibility, i.e., the certainty engendered by sense perception is not one that overrides the admission of this deeper possibility.⁴⁸⁴ Moreover he states there the principle that applies to our knowledge of Zayd is to be generalized and applied to cases not limited to the class of things considered.

Prior to the above passage, Rāzī responds to the third skeptical objection raised by the *lā-adriyya*, which interrogates the source of necessary knowledge (*darūrī*) and whether the senses are a means to obtaining it:

Their statement: Innate disposition (*fiṭra*) is either sufficient in obtaining these necessary [first] principles (*darūriyyāt*) or not. We state that it is not

⁴⁸³ This of course runs contrary to Avicenna's requirement for true certainty arrived at by demonstration as discussed below. See *Demonstration*, I, 8.

⁴⁸⁴ In a much later work, the *Maṭālib al-ʿĀliya*, which diverges in many ways from the earlier works that I have focused on, Rāzī raises the same point in a very different context. In fact he makes the point in one of the principles (*uṣūl*) of his new rational approach to proving prophecy. He states, "The second principle of those principles upon which the proving of prophecies turn (*madār*): That it is not impossible for the admission and possibility of a thing to be known, and for certainty (*jazm*) and definitude (*qaṭʿ*) to still obtain that [a thing] does not exist or obtain." He goes on to explain that the certainty that he means in knowing that Zayd is Zayd is fundamentally connected to sense perception. *Al-Maṭālib*, 8, 97-98. This seems to be how later Ashʿarites viewed our knowledge of everyday events, which they claimed is based on a sort of sense induction, see Jurjānī, *Sharḥ al-Mawāqif*, I, 90.

sufficient; rather, it is necessary to invoke (*istiḥḍār*) the conception (*taṣawwur*) of the individual terms of these primary propositions (*al-qadāyā al-awwaliyya*). Then, when those conceptions are obtained, assent necessarily obtains. [But] those conceptions are only derived through the senses. Hence, we do not claim that these propositions are only [obtained] by means of the induction of those judgments from experiential statements (*mujarrabāt*), so that what you mentioned [in terms of objections] might apply to us. Rather, sense perception provides the forms (*ṣuwar*) of these quiddities in the mind. If those forms obtain, then the obtaining of that assent is entailed by it.⁴⁸⁵

Rāzī's response invokes themes discussed by Avicenna in III.5 of *Demonstration* concerning whether the absence of a sense faculty or a type of sense perception entails the absence of certain objects of intelligible or universal knowledge.⁴⁸⁶ Like Rāzī, Avicenna affirms the need for sense perception and refers to "essential induction" (*al-istiqrā' al-dhātī*), which provides individual principles or simple concepts. He states that this kind of induction is one that is immediately associated with sense perception.⁴⁸⁷ Significantly, Avicenna distinguishes between "essential induction" and induction as a

⁴⁸⁵ *Nihāya*, fols. 24-25.

⁴⁸⁶ Indeed, from the manner in which the discussion proceeds, it seems that the problem posed at the beginning of Avicenna's chapter in *Demonstration* may itself concern arguments against his view of knowledge.

⁴⁸⁷ *Demonstration*, 158-7, where Avicenna discusses the parallel between the principles or individuals given to the senses to the axioms of mathematical astronomy and natural philosophy. It is important to note that induction here is connected *immediately* by Avicenna to the senses, and is not simply dependent on them, because the argument shows that even rational knowledge is dependent on sense knowledge, though in a removed sense.

method of proof.⁴⁸⁸ The latter requires the intellect to derive a universal judgment from particular instances. Although essential induction, for Avicenna, reliably supplies individual concepts or the simple terms that form the premises of demonstration, it does not provide certainty (or at least, the certainty he requires here) with regard to judgments. In *Demonstration* I.9, before his discussion of experiential knowledge treated above, Avicenna considers the nature of our knowledge of basic or self-evident premises, which he construes as those that do not require an explanatory cause (*sabab*) to know that the predicate holds of the subject.⁴⁸⁹ Such premises have no explanatory cause because they are self-evident (*bayyin fī nafsīhi*). However, Avicenna considers whether they are all self-evident or whether they become evident through induction. Here he distinguishes two possibilities: induction through sense perception *alone* and rational induction (*bi-l-‘aql*). He finds both possibilities problematic and suggests that the predicate simply applies to each individual of the subject self-evidently. Importantly, Avicenna eliminates sense-based or essential induction because it “does not necessitate permanence nor the exclusion of a thing that can possibly fail to hold.”⁴⁹⁰ Here Rāzī departs with Avicenna, particularly with respect to the requirement for certainty and demonstration. Avicenna states in the previous chapter, I.8, which discusses certain knowledge:

⁴⁸⁸ Thus, he treats the latter in the proofs section of the *Ishārāt*, whereas he discusses the former in his discussion of experiential knowledge which is found in the chapter on kinds of premises, i.e., that which supplies the matter for proofs.

⁴⁸⁹ The title of the chapter is: “Concerning the way to understand that whose predicate has no cause in its subjects, concerning induction and what it entails and experiential knowledge and what it entails.” *Demonstration*, I.9, 43.

⁴⁹⁰ *Ibid.*, 44. That what is at issue is not simply rational truths, such as the principle of non-contradiction, is suggested in his rejection of rational induction, where he states that what is known of the individuals is either their essential parts (which he rules out) or common accidents that, for some reason, apply to individuals. Such an analysis would only apply to external material things.

If someone says: every man is risible, every risible man is rational – it is not necessary from this that he believe with certainty that every man is rational in such a manner that it is not possible for him to believe in the possibility of the contradictory of this. This is so since laughter, or the laughing power, is caused (*ma^clūla*) by the power of rationality, so as long as the necessity of the power of rationality to human beings, and also the necessity of the power of laughter being subordinate to the power of rationality, is not understood, it is not necessary that he believes with certainty that it is not possible for there to be a human being who does not have the power of laughter. ([That is] unless certainty exists in that [person] through the senses, but the senses do not exclude the contrary of what is not perceived by them, or through experiential knowledge.) As for the intellect, *it is possible, if it disregards phenomenal regularity (al-^cāda), for it to have doubts about this and to conceive that human beings do not have the power of laughter perpetually, and for all [human beings], or to conceive of it as impermanent.*⁴⁹¹

Here, Avicenna underscores a fundamental premise that sets him apart from Rāzī: certainty should exclude the possibility of a thing's being contrary to how it seems. Even more, whatever falls short of a full essential explanation falls short of the certainty, that is, the complete, perpetual, essential certainty (*yaqīn^{an} dhātiyy^{an} dā'im^{an} tāmm^{an}*) that

⁴⁹¹ *Demonstration*, I.8, 38. I translate *cāda* as “phenomenal regularity”, because Avicenna allows for that to obtain, which is based primarily on experiential or sense knowledge and not demonstration. This accords with his view of the knowledge requirement in certain particular sciences and arts.

Avicenna requires.⁴⁹² Avicenna's position is, of course, based on his Aristotelian commitment to demonstrative proof as the source of true scientific knowledge, as we discussed above.

Returning to Rāzī's discussion in the *Nihāya*, his reference to sense knowledge as providing a sort of certainty is akin to Avicenna's generalization of phenomenal regularity (*ʿāda*) acquired through sense perception or essential induction. Rāzī however refrains from using the term induction, quite likely because he grants the objections against rational induction raised by the skeptics. Indeed, an objection he raises on their behalf is that induction presumes rational principles that make claims beyond what is afforded by sense perception. Here it is clear that the standard for knowledge is raised as induction seeks to verify knowledge of things at a deeper level. For example, Rāzī states that induction in this sense assumes the principle that "Things equal in relation to a certain thing are equal".⁴⁹³ Rāzī states that the claim that they are equal cannot be affirmed by the senses by way of verification (*taḥqīq*). That is, "equal" here is taken in the strong ontological sense of essential identity, as indicated by the term *taḥqīq*, which, as encountered previously in the *Mulakhkhaṣ* regarding essential definitions, refers to substantiating claims on a deeper demonstrative level.⁴⁹⁴

⁴⁹² *Demonstration*, I.8, 43; I.9, 45, and discussed throughout the book in detail and distinguished from non-demonstrative knowledge.

⁴⁹³ *Nihāya*, fol. 21b.

⁴⁹⁴ For a number of further objections see *Nihāya*, fol. 21.

BIBLIOGRAPHY

Primary Sources

- Abū al-Barakāt al-Baghdādī. *Al-Mu^ʿtabar fī al-Ḥikma*. 3 vols. Hyderabad, 1358 AH.
- Aristotle. *The Complete Works of Aristotle*. Edited by Jonathan Barnes. 2 vols., Princeton: Princeton University Press, 1984.
- . *Taḥlīlāt Thāniya (Maṭīq Aristū)*. Edited by ʿAbd al-Raḥman Badawī. Vol. 1. Cairo: Maṭbaʿat Dār al-Kutub al-Miṣriyya, 1948-1952.
- . *Ṭūbīka (Maṭīq Aristū)*. Edited by ʿAbd al-Raḥman Badawī. Vol. 1. Cairo: Maṭbaʿat Dār al-Kutub al-Miṣriyya, 1948-1952.
- Avicenna. *Al-Shifāʾ, al-Manṭiq, al-Madkhal*. Edited by I. Madkūr. Cairo: al-Maṭbaʿa al-Amīriyya, 1952.
- . *Al-Shifāʾ, al-Manṭiq, Kitāb al-Burhān, Kitāb al-Burhān*. Edited by ʿAbd al-Raḥman Badawī. Cairo: Maktabat al-Nahaḍa al-Miṣriyya, 1954.
- . *Al-Shifāʾ, al-Manṭiq, Kitāb al-Burhān, Kitāb al-Burhān*. Edited by Abū al-ʿAlā ʿAfīfī. Cairo: al-Maṭbaʿa al-Amīriyya, 1956.
- . *Al-Shifāʾ, al-Ṭabīʿiyyāt, Kitāb al-Nafs*. In *Avicenna's De Anima (Arabic Text): Being the Psychological Part of Kitāb al-Shifāʾ*. Edited by Fazlur Rahman. London: Oxford University Press, 1959.
- . *Al-Shifāʾ, al-Manṭiq, Kitāb al-Qiyās*. Edited by S. Zāyed and I. Madkūr. Cairo: al-Maṭbaʿa al-Amīriyya, 1964.
- . *Al-Shifāʾ, al-Ṭabīʿiyyāt, al-Kawn wa-l-Fasād*. Edited by M. Qāsim. Cairo: al-Maṭbaʿa al-Amīriyya, 1969.
- . *Al-Shifāʾ, al-Ṭabīʿiyyāt, Uṣūl al-Handasa*. Edited by ʿA. Ṣabra and ʿA. Luṭfī. Cairo: al-Maṭbaʿa al-Amīriyya, 1976.
- . *Al-Shifāʾ, al-Ṭabīʿiyyāt, ʿIlm al-Hayʾa*. Edited by M. Madwar and I. Aḥmad. Cairo: al-Maṭbaʿa al-Amīriyya, 1980.
- . *Al-Shifāʾ, al-Ṭabīʿiyyāt, al-Samāʿ al-Ṭabīʿī*. Edited by S. Zāyed. Cairo: al-Maṭbaʿa al-Amīriyya, 1983.
- . *Al-Shifāʾ, al-Ilāhiyyāt (Metaphysics of The Healing)*. Translated by Michael Marmura with Arabic edition. Provo, UT: Brigham Young, 2005.

- . *Al-Shifāʾ, al-Ṭabīʿiyyāt, al-Samāʿ al-Ṭabīʿī (Physics of The Healing)*. Translated by Jon McGinnis with Arabic edition. Provo, UT: Brigham Young, 2009.
- . *Manṭiq al-Mashriqiyyīn*. Qum: Maktabat Āyat Allāh al-ʿUẓmā al-Marʿashī al-Najafī, 1984.
- . *Al-Najāt*. Edited by ʿAbd al-Rahmān ʿUmayra. Beirut: Dār al-Jīl, 1992.
- Bahmanyār b. Marzubān, *al-Taḥṣīl*. Edited by Murtaḍā Muṭahharī. Tehran: Dānishgāh-i Tihārān, 1971.
- Al-Fārābī, Abū Naṣr. *Iḥṣāʾ al-ʿUlūm*. Edited by ʿAlī Bū Malḥam. Beirut: Dār wa-Maktabat al-Hilāl, 1996.
- . *Commentary and Short Treatise on Aristotle's De Interpretatione*. Translated and edited by F. W. Zimmermann. London: Oxford University Press, 1981.
- . *Kitāb al-Ḥurūf*. Edited by Muhsin Mahdi. Beirut: Dār al-Mashriq, 1969.
- . *ʿUyūn al-Masāʾil in Alfārābī's philosophische Abhandlungen*. Edited by F. Dieterici. Leiden: E. J. Brill, 1890.
- . *Risāla fī mā yanbaghī an yuqaddam qabla taʿallum al-falsafa*, in *Alfārābī's philosophische Abhandlungen*. Edited by F. Dieterici. Leiden: E. J. Brill, 1890.
- Ghazālī, Muḥammad b. Muḥammad. *Tahāfut al-Falāsifa*. Translated by Michael Marmura with Arabic edition. Provo, UT: Brigham Young University Press, 1997.
- Ibn Abī Uṣaybiʿa, Muwaffaq al-Dīn. *ʿUyūn al-Anbāʾ fī Ṭabaqāt al-Aṭibbāʾ*. 3 vols. Cairo, 1981.
- Ibn al-Haytham. *Kitāb al-Manāẓir*, Books I-III. Edited by A. I. Sabra. Kuwait: The National Council for Culture, Arts and Letters, 1983.
- Ibn Khaldūn. *Al-Muqaddima*. Beirut: Dār al-Kitāb al-Lubnānī, 1982.
- . *The Muqaddimah: An Introduction to History*. Translated by Franz Rosenthal. New York: Pantheon Books, 1958.
- Ibn Mattawayh. *Al-Tadhkira fī Aḥkām al-Jawāhir wa-l-ʿArāḍ*. Edited by Daniel Gimaret. Cairo: Institut français d'archéologie orientale du Caire, 2009.
- Ibn al-Ṭayyib, Abū al-Faraj. *Tafsīr Kitāb al-Maqūlāt*. Edited and translated by Cleophea Ferrari (*Der Kategorienkommentar von Abū l-Farağ ʿAbdallāh ibn aṭ-Tayyib*). Leiden: Brill, 2006.

- . *Tafsīr Kitāb Īsāghūjī li-Furfūriyūs*. Edited and translated by Kwame Gyekye. Beirut: Dār al-Mashriq, 1975.
- Al-Iṣfahānī, Shams al-Dīn Maḥmūd. *Maṭālīʿ al-Anẓār ʿalā Ṭawālīʿ al-Anwār*. Beirut: Dār al-Kutub, n.d. (with ʿAbd Allāh al-Bayḍāwī’s text, *Ṭawālīʿ al-Anwār*, and al-Sharīf al-Jurjānī’s gloss on the *Maṭālīʿ*).
- Plato. *Complete Works*. Edited by John Cooper with notes and introduction. Cambridge: Hackett Publishing Co., 1997.
- Al-Rāzī, Fakhr al-Dīn. *Al-Arbaʿīn fī Uṣūl al-Dīn*. Hyderabad, 1353 AH.
- . *Al-Barāhīn dar ʿIlm-i Kalām*. Edited by M. Sabzawārī. 2 vols. Tehran, 1962.
- . *Iʿtiqādāt Firqat al-Muslimīn wa-l-Mushrikīn*. Edited by T. Saʿd and M. Hawārī. Cairo: Maktabat al-Kulliyāt al-Azhariyya, 1978.
- . *Jāmiʿ al-ʿUlūm*. Edited by S. ʿAlī Āl Dāwūd. Tehran: 2003-2004.
- . *Al-Risāla al-Kamāliyya fī al-Haqāʾiq al-Ilāhiyya*. Edited by A. Muḥyī al-Dīn. Beirut: Dār al-Kutub al-ʿIlmiyya, 2002.
- . *Al-Mabāḥith al-Mashriqiyya*. Edited by M. al-Baghdādī. 2 vols. Beirut: Dār al-Kitāb al-ʿArabī, 1990.
- . *Manṭiq al-Mulakhkhaṣ*. Edited by A. F. Qarāmalikī & A. Aṣgharīnizhād. Tehran: Dānishgāh-e Imām Ṣādiq, 1381 [2002 or 2003].
- . *Al-Mulakhkhaṣ fī al-Ḥikma wa-l-Manṭiq*. Berlin Staatsbibliothek Ms. Or. Oct. 629.
- . *Al-Maḥṣūl fī ʿIlm al-Uṣūl*. Edited by J. F. ʿAlawānī. Beirut: Muʿassasat al-Risāla, n.d.
- . *Al-Maṭālib al-ʿĀliya min al-ʿIlm al-Ilāhī*. Edited by A. al-Saqqā. 9 vols. Beirut, 1987.
- . *Muḥaṣṣal Afkār al-Mutaqaddimīn wa-l-Mutaʾakkhkirīn min al-ʿUlamāʾ wa-l-Ḥukamāʾ wa-l-Mutakallimīn*. Edited by Ṭ. R. Saʿd. Cairo: Maktabat al-Kulliyāt al-Azhariyya, n.d.
- . *Munāzārāt fī Bilād mā Warāʾ al-Nahr*, see Kholeif, *A Study of Fakhr al-Din*.
- . *Al-Nafs wa-l-Rūḥ wa-Sharḥ Quwāhumā*. Edited by M. Maʿṣūmī. Islamabad, 1968.
- . *Nihāyat al-ʿUqūl fī Dirāyat al-Uṣūl*. Istanbul, Ms. Ayasofia 2376.

- . *Sharḥ al-Ishārāt wa-l-Tanbihāt*. Edited by °Alī R. Najafzāde. 2 vols. Tehran: Anjumān-e Āthār va Mafākhir-e Farhangī, 1384 [2005 or 2006].
- . *Sharḥ °Uyūn al-Ḥikma*. Edited by A. al-Saqqā. 3 vols. Cairo, Maktabat al-Anjlū al-Miṣriyya, n.d.
- . *Al-Taḥṣīn al-Kabīr*. 32 vols. Dār Iḥyā° al-Turāth al-°Arabī, 198[?].

Secondary Literature

- Adamson, Peter. “On Knowledge of Particulars.” *Proceedings of the Aristotelian Society* 105 (2004), 257-278.
- . “Vision, Light and Color in al-Kindī, Ptolemy and the Ancient Commentators.” *Arabic Sciences and Philosophy* 6 (2006), 207-236.
- . “Knowledge of Universals and Particulars in the Baghdad School.” *Documenti e studi sulla tradizione filosofica medievale* 105 (2005), 273-294.
- . “Yaḥyā ibn °Adī and Averroes on *Metaphysics* Alpha Ellaton.” *Documenti e studi sulla tradizione filosofica medievale* 21 (2010), 343-374.
- Adamson, Peter and Richard C. Taylor, eds. *The Cambridge Companion to Arabic Philosophy*. Cambridge: Cambridge University Press, 2005.
- Anagnostopoulos, Georgios, ed. *A Companion to Aristotle*. Chichester, U.K.: Wiley-Blackwell, 2009.
- Arnaldez, Roger. *Fakhr al-Dīn al-Rāzī: commentateur du Coran et philosophe*. Paris: J. Vrin, 2002.
- Aouad, Maroun and Marwan Rashed. “L’exégèse de la *Rhétorique* d’Aristote : Recherches sur quelques commentateurs grecs, arabes et byzantins.” *Medioevo* 23 (1997), 43-189.
- Bäck, Allan. “The *Triplex Naturae* and its Justification.” In *Studies in the History of Logic*. Edited by I. Angelelli and M. Cerrezo. Berlin, 1996.
- . “Avicenna the Commentator.” In *Medieval Commentaries on Aristotle’s Categories*. Edited by L. A. Newton. Leiden: Brill, 2008. 31-71.

- . “Avicenna on Relations and the Bradleyan Regress.” In *La tradition médiévale des catégories (XII^e-XV^e siècles)*. Edited by Joël Biard and Irène Rosier-Catach. Paris: Peeters, 2003. 69-84.
- . “The Ontological Pentagon of Avicenna.” *The Journal of Neoplatonic Studies* 2 (1999), 87-109.
- Balme, D. M. “Aristotle’s Use of Division and Differentiae.” In *Philosophical Issues in Aristotle’s Biology*. Edited by A. Gotthelf and J.G. Lennox. Cambridge: Cambridge University Press, 1987. 69-89.
- Barnes, Jonathan. *Porphyry, ‘Isagoge’, Translated with an Introduction and Commentary*. Oxford: Clarendon Press, 2003.
- . *Aristotle’s ‘Posterior Analytics’*. 2nd ed. Oxford: Clarendon Press, 1994.
- . “Aristotle’s Theory of Demonstration,” *Phronesis* 14 (1969), 65-87.
- . “Aristotle’s Philosophy of Sciences,” *Oxford Studies in Ancient Philosophy* XI (1993), 225-241.
- Bernard, Marie. *Le problème de la connaissance d’après le Muğnī du Cadī ‘Abd al-Ğabbār*. Algiers: 1982.
- Berti, Enrico, ed. *Aristotle on Science*. Padova: Antenore, 1981.
- Bertolacci, Amos. *The Reception of Aristotle’s Metaphysics in Avicenna’s Kitāb al-Šifā’: A Milestone of Western Metaphysical Thought*. Leiden: Brill, 2006.
- . “The Doctrine of Material and Formal Causality in the *Ilāhiyyāt* of Avicenna’s *Kitāb al-Šifā’*.” *Quaestio* 2 (2002), 125-154.
- . “Avicenna and Averroes on the Proof of God’s Existence and the Subject Matter of Metaphysics.” *Medioevo* 32 (2007), 61-97.
- Bertolacci, Amos and Dag N. Hasse, eds. *The Arabic, Hebrew and Latin Reception of Avicenna’s Metaphysics*. Berlin: De Gruyter, 2012.
- Black, Deborah. *Logic and Aristotle’s Rhetoric and Poetics in Medieval Arabic Philosophy*. Leiden: E.J. Brill, 1990.
- . “Estimation (*Wahm*) in Avicenna, The Logical and Psychological Dimensions.” *Dialogue* 32 (1993), 219-258.
- . “Avicenna on the Ontological and Epistemic Status of Fictional Beings.” *Documenti e studi sulla tradizione filosofica medievale* 8 (1997), 425-453.

- . “Knowledge (*‘Ilm*) and Certitude (*Yaqīn*) in al-Fārābī’s Epistemology.” *Arabic Sciences and Philosophy* 16 (2006), 11-45.
- . “Avicenna on Self-Awareness and Knowing that One Knows.” In S. Rahman, T. Street, and H. Tahiri, 55-74.
- Bonelli, Maddalena. “Alexander of Aphrodisias on the Science of Ontology.” In *Interpreting Aristotle’s Posterior Analytics in Late Antiquity and Beyond*. Ed. F. de Haas, M. Leunissen, and M. Martijn. Leiden: Brill, 2010, 101-121.
- Broadie, Sarah. “Aristotle’s Perceptual Realism.” *Southern Journal of Philosophy* 31 (1993), 137-159.
- Burnyeat, Miles. *A Map of Metaphysics Zeta*. Pittsburgh: Mathesis Publication, 2001.
- Buschmann, E. *Untersuchungen zum Problem der Materie bei Avicenna*. Frankfurt: Peter Lang G.m.b.H, 1979.
- Charles, David. *Aristotle on Meaning and Essence*. Oxford: Clarendon Press, 2000.
- Chiaradonna, Riccardo. “What Is Porphyry’s *Isagoge*?” *Documenti e studi sulla tradizione filosofica medievale* 19 (2008), 1-30.
- Davidson, Herbert. *Alfarabi, Avicenna, and Averroes on Intellect*. Oxford: Oxford University Press, 1992.
- . *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy*. New York: Oxford University Press, 1987.
- De Haas, Frans. *John Philoponus’ New Definition of Prime Matter*. Leiden: E.J. Brill, 1997.
- De Haas, Frans, Mariska Leunissen and Marije Martijn, eds. *Interpreting Aristotle’s Posterior Analytics in Late Antiquity and Beyond*. Leiden: Brill, 2010.
- Deslauriers, Marguerite. *Aristotle on Definition*. Leiden: Brill, 2007.
- . “Aristotle’s Four Types of Definition.” *Apeiron* 23, 1 (1990), 1-26.
- . “Plato and Aristotle on Division and Definition.” *Ancient Philosophy* 10 (1991), 203-219.
- Devereux, Daniel T. “Inherence and Primary Substance in Aristotle’s *Categories*.” *Ancient Philosophy* 12 (1992), 113-31.

- Dhanani, Alnoor. *The Physical Theory of Kalām: Atoms, Space and Void in Basrian Mu^ctazilī Cosmology*. Leiden: E.J. Brill, 1994.
- Druart, Thérèse-Anne. "The Soul and Body Problem: Avicenna and Descartes." In *Arabic Philosophy and the West*. Edited by Thérèse-Anne Druart. Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1988. 27-49.
- . "The Human Soul's Individuation and its Survival after the Body's Death: Avicenna on the Causal Relation between Body and Soul." *Arabic Sciences and Philosophy* 10 (2000), 259-273.
- . "Avicennan Troubles: The Mysteries of the Heptagonal House and of the Phoenix." *Topicos* (forthcoming).
- Duhem, Pierre. *Sōzein ta phainomena: essai sur la notion de théorie physique de Platon à Galilée*. Paris: Librairie philosophique J. Vrin, 1990.
- . *Le système du monde: histoire des doctrines cosmologiques de Platon à Copernic*. 10 vols. Paris: A. Hermann, 1913-59.
- Eichner, Heidrun. "Dissolving the Unity of Metaphysics: From Fakhr al-Dīn al-Rāzī to Mullā Ṣadra al-Shirāzī." 32 *Medioevo* (2007), 139-197.
- . "The Chapter 'On Existence and Non-Existence' of Ibn Kammūna's al-Jadīd fī l-Ḥikma: Trends and Sources in an Author's Shaping the Exegetical Tradition of al-Suhrawardī's Ontology." In *Avicenna and His Legacy*. Edited by Y. T. Langermann. Turnhout: Brepols, 2009. 143-177.
- Evangelidou, C. "Aristotle's Doctrine of Predicables and Porphyry's *Isagoge*." *Journal of the History of Philosophy* 23 (1985), 15-34.
- Ferejohn, M. "Empiricism and Aristotelian Science." In *A Companion to Aristotle*. Edited by G. Anagnostopoulos. Chichester, UK: Wiley-Blackwell, 2009. 51-65
- . *The Origins of Aristotelian Science*. New Haven: Yale University Press, 1991.
- Frank, Richard. *Beings and Their Attributes: The Teaching of the Basrian School of the Mu^ctazila in the Classical Period*. Albany: State University of New York Press, 1978.
- . *Al-Ghazālī and the Ash^carite School*. Durham, NC: Duke University Press, 1992.
- . "Attribute, Attribution, and Being: Three Islamic Views." in *Philosophies of Existence, Ancient and Medieval*. Edited by P. Morewedge. New York: Fordham University Press, 1982, 258-278.

- . Frede, Michael. *Essays in Ancient Philosophy*. Minneapolis: University of Minnesota Press, 1987.
- Frede, Michael. *Essays in Ancient Philosophy*. Minneapolis: University of Minnesota Press, 1987.
- Galluzzo, Gabriele and Mauro Mariani, eds., *Aristotle's Metaphysics Book Z: The Contemporary Debate*. Pisa: Edizioni della Normale, 2006.
- Goldin, Owen. "Two Traditions in the Ancient *Posterior Analytics* Commentaries." In *Interpreting Aristotle's Posterior Analytics in Late Antiquity and Beyond*. Edited by F. de Haas, M. Leunissen, and M. Martijn. Leiden: Brill, 2010. 156-182.
- . *Explaining an Eclipse: Aristotle's Posterior Analytics 2.1-10*. Ann Arbor: University of Michigan Press, 1996.
- Griffel, Frank. *Al-Ghazālī's Philosophical Theology*. Oxford: Oxford University Press, 2009.
- . "On Fakhr al-Dīn al-Rāzī's Life and the Patronage He Received." *Journal of Islamic Studies* 18 (2007), 344.
- . "Fakhr al-Dīn al-Rāzī". In *Encyclopedia of Medieval Philosophy: Between 500 and 1500*. Ed. Henrik Lagerlund. New York: Springer, 2011, 343-344.
- . "The Introduction of Avicennan Psychology into the Muslim Theological Discourse: The Case of al-Ghazālī (d. 1111)." In *Intellect and Imagination in Medieval Philosophy*. Edited by M. C. Pacheco and J. F. Meirinhos. Turnhout: Brepols, 2006. 571-582.
- Gutas, Dimitri. *Avicenna and the Avicennan Tradition: Introduction to Reading Avicenna's Philosophical Works*. Leiden: E. J. Brill, 1988.
- . "Medical Theory and Scientific Method in the Age of Avicenna." Edited by D. Reisman with the assistance of A. H. al-Rahim. Leiden: Brill, 2003. 145-162.
- . "The Study of Arabic Philosophy in the Twentieth Century: An Essay on the Historiography of Arabic Philosophy." *British Journal of Middle Eastern Studies* 29 (2002), 5-25.
- Halper, Edward C. *One and Many in Aristotle's Metaphysics: Books Alpha to Delta*. Las Vegas: Parmenides Pub., 2009.
- Harte, Verity. *Plato on Parts and Wholes: The Metaphysics of Structure*. Oxford: Clarendon Press, 2002.

- Hasse, Dag N. "Avicenna on Abstraction". In *Aspects of Avicenna*. Edited by Robert Wisnovsky. Princeton: Markus Wiener Publishers, 2001. 39-72.
- . *Avicenna's De Anima in the Latin West: The Formation of a Peripatetic Philosophy of the Soul, 1160-1300*. Warburg Institute of Studies and Texts vol. 1. London: The Warburg Institute, 2000.
- Heer, Nicholas. "Al-Rāzī and al-Ṭūsī on Ibn Sīnā's Theory of Emanation," in *Neoplatonism and Islamic Thought*, ed. P. Morewedge (Albany: State University of New York Press, 1992), 111-125.
- Hintikka, J. *Time and Necessity: Studies in Aristotle's Theory of Modality*. Clarendon Press, 1973.
- Horten, Max. *Die philosophischen Ansichten von Rāzī und Tusi (1209+ und 1273+) mit ednem Anhang: Die griechischen Philosophen in der Vorstellungswelt von Rāzī und Tusi*. Bonn, 1910.
- Hyman, A. "Aristotle's 'First Matter' and Avicenna's and Averroes' 'Corporeal Form'". In *Essays in Medieval Jewish and Islamic Philosophy*. New York: KTAV Publishing House, 1977, 335-356.
- Janssens, Jules. "Ibn Sīnā's Impact on Faḥr al-Dīn ar-Rāzī's *Mabāḥiṭ al-Mašriqiyya*, with Particular Regard to the Section Entitled *al-Ilāhiyyāt al-maḥḍa*: An Essay of Critical Evaluation." *Documenti e studi sulla tradizione filosofica medievale* 21 (2010), 259-285.
- . "Bahmanyār ibn Marzubān: A Faithful Disciple of Ibn Sīnā?" In *Before and After Avicenna: Proceedings of the First Conference of the Avicenna Study Group*. Edited by D. Reisman with the assistance of A. H. al-Rahim. Leiden: Brill, 2003, 177-199.
- . "Bahmanyār and his Revision of Ibn Sīnā's Metaphysical Project." *Medioevo*, 32 (2007), 99-117.
- . "Al-Lawkarī's Reception of Ibn Sīnā's *Ilāhiyyāt*." In *The Arabic, Hebrew and Latin Reception of Avicenna's Metaphysics*. Edited by D. N. Hasse and A. Bertolacci. Berlin: De Gruyter, 2012. 7-26.
- . "The Notions of *Wāhib al-Ṣuwar* (Giver of Forms) and *Wāhib al-ʿAql* (Bestower of Intelligence) in Ibn Sīnā." In *Intellect and Imagination in Medieval Philosophy*. Edited by Pacheco and Merinhos. Turnhout: Breplos, 2006. 551-562.
- Kuhn, Thomas. *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought*. Cambridge, MA: Harvard University Press, 1957.

- Kukkonen, Taneli. "Possible Worlds in the *Tahāfut al-Falāsifa*: Al-Ghazālī on Creation and Contingency." *Journal of History of Philosophy* 38 (2000), 479-502.
- . "Al-Ghazālī on the Signification of Names." *Vivarium* 48 (2010), 55-74.
- Langermann, Y. T., ed. *Avicenna and His Legacy: A Golden Age of Science and Philosophy*. Turnhout: Brepols, 2009.
- Lettinck, Paul. *Aristotle's Physics and its Reception in the Arabic World: With an Edition of the Unpublished Parts of Ibn Bājjā's Commentary on the Physics*. Leiden: Brill, 1994.
- Lindberg, David. *Theories of Vision from al-Kindi to Kepler*. Chicago: University of Chicago Press, 1976.
- . *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450*. 2nd edition. Chicago: The University of Chicago Press, 2007.
- Lizzini, Olga. "The Relation between Form and Matter: Some Brief Observations on the 'Homology Argument' (*Ilāhiyyāt*, II.4) and the Deduction of *fluxus*." In Jon McGinnis, ed., 175-189.
- Longo, Angela. "Les « Seconds Analytiques » dans le commentaire de Syrianus sur la « Métaphysique » d'Aristote." In *Interpreting Aristotle's Posterior Analytics in Late Antiquity and Beyond*. Edited by F. de Haas, M. Leunissen, and M. Martijn. Leiden: Brill, 2010. 123-133.
- Lloyd, A. C. *The Anatomy of Neoplatonism*. Oxford: Clarendon Press, 1990.
- Lloyd, G. E. R. "Saving Appearances." *The Classical Quarterly* 28 (1978), 202-223.
- Macdonald, Duncan B. "The Development of the Idea of Spirit in Islam." *Muslim World* 22 (1932), 25-42; 153-68.
- Marcotte, Roxanne D. "Abū l-Barakāt al-Baghdādī." In *Encyclopedia of Medieval Philosophy: Between 500 and 1500*. Edited by Henrik Lagerlund. New York: Springer, 2011. 10-12.
- Marmura, Michael E. "Avicenna's 'Flying Man' in Context." *The Monist* 69 (1986), 383-395.
- . "Some Questions regarding Avicenna's Theory of the Temporal Origination of the Human Rational Soul," *Arabic Sciences and Philosophy* 18 (2008), 121-138.

- . “Fakhr al-Dīn al-Rāzī’s Critique of an Avicennan *Tanbīh*.” In *Historia Philosophiae Medii Aevi II*. Edited by B. Mojsisch *et al.* Amsterdam: 1991. 627-637.
- . “The Fortuna of the *Posterior Analytics* in the Arabic Middle Ages.” In *Knowledge and the Sciences in Medieval Philosophy: Proceedings of the Eighth International Congress of Medieval Philosophy*. Edited by M. Asztalso, J. Murdoch, and I. Miiniluoto, vol. 1. Helsinki, 1990. 89-98.
- . “Ghazālī and Demonstrative Science,” *Journal of History of Philosophy* 3 (1965), 183-204.
- . “Some Aspects of Avicenna’s Theory of God’s Knowledge of Particulars.” *Journal of the American Oriental Society* 82 (1962), 299-331.
- . “Avicenna’s Chapter on Universals in the *Isagoge* of the *Shifā’*.” In *Islam, Past and Present Challenge: Studies in Honour of W.M. Watt*. Edited by T. Welch and P. Cachia. Edinburgh: Edinburgh University Press, 1979, 34-56.
- . “Avicenna on the Division of the Sciences in the *Isagoge* of his *Shifā’*.” *Journal of the History of Arabic Science* 4 (1980), 1-15.
- . “Quiddity and Universality in Avicenna.” In *Studies in Neoplatonism*. Edited by P. Morewedge. Albany, NY: State University of New York, 1992. 77-87.
- Matthews, Gareth B. “Aristotelian Categories.” In G. Anagnostopoulos, *A Companion to Aristotle*, 144-154.
- McGinnis, Jon. “Logic and Science: The Role of Genus and Difference in Avicenna’s Logic, Science, and Natural Philosophy.” *Documenti e studi sulla tradizione filosofica medievale* 18 (2007), 165-186
- . “A Penetrating Question in the History of Ideas: Space, Dimensionality and Interpenetration in the Thought of Avicenna.” *Arabic Sciences and Philosophy* 16 (2006), 47-69.
- . “Scientific Methodologies in Medieval Islam.” *Journal of the History of Philosophy* 41 (2003), 307-327.
- . “Making Abstraction Less Abstract: The Logical, Psychological, and Metaphysical Dimensions of Avicenna’s Theory of Abstraction.” *Proceedings of the American Catholic Philosophical Association* 80 (2007), 169-183.
- . “Avicenna’s Naturalized Epistemology and Scientific Method.” In S. Rahman, T. Street, and H. Tahiri, *Unity of Science*, 129-152.
- . *Avicenna*. Oxford: Oxford University Press, 2010.

- . “Occasionalism, Natural Causation and Science in al-Ghazālī.” In *Arabic Theology, Arabic Philosophy: From the Many to the One: Essays in Celebration of Richard M. Frank*. Edited by J.E. Montgomery. Leuven: Peeters, 2006. 441-463.
- McGinnis, Jon, ed. *Interpreting Avicenna: Science and Philosophy in Medieval Islam*. Leiden: E. J. Brill, 2004.
- McGinnis, Jon and David C. Reisman, trans. and eds. *Classical Arabic Philosophy: An Anthology of Sources*. Indianapolis and Cambridge: Hackett Publishing Co., 2007.
- Menn, Stephen. “Metaphysics, Dialectic and the *Categories*.” *Revue de Métaphysique et de Morale* 100 (1995), 311-337.
- . “Al-Fārābī’s *Kitāb al-Ḥurūf* and His Analysis of the Senses of Being”, *Arabic Sciences and Philosophy* 18 (2008), 68.
- . “Farābī in the Reception of Avicenna’s *Metaphysics*: Averroes against Avicenna on Being and Unity.” In *The Arabic, Hebrew, and Latin Reception of Avicenna’s Metaphysics*. Edited by A. Bertolacci & D.N. Hasse (Berlin: de Gruyter, 2012), 51-96.
- Menn Stephen and Robert Wisnovsky. “Yahyā Ibn ‘Adī’s Essay on the Four Scientific Questions regarding the Three Categories of Existence: Divine, Natural and Logical. Editio princeps and English translation.” *Mélanges de l’Institut dominicain d’études orientales du Caire (MIDEO)* 29 (2012), 73-96.
- Michot, J. “Avicenna’s ‘Letter on the Disappearance of the Vain Intelligible Forms After Death’”. *Bulletin de Philosophies Médiévale* 26-27 (1984-1985), 94-103.
- . “L’Épître sur la disparition des formes intelligibles vaines après la mort d’Avicenne.” *Bulletin de Philosophie Médiévale* 29 (1987), 157.29-30.
- Moravcsik, J.M.C. “Aristotle on Predication.” *The Philosophical Review* 76 (1967), 80-96.
- Perler, Dominik and Ulrich Rudolph, eds. *Logik und Theologie: das Organon im arabischen und im lateinischen Mittelalter*. Leiden: Brill, 2005.
- Ragep, F. Jamil. “Freeing Astronomy from Philosophy: An Aspect of Islamic Influence on Science.” *Osiris* (2001), 49-71.
- . “Copernicus and His Islamic Predecessors: Some Historical Remarks.” *History of Science* 45 (2007), 65-81.

- . “‘Ali Qushji and Regiomontanus: Eccentric Transformations and Copernican Revolutions.” *Journal for the History of Astronomy* 36 (2005), 359-371.
- Rahman, S., T. Street, and H. Tahiri. *Unity of Science in the Arabic Tradition: Science, Logic, Epistemology and Their Interactions*. Dordrecht: Springer, 2008.
- Rashed, Marwan. “Ibn ‘Adī et Avicenne: sure les types d’existants.” In *Aristote e i suoi esegeti neoplatonici. Logica e ontologia nelle interpretazioni greche e arabe* (Atti del convegno internazionale, Roma, 19-20 ottobre 2001). Edited by V. Celluprica & C. D’Ancona. Napoli: Bibliopolis, 2004. 107-171.
- . “Natural Philosophy.” In *The Cambridge Companion to Arabic Philosophy*. Edited by P. Adamson and R. Taylor. Cambridge: Cambridge University Press, 2005. 287-307.
- Rashed, Roshdi. “Mathématiques et Philosophie chez Avicenne.” In *Études sur Avicenne*. Edited by J. Jolivet and R. Roshdi. Paris : Société d’édition les Belles Lettres, 1984. 29-39.
- . “The Philosophy of Mathematics.” In S. Rahman, T. Street, and H. Tahiri, *Unity of Science*, 129-152.
- Reisman, David, ed. *Before and After Avicenna: Proceedings of the First Conference of the Avicenna Study Group*. Leiden: E. J. Brill, 2003.
- Rosenthal, Franz. *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam*. Leiden: Brill, 2007.
- . *Science and Medicine in Islam: A Collection of Essays*. Aldershot: Variorum, 1990.
- Sabra, A. I. “Avicenna on the Subject Matter of Logic.” *Journal of Philosophy* 77 (1980), 746-764.
- . “The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam: A Preliminary Statement.” *History of Science* 25 (1987), 223-243.
- . “Science and Philosophy in Medieval Islamic Theology.” *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 9 (1994), 1-42.
- . “Kalām Atomizing as an Alternative Philosophy to Hellenizing *Falsafa*.” In *Arabic Theology, Arabic Philosophy: From the Many to the One: Essays in Celebration of Richard M. Frank*. Ed. J.E. Montgomery. Leuven: Peeters, 2006, 199-272.
- Sambursky, S. *The Physical World of Late Antiquity*. Princeton: Princeton University Press, 1962.

- Scaltas, Theodore. *Substances and Universals in Aristotle's Metaphysics*. Ithaca: Cornell University Press, 1994.
- Sebti, Meryem. "Le statut ontologique de l'image dans la doctrine avicennienne de la perception." *Arabic Sciences and Philosophy* 15 (2005), 109-140.
- Setia, A. "Time, Motion, Distance and Change in the *Kalām* of Fakhr al-Dīn al-Rāzī: A Preliminary Survey with Special Reference to the *Maṭālib al-ʿĀliyyah*." *Islam & Science* 6 (2008), 13-29.
- . "Atomism and Hylomorphism in the *Kalām* of Fakhr al-Dīn al-Rāzī: A Preliminary Survey of the *Maṭālib al-ʿĀliyyah*." *Islam & Science* 4 (2006), 113-140.
- . "Fakhr al-Dīn al-Rāzī on Physics and the Nature of the Physical World: A Preliminary Statement." 2 (2004), 161-180.
- Shihadeh, Ayman. "From al-Ghazālī to al-Rāzī: 6th/12th Century Developments in Muslim Philosophical Theology," *Arabic Sciences and Philosophy*, 15 (2005), 141-179;
- . *The Theological Ethics of Fakhr al-Dīn al-Rāzī* (Leiden: Brill, 2006);
- Smith, Robin. *Aristotle, 'Topics', Books I and VIII, Translated with a Commentary*. Oxford: Clarendon Press, 1997.
- Sorabji, Richard. "Definitions: Why Necessary and in What Way?" In *Aristotle on Science: The Posterior Analytics*. Ed. E. Berti. Padua: Editrice Antenore, 1981, 208-244.
- . *The Philosophy of the Commentators, 200-500*. 3 vols. Ithaca, N.Y.: Cornell University Press, 2005.
- . *Philoponus and the Rejection of Aristotelian Science*. London: Duckworth, 1987.
- Stone, A. D. "Simplicius and Avicenna on the Essential Corporeity of Material Substance." In *Aspects of Avicenna*. Edited by Robert Wisnovsky. Princeton: Markus Wiener, 2001, 73-130.
- Street, Tony "Faḥraddīn al-Rāzī's Critique of Avicennan Logic." In D. Perler and U. Rudolph, *Logik und Theologie*, 99-116.
- Strobino, Riccardo. "Avicenna on the Indemonstrability of Definition." *Documenti e studi sulla tradizione filosofica medievale* 21 (2010), 113-163.
- Thom, Paul. *Medieval Modal Systems*. Aldershot; England: Ashgate, 2003.

- . “Three Conceptions of Formal Logic.” *Vivarium* 48 (2010), 228-242.
- . “Al-Fārābī on Indefinite and Privative Names.” *Arabic Sciences and Philosophy* 18 (2008), 193-209.
- . “Logic and Metaphysics in Avicenna’s Modal Syllogistic.” In S. Rahman, T. Street, and H. Tahiri, *Unity of Science*, 283-295.
- Tuominen, Miira. “Alexander and Philoponus on *Prior Analytics* I 27-30: Is There a Tension between Aristotle’s Scientific Theory and Practice?” In *Interpreting Aristotle’s Posterior Analytics in Late Antiquity and Beyond*. Edited by F. de Haas, M. Leunissen, and M. Martijn. Leiden: Brill, 2010. 137-156.
- Van Fraassen, Bas C. “A Re-examination of Aristotle’s Philosophy of Science.” *Dialogue* 19 (1980), 20-45.
- Waterlow, S. *Passage and Possibility: A Study of Aristotle’s Modal Concepts*. Oxford: Oxford University Press, 1984.
- Wedin, Michael V. *Aristotle’s Theory of Substance: The Categories and Metaphysics Zeta*. Oxford: Oxford University Press, 2002.
- Wisnovsky, Robert. *Avicenna’s Metaphysics in Context*. Ithaca, NY: Cornell University Press, 2003.
- . “Notes on Avicenna’s Concept of Thingness (Šay‘iyya).” *Arabic Sciences and Philosophy* 10 (2000), 181-221.
- . “Avicenna and the Avicennan Tradition.” In *The Cambridge Companion to Arabic Philosophy*, ed. P. Adamson and R. Taylor. Cambridge: Cambridge University Press, 2005, 92-136.
- . “The Nature and Scope of Arabic Philosophical Commentary in Post-classical (ca. 1100-1900 AD) Islamic Intellectual History: Some Preliminary Observations.” In *Philosophy, Science and Exegesis in Greek, Arabic and Latin Commentaries*. Ed. P. Adamson, H. Baltussen and M.W.F. Stone, vol. 2. London: Institute of Classical Studies, 2004, 149-191.
- . “New Philosophical Texts of Yahyā ibn ‘Adī: A Supplement to Endress’ *Analytical Inventory*.” In *Islamic Philosophy, Science, Culture, and Religion: Studies in Honor of Dimitri Gutas*. Leiden: Brill (2012), 307-326.
- . “Essence and Existence in the Islamic East (*Mashriq*) in the 11th and 12th Centuries CE: A Sketch.” in *The Arabic, Hebrew and Latin Reception of Avicenna’s Metaphysics*. Ed. A. Bertolacci and D. Hasse. Berlin: De Gruyter, 2011, 27-50.

- . “Philosophy and Theology (Islam).” In *The Cambridge History of Medieval Philosophy*. Vol. 2. Edited by R. Pasnau. Cambridge: Cambridge University Press, 2009. 698-706.
- . “Fakhr al-Dīn al-Rāzī’s *Commentary on the Metaphysics* of Avicenna’s *Kitāb al-Ishārāt wa-l-Tanbīhāt*” (trans.). In *An Anthology of Philosophy in Persia: Philosophical Theology in the Middle Ages*. Vol. 3. Edited by S.H. Nasr and M. Amin Razavi. London: I.B. Tauris, 2009, 189-202.
- . “One Aspect of the Avicennan Turn in Sunnī Theology.” *Arabic Sciences and Philosophy* 14 (2004), 65-100.
- Wisnovsky, Robert, ed., *Aspects of Avicenna*. Princeton, NJ: Markus Wiener Publishers, 2001.
- Zarkān, Muḥammad Ṣ. *Fakhr al-Dīn al-Rāzī wa-Ārāʾuhu al-Kalāmiyya wa-l-Falsafīyya*. [Cairo]: Dār al-Fikr, [1963].
- Ziai, Hossein. *Knowledge and Illumination*. Atlanta: Scholars Press, 1990.

Capturing the Human Essence

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BY HONGLIN XIAO

Honglin Xiao: Tell us about yourself and how you got involved in your field of medicine, research, or your educational background.

Richard Gunderman: I grew up in Indianapolis and went to Wabash college northwest of here. I then did my medical training at the University of Chicago in their Medical Scientist Training Program. I was kind of a test case for them because I was interested in a PhD program which was not in the physical sciences but one that was involved in the humanities and social sciences, the Committee on Social Thought. I believe deeply in the importance of bench and clinical research, but I was concerned at the time and remain concerned that there are important human aspects of our work in biomedical science, clinical medicine, and public health that sometimes do not get the attention they deserve.

X: What was your PhD concentration in?

G: The topic was how our understanding of health can serve as a lens to understand who we are as a people. For example, at one point in some cultures, disease was understood as something of a breach with the divine, a sign that you had offended God, or perhaps a sign that you were at odds with your community. Illness was seen as a kind of punishment. However, another perspective would be that disease results from infectious organisms. These are two very different understandings of health and disease. It is tempting to say one is wrong and one is right, but there is more to it than right and wrong, true or false. There is the matter of how disease fits into a larger culture. We understand how to open clogged arteries, and we are relatively good at eradicating some cancers.

But there are some aspects of health that we may not be so good at, like preventing disease or promoting health or caring for people with chronic conditions. These are just some aspects of care that reflect the lens through which we see health and disease – as a kind of pure biologic problem that must be solved with a purely biologic solution. Say somebody has cirrhosis of the liver due to alcoholism or lung cancer due to smoking. We can say that these diseases are caused by alcoholism and smoking, and yes, it is important to study these biologic mechanisms, but there is a lot more going on. Why did the person start drinking to excess or smoking in the first place? These questions are just as important to investigate as the biological mechanisms. There are social, cultural and spiritual dimensions to disease that must be addressed and that is what my graduate study was focused on.

X: There then seems to be multiple paths in research. For example, you looked at the humanistic side of disease and there are many students and physicians who elect to follow clinical and lab science paths. Do you have any advice for medical

students how to get involved in different types of research?

G: We need to make sure that our medical students have time to think. Not just that we should spend every waking hour trying to get the best score on an exam, but that we are spending time thinking about what type of physician we want to be. It could be thoughts on “Am I going to be a surgeon or an internist?” But it could also be “Am I going to be an investigator? Am I going to be a clinician? An educator?” If I wanted to be an investigator, I may be interested in topics outside the biological sciences, such as economics or political science. We need to expose our students to exemplars, advocates for the different career paths available to them. Here is an MD who never sees patients but who is devoted completely to research. Here is another physician who is a clinical investigator who seems many patients a day but does not do bench science. We can place people at different points on different spectra, but we need to enable our students to meet professionals who are there not only to deliver the curriculum. Doing well on STEP 1 is important, but we want you to interact with these people because they represent a career path that you may feel called by in the future.

X: It sounds like you are going against what many medical students hold in their eyes as the most important thing, the STEP scores. How do we change that mindset?

G: During my time as a medical student, we never talked about STEP. It was decades ago, but we knew you had to take it and do well on it. But it was not a priority of the school at all. The school prided itself on the fact that a higher percentage of its graduates pursued academic careers than any other institution. They were dedicated to making sure that over the course of our education, we were encountering different physicians who represent different career paths. Because you are not just assimilating knowledge, not just choosing different specialty options, but you are also choosing a path that will challenge, engage, and reward you for a lifetime. Today, it has been simplified to the point of “career counseling” which makes something big into something little and turns it into something technical. We need to guard against that; our students’ imaginations must be nourished. We need to present a full range of possibilities and stimulate our students’ imaginations, so they can make a choice about what type of doctor they want to be, which might include the pursuit of knowledge, education, or service.

X: How can IU better achieve this goal and move to making this a reality, to make sure that not only do we do well on STEP and be competitive for residency positions but that our imaginations are also given the chance to grow?

G: I think one way would be to offer regular programming, perhaps extracurricular, where someone comes in and talks about their career. We want their excitement, their enthusiasm to shine through and reach the medical students at such events. We want these presenters beaming with excitement and pride about



RICHARD GUNDERMAN | PHOTO

what type of doctors they are so the students see a wide variety of professional paths. It could be somebody who is tremendously busy seeing patients and who is really excited about that. It could also be somebody who is committed to research. Let our medical students see this excitement. For students, there is a type of research into questions that will get you published and make you a competitive candidate during interviews, but there is also a type of investigation that illuminates what kind of doctor you want to be.

X: To get where you are now in your medical career, there has undoubtedly been key people who have helped you along the way. What should the role of a mentor be for the student to be successful?

G: You need to know that there is somebody who knows you as a person and who cares about you as a person. They may have nothing to do with your intended medical specialty. But they are a physician who knows you and likes you and wants to help you. For them, it is important to help you grow as a person and flourish in your role. Some might like to construct a system that would carry out this function, but ultimately it takes flesh-and-blood human beings with their hearts in the right place for it to be done well. You need a human being who cares about you for this to be successful.

X: Have there been any important mentors in your life or medical career?

G: Yes, at Wabash I had a vague idea that I wanted to do medicine and that I also had an interest in philosophy and religion. Was there any way to do both paths in tandem? A faculty member in

the divinity school at my future medical school came as a visiting professor, and for whatever reason he took an interest in me and opened my eyes to possibilities that I did not even know existed. That person is the reason I ended up at the University of Chicago. I was just a hayseed from Indiana, but someone who knew more than I did made a huge difference in my life by opening up the full extent of what is possible.

X: To wrap up — this is going to be distributed at the White Coat Ceremony. There will be a lot of eager minds getting ready to start their careers in medicine. If you had to give one piece of advice what would it be?

G: Don't suppose that just because you are at the beginning of your career in medicine, that you have nothing to contribute. Try to make choices that give you the opportunities to help from the beginning. Supposedly you're not a doctor until you graduate after four years of medical school and until then you don't have the opportunity to help others. In fact, you are capable of contributing from day one. You can listen to people. You can try to care for your classmates. There will be people sitting next you on the first day of class who are lost and alone. You can help connect with them, invite them out and have fun. You can help build a deeper community in medicine and you may be better equipped to do so now than on the day you will graduate. We need this in medicine. We need to care for our patients, but we also need to care for each other.

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THE HUMAN NATURE ACCORDING TO ST. THOMAS AQUINAS

Rev. Fr. Anthony P. Irineo, OAR

A lot of things happen in a day. If one is sensitive and conscious to the details that unfold in every moment of his life, he would be amazed at some surprises of events. Even those expected ones that usually occur as part of daily routine would not be wholly the same as it previously happened. It is because, a whole day's living, for a normal person, would account to varied personal decisions and operations whether caused directly by the person himself or by others to him, or by his interaction with nature,¹ and by other intervening factors.

Some people believe that events in life are products of cause and effect.² Say, upon waking up one day, you feel dizzy or not okay, then instinct would dictate that you would look for an immediate cure and part of it is that you would naturally think of the cause of such condition. You would surely recall the things that you have done in the previous day, let's say, what you have eaten, or taken in that may have caused such illness. That would also be the same thing that would be asked of you by a doctor or by anyone.

Other people do not mind or are not even aware of that cause and effect principle but they consider the belief that time to time occurrences may depend on fate. "Time just passes by," "people come and go," and "changes happen naturally as they are," are examples of such expressions. For them, realities wrapped in various forms and sizes are bound to happen as they are supposed to be. We are not in control of everything, they say. All that one is left to do is to just let things be.

With all these and other real considerations, man may ask himself: Would it mean that man has no freedom anymore, that he would only let events happen as they are, and there is no need for him to actively participate in order to determine his future? Is man already determined by his past, or by his fate? Borrowing the words of Michael Polanyi, he asked, "Does the nature of man as a material system, as a machine, as a center of appetites, and as part of a society subject to coercion by predominant interests, permit him to make any truly independent choices?"³

Even Jose Garcia y Gasset claims that "man, in a word, has no nature; what he has is [...] history."⁴ If man has no nature other than what he has himself done, then it does not necessarily mean that he has no more capacity to alter his destiny.

Yes, man is more than what the possibility of cause and effect, of fate, and other factors could offer. So, who is man, what is the nature of man, or the human nature? Man, indeed, is a mystery.

¹Michael Polanyi expresses it as "the human person [...] has come into being by evolution from an inanimate universe." cf. *The Study of Man*, (Chicago: Phoenix Books, 1958), 43.

²It has a foundation from Aristotle's four causes, potentiality and actuality topics in Physics and Metaphysics and followed by St. Thomas Aquinas in the Middle Ages and also by Machiavelli, Bacon, Hume, and others. (cf. www.wikipedia.com on Causality).

³Michael Polanyi, *The Study of Man*, 63.

⁴This was noted during the lecture of Rev. Fr. Venusto Suarez on Philosophical Anthropology last May 7, 2013. Cf. Jose Garcia y Gasset, Stanford Encyclopedia of Philosophy, www.plato.stanford.edu/entries/gasset.

St. Thomas Aquinas (1224/6-1274), a Dominican friar, born in Roccasecca, near Naples, Italy, influenced by Aristotle, Augustine, pseudo-Dionysius, and later by his mentor, Albert the Great, who, at his early academic pursuit referred to him as “the dumb ox,”⁵ wrote outstanding treatises and elucidations on theology, philosophy, ethics, and almost all fields of discipline. Considered as the greatest, magnificent, highly regarded and most characteristic of his works is the *Summa Theologiae* (1265-1274), though he was not able to complete it during his lifetime.

In *Summa Theologiae*, particularly in Part Ia, questions 75-102 deal with the human nature.⁶ Related to this theme are particularities such as the human soul’s nature that consequently presents the contrast between the body and the soul, the principle of life, embodied (incarnate) spirit, substance, substantial unity, actuality, and operations of the spirit.

What does it mean when St. Thomas says that he will focus on human nature? He means “to discuss the essential features of human beings, the things that make us human, or [...] what it is to be a human being.”⁷ Though *natura* has a complex range of meanings, it refers to the essence or defining character of human beings. “In general, it is the essence of any thing, what its definition signifies, that it is called its nature.”⁸

St. Thomas starts the Treatise on Man with a profound discussion on the nature of the soul and then proceeds by applying this understanding of soul to man.⁹ Why is this so? It is because his working premise is that the human soul’s nature is a philosophical problem.¹⁰

a. The human soul’s nature

Is the soul a body? This query of St. Thomas had a basis on the persisting idea of dualism espoused by Descartes at that time and also with Plato’s account of the soul. For Plato, “a human being is not something composed of soul and body; rather, a human being is a soul using a body, so that the soul is understood to be in the body somewhat as a sailor is in a ship.”¹¹ St. Thomas rejected this position. He said:

This position is shown to be impossible. For an animal and a human being are natural, sense-perceptible things. But this would not be the case if a body and its parts did not belong to the essence of a human being and of an animal. Instead, on Plato’s view, the whole essence of both the human being and an animal would be the soul, although the soul is not anything sense-perceptible or material. And for this reason, it is impossible that [something that is] a human being and an animal be a soul using a body.¹²

⁵Eleonore Stump, *Aquinas*, (New York: Routledge, 2003), 3.

⁶Ibid, 9. For Robert Pasnau, the questions on human nature in the Treatise are contained in QQ 75-89 or only fifteen questions (cf. Robert Pasnau, *Thomas Aquinas on Human Nature*, 3) and also referred to by Ma. Liza Ruth A. Ocampo, *The Dignity of the Thinking Person*, 20.

⁷Ramon Lucas, *Man, Incarnate Spirit* (Italy: Circle Press, 2005), 7.

⁸*Summa Theologiae*, 29.I ad 4. Cf. Ibid., 8.

⁹Ma. Liza Ruth A. Ocampo, *The Dignity of the Thinking Person* (Manila: UST Publishing House, 2006), 21.

¹⁰Ibid.

¹¹*Quaestio disputata de spiritualibus creaturis*, un. 2. Cf. Stump, *Aquinas*, 193.

¹²*Summa contra gentiles*, II, 57. Cf. Ibid.

In question 75, 1c, St. Thomas deals with the nature of human's soul:

... no body can be the first principle of life. For (i) it is clear that to be a principle of life, or to be living, does not hold of a body as the result of its being a body; otherwise (ii) every body would be living, or a principle of life. Therefore (iii) it holds of some body that it is living, or else is a principle of life, through its being *such* a body. But (iv) as for the fact that it is actually such, it has this form a principle that is called its *actuality*. Therefore (v) the soul, which is the first principle of life, is not a body, but the actuality of a body.¹³

Moreover, question 75, a.1 tackles the problem of proving that the nature of soul is *spiritual* (immaterial) understood in a broad sense. In the case of the human soul, being spiritual translates to “something” subsistent:

Therefore the intellectual principle which we call the mind or intellect has an operation *per se* apart from the body. Now only that which subsists can have an operation *per se*. For nothing can operate but what is actual: wherefore a thing operates according as it is; for which reason we do not say that heat imparts heat, but that what is hot gives heat. We must conclude, therefore, that the human soul, which is called the intellect or the mind, is something incorporeal and subsistent.¹⁴

b. The principle of life

In question 75, 1c, St. Thomas used the term ‘first principle of life.’ What did he mean about this notion? Robert Pasnau clarifies that, “in speaking of a *principle* all that Aquinas is looking for is the cause of life, or the internal source from which life springs.”¹⁵ But regarding the notion of ‘first principle,’ this is what Pasnau explains:

... we will see various ways in which soul can be viewed as the *first* source, cause, or principle of life. It is first in terms of being that which is primarily responsible for the *existence* of a living being, and it is also first in terms of what it contributes to the *purpose* of a living being. Here we are looking for that which is primarily responsible for life, and Aquinas tells us that “life is displayed above all by two functions: cognition and movement.” So to speak of soul as the first principle of life is to say that it is primarily responsible for cognition and movement.¹⁶

However, there is an important point to be considered about this notion. Pasnau mentions that:

¹³Cf. Robert Pasnau, *Thomas Aquinas on Human Nature* (New York: Cambridge University Press, 2002), 35.

¹⁴*ST I*, q. 75, a.2, res. Cf. Ma. Liza Ruth A. Ocampo, *The Dignity of the Thinking Person*, 22-23.

¹⁵Robert Pasnau, *Thomas Aquinas on Human Nature*, 28.

¹⁶*Ibid.*, 29.

Aquinas acknowledges [...] when he allows that a body can be a principle of life [...] He grants that it makes sense to speak of bodily parts as principles of life. [...] The eye is a principle of vision; elsewhere he says that the heart is the principle of movement in animals. [...] But what Aquinas insists on is that nothing bodily can be the *first* principle of life.¹⁷

c. Embodied (incarnate) spirit

In our encounter of the living body of a man, we do not actually see the body itself but a man who is alive, that is, with body and the soul, or the spirit, psyche or the total person himself. This is how it is elucidated by Ramon Lucas:

The expression “human body,” therefore, already contains the composition of matter and spiritual form. We cannot speak of the “human body” considering it as only a body because, insofar as it is a human body, it is by definition always informed by a spiritual soul. [...] Nor can we speak of body and soul in a kind of opposition, as if they were two specifically distinct substances. We must speak of the only man who exists: “*anima et corpus non sunt distinct sicut res diversorum generum vel specierum. [...] Una enim et eadem forma est per essentiam, per quam homo est ens actu, et per quam est corpus, [...] et per quam est homo.*” Strictly speaking, therefore, it is incorrect to say that the human body is for the soul because the expression “human body” already contains the notion of a spiritual soul.¹⁸

For Ocampo, “the presence of spirit is the reason for the metaphysical grounding to any claims to dignity in definitions like “incarnate spirit” and to a certain degree “person” is defended.¹⁹

d. Substance

St. Thomas started in his Treatise that “human beings are composed of a spiritual and corporeal substance.”²⁰ This is somewhat “hard to imagine, at first glance, a clearer statement of the dualist doctrine: the human mind is one thing, the human body another, each its own independent substance,” says Pasnau. Referring to 75.2 where Aquinas argues that the human soul subsists on its own, Pasnau continues:

Here he (St. Thomas) links being subsistent with being a substance, quoting from Augustine approvingly (“it is the nature of mind both to be a substance and not to be a corporeal”) and explaining that to be a substance in this context means to be subsistent (sc). So there can be no doubt that Aquinas regards the soul as a substance.²¹

¹⁷Ibid., 36-37.

¹⁸Ramon Lucas, *Man, Incarnate Spirit* (Italy: Circle Press, 2005), 232.

¹⁹Ma. Liza Ruth A. Ocampo, *The Dignity of the Thinking Person*, 15.

²⁰*Summa Theologiae*, q. 75 prologue.

²¹Robert Pasnau, *Thomas Aquinas on Human Nature*, 45.

To understand further what Aquinas meant by saying that the soul *subsists*, Pasnau writes, “to say that a thing subsists is to say virtually nothing at all, because the word ‘subsist’ has no settled meaning or even connotation in English, even as a technical philosophical term.”²² In Aquinas’s writings, he treats the notion of subsistence as prior, and uses it to analyze the notion of substance. In *Summa Theologiae* 29.2c, he claims that “things subsist that have existence not in others, but in themselves.” In *Quaestiones disputatae de potential* 9.1c, he writes, “a thing subsists when it does not need some outside foundation in which it is sustained, but is sustained in its own self.”²³

e. Substantial unity

This topic on the substantial unity is St. Thomas Aquinas’s “most extensive, longest and mature defense on man’s special unity.”²⁴ The question 76, a.1 of the *Summa Theologiae* is his cornerstone argument of human nature. As stated by Ocampo:

Aquinas syllogism on man’s unity asserts that it is by virtue of soul as form that he enjoys substantial unity. He asserts that the form of man is *rational*. He identifies the nature of man by virtue of the unity that he enjoys.²⁵

Aquinas argues for man’s substantial unity by referring to the basic formulation of “genus and species” that form the definition which in turn signifies the whatness of the being in question. In his view, the formal principles of the definition, which is the difference, account for substantial unity. He extends this treatment to the integration of “formal principles” in the analysis of life; he leads us to the consideration that one has to be aware of grades and levels of reality in order to grasp the nature of things. And in the context of such hierarchy, man is presented with a special kind of unity in the class of natural substances. It is in man that the phenomenon of “substantial unity” is properly seen.²⁶

f. Actuality

To have a clear comprehension of this concept, it would be helpful to have a background about the metaphysical world according to St. Thomas. Eleonore Stump states:

The metaphysical world is ordered in such a way that at the top of the metaphysical hierarchy there are forms – the angels [...] – which exist independently and are not configurational constituents of anything else. Near the bottom of the hierarchy are forms that configure matter but do not exist independently of matter as configured things in their own right. [...] And in the middle are human souls, the amphibians of this

²²Ibid.

²³Ibid., 48.

²⁴Ma. Liza Ruth A. Ocampo, *The Dignity of the Thinking Person*, 25.

²⁵Ibid.

²⁶Ibid., 26.

metaphysical world, occupying a niche in both the material and the spiritual realm. Like an angel, the human soul is itself a configured subsistent form; but like the forms of other material things, the human soul has the ability to configure matter.²⁷

Moreover, Stump continues:

The human soul, then, is a configured configure. On the one hand, like an angel, it is able to exist and function on its own, apart from matter. On the other hand, the human soul is not, as Plato thought, a spiritual substance moving a body which is also a substance in its own right; rather, the human soul is the substantial form constituting the material substance that a human being is, and it configures matter, as material forms do. So, for Aquinas, the human soul is the noblest and highest of the forms that configure matter, but it is the lowest in the rank of intellectual subsistent forms, because it is mixed with matter, as the intellectual subsistent forms that are angels are not. Aquinas sums up his position this way: “the [human] soul has subsistent being, insofar as its being does not depend on the body but is rather elevated above corporeal matter. Nevertheless, the body receives a share in its being, in such a way that there is one being of soul and body, and this is the being of a human” (*QDSC un 2 ad 3*). He goes on to say, “no part has the perfection of its nature when it is separated from [its] whole. And so since the soul is a part of human nature, it does not have the perfection of its nature except in union with the body [...] And so, although the soul can exist and intellectually cognize when it is separated from the body, nonetheless it does not have the perfection of its nature when it is separated from the body” (*QDSC un 2 ad 5*).²⁸

Regarding the further description of this form that St. Thomas was referring to, Stump states:

The substantial form that configures a human being allows for still further sets of operations, namely, intellective and volitional processes. Because the human soul has this distinctive set of capacities, Aquinas tends to call it ‘the intellective soul,’ or ‘the rational soul’ to distinguish it from the nutritive soul of plants and the sensitive (i.e. capable of perception) soul of animals generally. The intellective soul is thus that configuration of matter on the basis of which something exists as this living human body. There is not a configuration of matter that makes the body a human body and then another configuration that is the intellective soul. As Aquinas says: “There is no other substantial form in human beings apart from the intellective soul” (*ST Ia.76.4*)²⁹

Hence, Aquinas claims, “in virtue of this one form, a human being exists as an actual being, as a material object, as a living being, as an animal, and as a human being with cognitive

²⁷Eleonore Stump, *Aquinas*, 200.

²⁸*Ibid.*, 200-201.

²⁹*Ibid.*, 201-202.

capacities.”³⁰ For this reason, Aquinas “tends also to call the soul the act of the body; the soul configures matter in such a way that the matter is actually a living human body.”³¹

g. Operations of the spirit

Going back to St. Thomas’s *Summa Theologiae* I, question 76, a.1 *res*, it says:

The same can be clearly shown from the nature of the human species. For the nature of each thing is shown by its operations. Now the proper operation of man as man is to understand; because he thereby surpasses all other animals. [...] Man must therefore derive his species from that which is the principle of this operation. But the species of anything is derived from its form. It follows therefore that the intellectual principle is the proper form of man.³²

From the above statement, it is clear that “man’s proper activity is understanding but it is one among the several activities that he is capable of performing.”³³ This intellectual faculty allows man to know (to understand) the truth. According to Aquinas, the terms intellect and reason have the same object: the truth. However, there is a need to distinguish intellect and reason in order to grasp fully the kinds of powers or faculties of the soul.³⁴

In question 79, a.8, St. Thomas provides the distinction:

I answer that, Reason and intellect in man cannot be distinct powers. We shall understand this clearly if we consider their respective actions. For to understand is simply to apprehend intelligible truth: and to reason is to advance from one thing understood to another, so as to know an intelligible truth. And therefore angels who, according to their nature, possess perfect knowledge of intelligible truth, have no need to advance from one thing to another; but apprehend the truth simply and without mental discussion, as Dionysius says (*Div. Nom. Vii*). But man arrives at the knowledge of the intelligible truth by advancing from one thing to another; and therefore he is called rational. Reasoning, therefore, is compared to understanding, as movement is to rest, or acquisition to possession; of which one belongs to the perfect, the other to the imperfect.³⁵

Man’s mode of understanding presupposes reason, intellect and mind. The question regarding this matter is actually based on the general theory of intellectual powers of Aristotle which he discussed in *De anima*. For Aquinas, man’s perfection lies in the apprehension of truth which he attains through the act of understanding:

³⁰*Summa Theologiae* Ia.76.6 *ad* 1. cf. *Ibid.*, 202.

³¹*Summa Theologiae* Ia.75.1. cf. *Ibid.*

³²Cf. Ma. Liza Ruth A. Ocampo, *The Dignity of the Thinking Person*, 32.

³³*Summa Theologiae* I, q. 77. cf. *Ibid.* 83-84.

³⁴*Ibid.* 86.

³⁵*Ibid.*

Understanding indicates simple and absolute knowledge. And one is said to understand (*intelligere*) because in some sense he reads (*legit*) the truth within (*intus*) the very essence of the thing. Reason, on the other hand, denotes the transition from one thing to another by which the human soul reaches or arrives at knowledge of something else.³⁶

Regarding understanding, particularly the discursive kind, Stump clarifies:

Discursive understanding is the hallmark of the rational soul. Reasoning is compared to understanding as movement is to rest, or as acquisition is to possession. Aquinas describes the *via* of man's discovery of the truth in terms of movement and rest; imperfection towards perfection; from potency to act. But the striking point that Aquinas upholds throughout his reflection on the *intellectus-ratio* framework of human knowledge is the human being's real capacity to reach the truth. The discursive character of rationality is not viewed as an obstacle but the particular way in which man's soul as the responsible principle of man's "dual" powers for *intellectus o ratio* in the discovery of the truth in time and history.³⁷

Aside from those mentioned above, Aquinas also acknowledges these operations:

A proper sense makes judgments about its proper sensible, discerning it from others that fall under the same sense – discerning white from black or green, for example. But neither sight nor taste can discern white from sweet, because that which discerns between two things must recognize both. Consequently, this discerning judgment must pertain to the common sense, to which all memory apprehension are conveyed, as to their common terminus.³⁸

Moreover, there is another separate operation of the soul. About this operation, Pasnau states:

Aquinas does not have a theory of consciousness. But neither does he make the false assumption that there is some one place where consciousness happens. Indeed, one of the consistent motifs of Aquinas's work is his effort to account for the mind's operations without postulating this command center. The soul's different capacities play different roles, and what we take to be unified functions, such as consciousness, are actually distributed over several capacities, working in tandem. The common sense is not the magic place where consciousness happens, because consciousness happens all over the mind.³⁹

Lastly, of the human soul's various capacities or operations, only two – intellect and will – distinguish us as human. Pasnau presents this idea of Aquinas:

³⁶*De Veritate* q. 15, a.1 res., cf. *Ibid.*, 87.

³⁷*Ibid.*, 88.

³⁸*Summa Theologiae* 78.4 ad 2. cf. Robert Pasnau, *Thomas Aquinas on Human Nature*, 192.

³⁹*Ibid.*, 198.

Most generally, a appetite is nothing other than a certain inclination toward something on the part of what has the appetite (*Summa Theologiae* 1a2ae 8.1c). Accordingly, the function of an appetitive power just is to produce such appetites or inclinations: ‘the operation of an appetitive power is completed when the agent is inclined toward its object’ (*Summa Theologiae* 81.1c). In our case these inclinations come in the form of desires, and indeed the Latin *appetitus* can often be plausibly translated as *desire*. So the will operates, producing desires, and these desires in turn lead to action on the part of our mind or body. ‘The act of will is a certain inclination toward something. [...] An inclination is a disposition of the mover in virtue of which the agent produces movement’ (*Quaestiones disputatae de veritate* 22.12c). Aquinas often insists that it is the whole human being which moves, thinks, perceives, and so forth.⁴⁰

h. Conclusion

Though man is a mystery but there many manifestations, ways, and realities in which man is open and in fact, he directly participates in and involves with them, in order to really understand his being as a human person. Man is substantially united, body and soul, and through this reality, he must open himself to many ‘surprises’ that may come and go in every moment of his life. He has the capacity to go beyond from his present condition but there remains his nature that has history, and endowed with faculty and operations in order to actualize himself and with the community. As spiritual, man is also open to realities beyond the ambit of time and space through which he may realize that there is this divine Being whom he calls God who continuously helps, nourishes, and completes his essence and meaning as a human being until the time that he could arrive and share the promised reward of the Supreme Good Himself.

⁴⁰Ibid., 200-201.

**People as Penguins:
Thermoregulation as Part of the Human Essence**

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People as Penguins:

Thermoregulation as Part of the Human Essence

It is by now well known that having a higher quality social network leads to a happier, healthier, and longer life. One of the best known meta-analyses shows that the quality of one's social network is an even more important predictor of longevity than for example obesity, exercising regularly (or not), and as significant as smoking (or not; Holt-Lunstad et al., 2010; see also House et al., 1988). It is also often said that relationships help us prosper because they help fulfill what has been called a *need to belong*. This need to belong has been understood as a biological urge to be connected through loving and caring relationships (Baumeister & Leary, 1995; Bowlby, 1969). Yet, fulfilling a “need to belong” is hardly a satisfying answer to the question *why* belongingness is so essential for making us thrive. A need to belong is something we intuitively understand – being with other people. But if we think about other animals, like penguins, is a “need to belong” really so essential to help them survive and thrive?

That leads us to the question why relationships make us thrive the way they do, and what makes the need to belong part of the human essence? Often the answers to questions that seem to be the most profound are those that are surprisingly simple. Because a rather essential part of the human essence is staying alive, so what is more crucial and more obvious as a biological urge than that which is required to do to keep us alive every single day? In this chapter we reason that thermoregulation – the regulation of body temperature – is essential not only for staying alive, but also an essential feature for the human need to belong and for social integration more generally. Specifically, we identify basic patterns in how thermoregulation relates to social cognition, and how – as a result – more complex social integration affects our core body temperatures.

Our perspective suggests that humans are, in one important way, just like penguins: We need warmth and a good huddle when we are cold in order to survive. Yet temperature affects our social behavior in even more complex ways. Warm environments, for example, elicit greater conformity in horse race-betting (Huang et al., 2011). Furthermore, houses – which protect us against the cold – are regarded as more homely while we are more likely to purchase them when temperatures are low (Van Acker et al., in press). Moreover, customer service employees become friendlier when temperatures drop (Kolb et al., 2012). All of these findings are all part of an area of research that has been aptly called *social thermoregulation* (IJzerman et al., 2015a). How can they be organized so that we understand how and why temperature has become part of our needing to belong?

In this chapter we provide an overview of the domain of social thermoregulation. Our overview suggests that humans have always relied on, and still rely on, thermoregulation to navigate their social environment. In outlining social thermoregulation, something that we share to some degree with other species, as a crucial feature of the human essence, we focus on the continuity of thermoregulatory mechanisms from other animals to humans. We then provide a number of different effects from the social psychological literature that helps us understand how thermoregulation is implicated in social behavior. From there on, we seek to understand our brain as a “hierarchically organized prediction machine” that helps us keep temperature at optimal levels. By then, it should be clear how thermoregulation is part of our human essence, how it changes our thoughts about others, and alters our motivations to be with others. We end by pointing to the implications of understanding thermoregulation as human essence.

Thermoregulation in the Animal Kingdom

The knowledge base of thermoregulatory mechanisms in the animal kingdom is vast: Between 2011-2015 alone an estimated 9,000 papers were published on thermology and temperature measurement (Ammer, 2014, 2015). Our aim here is not to provide an exhaustive review, but to instead distil the core conclusions from this work and the perspective on human essence it implies. In doing so, we assume that despite that other animals are different from humans in many respects, and suggest that there is still a good amount that remains to be learnt from species that are related to us, how distant evolutionarily they may be.

Broadly speaking, animals seek to keep them safe in order to survive, and mismatches between “desired states” and influences from the environment lead the organism to act. This simple principle also holds for thermoregulation. If environmental temperatures rise or drop precipitously, recognition and then regulation is required. In learning basic thermoregulatory mechanisms, the distinction between *poikilotherms* (cold-blooded animals) and *homeotherms* (warm-blooded animals) is helpful. Fundamental differences exist between poikilotherms and homeotherms in terms of how they regulate their body temperature: Poikilotherms solely rely on the environment to regulate their body temperature; homeotherms also do so internally. When poikilotherms’ temperatures rise or drop outside of comfortable ranges, they gravitate towards more comfortable environments. Homeotherms on the other hand have more complex systems to detect and regulate temperature. This regulation can be understood by what Walter Cannon (1932) called “homeostasis”: Keeping stable internal physiological features, even when the external environment becomes more instable. Warm-blooded animals strive for “thermal” homeostasis by keeping their internal physical circumstances as constant as possible.

In maintaining homeostasis, homeotherms mount a number of internal defense systems. In case of temperature increases, they can sweat, pant, or yawn (e.g., Gallup & Gallup, 2008) and

when temperatures drop they can shiver (Yanský, 1973). There is a considerable asymmetry here: Temperature rises are typically resolved by the organism itself (either through internal regulation or by simply jumping into a nice and cold pool) as not being able to do so quite rapidly can cause death or permanent brain damage. Temperature drops on the other hand are not immediately threatening to the organism: Only when temperature drops threaten the core they are likely to become threatening for survival or for brain functioning, and this occurs much more slowly than when temperatures rise. As a result, temperature drops (but not increases) can be regulated while relying on the environment, which can be other animals. .

What is more, this internal regulation mechanism confers homeotherms with an added advantage: It allows them to be much more *flexible* in choosing the environment to live in. However, internal regulation mechanisms come at a cost: Ask anyone that comes out of ice cold water. When temperatures drop, animals start to metabolize and “spend” energy to warm up through for example through shivering. Shivering counts as one of the most energy-costly bodily processes and thus is expensive (King & Farner, 1961); it may then also not come as a surprise that animals seek to *economize* thermoregulation, so that body thermoregulation is done as efficiently as possible (Nuñez-Villegas et al., 2014).

As we have noted, temperature drops do not immediately threaten survival or brain functioning. This allows homeotherms to rely on fellow animals for thermoregulation. The result for homeotherms is that many of them live in groups to distribute the risk of cooling down, and not only to avoid the risk of being eaten (for those that live in contexts populated with conspecifics). Many homeotherms have thus started relying on other animals to distribute and economize the costs of thermoregulation across conspecifics.

Experimental rodent research has suggested a first hint to this energy-saving hypothesis for homeotherms: The Octodon Degus' (a Chilean rodent) energy usage at 15 degrees Celsius is 40% lower and surface temperature higher when housed with three or five (vs. alone; Nuñez-Villegas et al., 2014). This causes *social thermoregulation* to be part of homeotherms' essence, as one article reviewing rat research shows that social thermoregulation is one core reason for why homeotherms live in groups (Ebensberger, 2001). And in different species we can also observe mechanisms that are in place to let conspecifics help in survival, and which therefore help thermoregulation become part of their essence. For example, example, cows and pigs cry or shriek to call their fellow farm animals closer in case temperatures drop and they are in need of a solid huddle (e.g., Hafez, 1964).

This suggestion has important implications. For one, if other animals indeed help their ilk to keep warm, one might expect physiological and cognitive mechanisms that help us understand who can be relied upon to do so. This is where animals are often set apart in terms of how complex thermoregulatory mechanisms have become (and obviously the sole way that we can distinguish penguins from humans). More specifically, we observe an increase in complexity of thermoregulatory mechanisms via which animals control their temperature when we shift to animals whose social and physical environments are more complex.

Consider a species called *vervet monkeys*, a monkey native to Africa, and one that is often used to understand human behavior. Researchers observed these monkeys at the Eastern Cape in South Africa and counted the number of other monkeys they interacted with. What the researchers found is that the core temperature for those with larger social networks remained higher when the monkeys' social networks were larger (they had a smaller amplitude; McFarland et al., 2015). This means that the monkeys somehow "know" that they can rely on other

monkeys, as their own bodies exert more energy to stay warm. We will return to which mechanisms are in place for those monkeys later, when we return to the idea of a “layered” system of thermoregulation.

In conclusion, it is pretty clear that environmental and internal regulation mechanisms exist to regulate temperature. Furthermore, it also is becoming very apparent that social contact has become part of the animals’ bioenergetic regulation systems and that social contact helps homeotherms to maintain temperature homeostasis as efficiently as possible. It logically follows that some mechanisms *have to be* in place to help estimate how reliable the social environment is, as this confers the animal with ever-greater flexibility to adapt to novel environments. We now first direct our attention to research on thermoregulation in humans, and then direct our attention to those mechanisms that help estimate how reliable our social environment is. From there, we will return to the *need to belong*, so that we can start to comprehend why thermoregulation has become such an essential feature of the human essence, and why social proximity and social soothing have become what we call *unconditionally reinforcing* (i.e., innately motivating).

Human Social Thermoregulation: You, Penguin?

It is easy to argue, at this point, that current humans no longer depend so much on social thermoregulation: Whether it is clothes, a thermostat, a shower, or a personal heater around the wrist, we know how to warm ourselves up and cool off when need be. But please remember that these inventions are relatively novel in terms of our evolutionary history – from this perspective, it is quite likely that many of the biological and cognitive systems that we use for navigating our social environment have been formed over many years of evolution without all these novel thermoregulatory devices. Two questions are therefore important to address: Is

temperature at all involved in navigating humans' current social world, and, if so, how did it become involved in our social motivations and in our thoughts about others?

As for the first question, although the field of social thermoregulation is very much in its infancy¹, it is becoming clearer and clearer that thermoregulation is involved in our social behavior. Since 2008, when the first report on the topic was published, approximately 83 reports appeared at the time of writing this chapter on thermoregulation and social behavior. One of the first reports was published by Lawrence Williams and John Bargh (2008), who found that after participants held a warm (as compared to a cold) cup, they judged others as more sociable and trustworthy, and became themselves more generous. This suggests that a temperature cue distorts our thoughts about others and behaviors towards others in important ways.

There were many reports in the scientific literature that followed, and the effects researchers found on motivations and social cognitions varied widely. Some very basic effects indicated that people pay more attention to relationships when they are warmer. Participants in these studies for example, used more language associated with feeling psychologically closer to others and they tended to see more relationships in very basic figures when in a warm (as opposed to a cold) condition (IJzerman & Semin, 2009). Similarly, when people were in warmer conditions they show more conformity to the group. For example, when it gets warmer, people bet on horses that are more popular with the “bookies” (Huang et al., 2011).

¹ It is certainly worthwhile mentioning that these effects have not been without criticism, as some effects in this literature are (Schilder et al., 2015) and others are not replicated (Vess, 2012; LeBel & Campbell, 2013). The psychological literature in the last few years have seen a large overhaul in terms of what is considered reliable and solid evidence, and rightfully so. What is often the case is that psychological studies are heavily “underpowered” (i.e., participant samples that are too small to be able to support the tested hypothesis). Although this may be true of some of the reports in this literature, solid evidence certainly exist, with a considerable amount of studies with participant samples between 100-500, and some outliers even with samples around 30,000 and above 6 million. Though the criticisms are well-taken, we suspect that criticisms for this field should be mostly directed at measurement and picking the right variable for the right situations.

To what degree is this part of the human essence, and do we as humans still apply thermoregulatory mechanisms to our non-social environment? The literature suggests that we do, as temperature remains a cue when we observe robots, which we view as more humanlike and friendly when they are physically warmer (Nie et al., 2012), while we also connect warmer temperatures to products we perceive as more trustworthy (IJzerman et al., 2015b). This thus suggests that thermoregulation has become truly essential to the human essence, and likely the underlying motivating mechanism for our need to belong.

Yet, the effects are not as straightforward as they seem. While many of the effects seem to show a positive link between warmth and prosocial behavior, customer service employees are friendlier in colder environments (Kolb et al., 2012), while people rent more romance movies (but not more movies overall) when they get colder (Hong & Sun, 2012). Furthermore, people find a house more “homelike” and want to pay more for it when it is colder. These tendencies seem to be driven by people’s motivations to be with others when they are colder (Van Acker et al., 2016). Altogether, this seems to suggest that we are *motivated* to be with others when it is colder, while our *thoughts* are more likely to be prosocial when in warmer environments.

We can conclude that thermoregulation is deeply integrated into our thoughts about others and our motivations towards others in interpersonal situations. In further understanding these effects, it helps specifying individual differences as to how people rely on thermoregulatory cues. We will address this idea in the next section, where we illuminate how thermoregulatory cues help us navigate our social environment by making predictions about other people.

Human Cognition: Meet Our Brain, the Prediction Machine

The tendency to affiliate with others can also be detected when we look at people's memories of others: When participants are put in physically colder conditions, they are more likely to think of loved ones than in warm conditions. However, this memory of others is driven by their past relationships experiences with, and thus predictions about, other people (IJzerman et al., 2016a; see also Fay & Maner, 2012). This individual difference in what kind of predictions we make about others can help us specify what the central mechanisms are guiding and regulating temperature and social world, and how this sets apart the human from the penguin essence.

Crucial to understanding human social thermoregulation – and where it sets the human essence apart from many other animals - we believe, is the *value* of temperature cues in predicting the reliability of our social environment. Some of the effects may indeed be confusing: Warm and cold conditions may sometimes give rise to being more and sometimes to being less friendly. How can we resolve this puzzle in understanding how thermoregulation factors into our social behavior? Although there is still much to be learnt about the exact mechanisms, there are a couple of heuristics we can adopt. Essentially, (a) others help us to warm up (not cool down), (b) our cognitive systems should function in such a way that it helps us predict to what degree others can reliably warm us (and that we feel warmer when we think someone is more trustworthy). Thus, (c) when we are (comfortably) warm, we feel trusted and will be more generous, but (d) when we are cold, we are motivated to seek out other people (or consumer brands or houses), and we do so when (e) we learnt that others reliably warm us up.

Furthermore, we rely on temperature to navigate our social environment. When we are reminded of the fact that others are trustworthy (and thus *socially predictable*), we feel warmer; that is, when we are put physically closer to another person, or even when we are reminded of

trustworthiness, we perceive temperatures as higher (IJzerman & Semin, 2010). On an even more abstract level, when we are reminded of a consumer brand we associate with positively, our temperature perception also goes up (IJzerman et al., 2015b). Thus, temperature-dependent social behavior is not solely applicable for huddling with one another, but it extends to what kind of predictions we make of others. Perhaps the most sophisticated example is a recent finding that people living further from the equator (typically taken as a proxy for a colder climate) have more diverse social networks, and these diverse social networks protect people's core temperatures from the cold (IJzerman et al., 2016b). And *only* those who have a romantic relationship get access to those more diverse social networks. In other words, being able to cuddle everyday with a partner – like a penguin - allows one to profit from “more advanced thermoregulation” – something that probably not penguins, but most humans seem capable of doing.

As a more general overview of how the brain relies on temperature predictions to navigate the social environment, the person who best summarized what we need for understanding this complex relationship is the cognitive scientist Andy Clark (2015). He called our brain and body a “multi-layer probabilistic prediction machine” (Friston, 2009). These multi-layer predictions go from relying on basic mechanisms in the body (like cuddling) to more advanced long-term predictions (knowing that one can rely on one's social network). Over evolutionary time, more novel systems likely developed that allow us to make predictions about others, and these rely on the same brain mechanisms that helped us knowing who could warm us. Early on, animals could simply move to a different environment to warm up. Over evolutionary time more complex regulation mechanisms started to emerge that were either internal and/or social, and helped us become more flexible.²

² Although it may appear that we suggest that homeotherms evolved *further* than poikilotherms, this is not what we intend to say. Instead, homeotherms have become equipped with *extra* mechanisms that afforded them with greater

Throughout most of human history, we did not live in houses, make fire, or model weather conditions days in advance. We always needed to cuddle with others simply to stay warm. We think that this necessity led people to survive who were also better able to predict who would be reliable in warming them up when cold. As a result, brain mechanisms have become assembled in such a way that we have obtained integrated thermoregulatory-social prediction brains (Satinoff, 1978). That is why thermoregulation likely remained an important variable for our brains to make predictions about, and that is why temperature predictions remain important in so many of the social behaviors we engage in day in and day out. It is also why we have integrated thermoregulation into our thinking about our social network, and why (mostly) people that speak Indo-European languages think of emotionally responsive people as warm and emotionally unresponsive people as cold. And it is also what sets the human essence apart from the penguin essence.

Further Distinguishing Humans from Penguins: Thermoregulation is Hierarchically Organized

Again, the mechanisms that have arisen are anything but simple. When we started discussing the basic mechanisms central to thermoregulation, we implicitly and explicitly described a hierarchical view of thermoregulation, with at the lowest level the distinction between animals that make use of their environment versus animals that can also regulate temperature internally. Accordingly, homeotherms have been afforded with an extra feature that makes them more flexible to adapt to new environments. And could it be that even more systems are in place that make animals yet more flexible to adapt to climatically unstable environments?

flexibility to adapt to novel environments. Following such adaptations, both homeotherms and poikilotherms still evolved throughout years of evolution. There are not just advantages to internally regulating temperature: Homeotherms for example are also much more sensitive to the environment, as homeotherms closer to the equator are much smaller, a rule that poikilotherms are much less sensitive to (cf., Bergmann's rule; Meiri, 2011).

After all, recall that vervet monkeys had actual higher core temperatures if they had higher social networks. Could it be that the monkeys get some kind of cue when they are more socially connected, and because of that they get warmer, even when the environment is the same?

There is some research that confirms this. One very “cool” study demonstrated that when they groomed dead monkey pelts, the pelt was much better protected against blasts of warmth or coldness than in an ungroomed condition (McFarland et al., 2016). Thus, the grooming of the monkey likely *changes* the vervet monkey’s perception of temperature, “communicating” that its social group helps in staying warm. Thus, we infer that the socially connected monkey receives (nonconscious) cues that it has a social network to rely on, and, as a result, it can adapt itself better to changing environmental temperatures than the not so well connected monkey. But this is unlikely about “just” warming up, but also about assessing the reliability of the social environment.

In comes the evidence on humans. One of the prime indicators that proximity is at a neutral, and desired, level is body temperature. That is, Fransson, Karlsson, and Nilsson (2005) found that babies have smaller differences between skin temperature and core temperature when being held (vs. when not) potentially preventing hypothermia, and thus *maintaining homeostasis*. Thus, more and more evidence is coming together that thermoregulatory systems are *layered*. From poikilotherms to penguins to monkeys, thermoregulatory mechanisms have become more complex, and layer upon layer the brain and body help protecting against harsher and harsher temperature environments (cf. Caporael et al., 2013; Mandler, 1992).

Consider an even more advanced way of regulating temperature, as in how temperature can bias memory in humans: When a face is paired with physical warmth, we remember the face as friendlier (thus decreasing our need to be with others in our environment), and if it is paired

with physical coldness, we remember the face as unfriendlier (Messer et al., 2016). Furthermore, our skin becomes colder when we are excluded from the social group and we can fool a person's emotional state (at least temporarily) after being excluded by handing them a warm cup to hold (IJzerman et al., 2012).

The view of thermoregulation as guiding our predictions about social behaviors, and thermoregulation as structured hierarchically may help us understand why thermoregulation has remained relevant for more complex social behaviors, like eliciting greater conformity in horse race-betting (Huang et al., 2011). Or why houses are regarded as more homelike when temperatures are low (Van Acker et al., 2016). And also why customer service employees become friendlier when temperatures drop (Kolb et al., 2012). And it should be clearer why people who are more socially integrated have their core temperatures buffered better from the cold. Finally, if we “prime” people with the idea of social predictability, their temperature perceptions should rise (IJzerman & Semin, 2010; IJzerman et al., 2015b; Zhong & Leonardelli, 2008).

Implications for Understanding Social Thermoregulation as Human Essence

Perhaps the reader is convinced that thermoregulation is part of the human essence. But at the end of this chapter, perhaps the question “so what?” is justified. We hope we have made the case for the fact that thermoregulation is still an important motivating factor for our relationships (and, as some have argued, that homeothermy is one of the main reasons why morality has become part of our essence as well; Churchland, 2014). It is thus tempting to quickly intervene in helping us to live a longer, happier, and healthier life. However, our enthusiasm still needs to be tempered, for a number of reasons. First, we know little about its consistency across climatic environments. Most studies that are currently conducted are done in

the Western world, which may not necessarily generalize to other climatic environments. There are some indications that the way that people think about temperature differs as a function of climatic variation, at least as evidenced by linguistic expressions. Metaphors using warmth for affection mostly appear in Indo-European languages and are absent in languages spoken close to the equator (Koptjevskaja-Tamm, 2015). And basic thermophysiology is already complex, let alone its connection to social behavior. Thus, simply holding a warm cup will not resolve our anxieties or feelings of loneliness long-term. Again, it is important to keep in mind that the field of social thermoregulation is only in its infancy.

Even though its application requires much more research, we are hopeful, particularly in relation to health. For example, *Brown Adipose Tissue* (BAT; a type of fat) is not only involved in shivering thermogenesis, but also involved in tumor growth, at least in rats (e.g., Ricquier et al., 1983). Only recently did researchers discover that BAT is not only present in infants, but also in adult humans (Nedergaard et al., 2007). We know that relationships and social support are linked to health, and social support is even linked to recovery from (breast) cancer (Funch & Marshall, 1983; Waxler-Morrison et al., 1991). Could it be that thermoregulation is an important missing link in understanding just how relationships help us survive, even in the face of destructive forces such as cancer? We think so, but we barely know anything about how thermoregulation relates to a disease like cancer, and the mechanisms likely vary per type of cancer.

Thermoregulation can likely also be used to understand the link between relationships and the development of self-regulation. We suspect that maternal thermoregulation links to brain development in the human infant's early days. In rats, longer maternal thermoregulation has been associated with longer brain growth in rats (Suchecki et al., 1993). Along the same lines, rat pups

that had received longer, more intensive maternal care grow up to show a healthier stress response (Weaver et al., 2004). Outsourcing the (metabolically expensive) activity of thermoregulation - and having more “energy” available may well be an important reason why the brain has a longer period to mature with prolonged maternal thermoregulation, and we suspect something comparable occurs for humans. In other words, we think that thermoregulation is such an important part of the attachment system that relationship and attachment interventions should rely on temperature as an *unconditional reinforcer* to help increase social predictability, and to help the infant’s brains to mature. If that were true, would such interventions also extend to adult humans? Interventions are typically aimed at talking about difficult emotional episodes. But could it not instead be that crucial for attachment interventions is linking warmth with social predictability?

We suspect so. We think that social thermoregulation is the reason that the *need to belong* is a biological urge, and one important facet in why relationships are even more important for our health than being obese (or not), exercising (or not), and as important as smoking (or not) for how long we live. Nevertheless, just like that we do not yet fully understand how social thermoregulation motivates us to act in social situations, we still need to set up substantial programs of research before being able to intervene in daily life. But as it may, the answers to these questions are right around the corner: With the advent of modern sensor and actuator technology and advanced statistical analyses, we are convinced that a more advanced understanding of social thermoregulation will help us thrive.

This brings us back to the notion of human essence. For us, clearly what is essential for people is their relationships and their need to belong. But what drives the need to belong is people’s day-to-day challenge to thermoregulate, and it is this part of the human essence that we

share in part with other animals. And perhaps because it is so essential it may have been often overlooked. But the animal, physiological, and psychological literatures all point to one important truth: Social thermoregulation is one important universal for homeotherms that live in groups, and humans do so in even more complex ways. Just how, why, and when we can apply this knowledge of our human essence will only be understood in the very near future.

Further Reading

Key References:

- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497.
- Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: a meta-analytic review. *PLoS Med*, 7, e1000316.
- IJzerman, H., Coan, J. A., Wagemans, F. M., Missler, M. A., van Beest, I., Lindenberg, S., & Tops, M. (2014). A theory of social thermoregulation in human primates. *Frontiers in Psychology*, 6, 464-464.

Remaining References:

- Ammer, K. (2014). Published papers on thermology or temperature measurement between 2011 and 2013. *Health*, 4(3), 165–169. Retrieved from [http://www.uhlen.at/thermology-international/data/Volume 4a.pdf](http://www.uhlen.at/thermology-international/data/Volume%204a.pdf)
- Ammer, K. (2015). *Published papers on THERMOLOGY or TEMPERATURE MEASUREMENT between 2014 and 2015 an index of publications computed by Prof Kurt Ammer MD*, PhD (Vol. 5).
- Bowlby, J. (1969). *Attachment and Loss: Attachment*; John Bowlby. Basic Books: New York.
- Cannon, W. B. (1932). Homeostasis. *The Wisdom of the Body*. Norton: New York.
- Caporael, L. R., Griesemer, J. R., & Wimsatt, W. C. (2013). *Developing scaffolds in Evolution, Culture, and Cognition*. MIT Press.
- Clark, A. (2015). Surfing uncertainty: Prediction, action, and the embodied mind. Retrieved from <http://tinyurl.com/hllu4xe>.

- Churchland, P. S. (2014). The neurobiological platform for moral values. *Behavior*, 151, 283 – 296.
- Ebensperger, L. A. (2001). A review of the evolutionary causes of rodent group-living. *Acta Theriologica*, 46, 115-144.
- Fay, A. J., & Maner, J. K. (2012). Warmth, spatial proximity, and social attachment: The embodied perception of a social metaphor. *Journal of Experimental Social Psychology*, 48, 1369-1372.
- Fransson, A. L., Karlsson, H., & Nilsson, K. (2005). Temperature variation in newborn babies: Importance of physical contact with the mother. *Archives of Disease in Childhood-Fetal and Neonatal Edition*, 90, F500-F504.
- Friston, K. (2009). The free-energy principle: A rough guide to the brain? *Trends in Cognitive Sciences*, 13, 293-301.
- Funch, D. P., & Marshall, J. (1983). The role of stress, social support and age in survival from breast cancer. *Journal of Psychosomatic Research*, 27, 77-83.
- Gallup, A. C., & Gallup, G. G. (2008). Yawning and thermoregulation. *Physiology & Behavior*, 95, 10-16.
- Hafez, E. S. E. (1964). Behavioral thermoregulation in mammals and birds. *International Journal of Biometeorology*, 7, 231-240.
- Hong, J., & Sun, Y. (2012). Warm it up with love: The effect of physical coldness on liking of romance movies. *Journal of Consumer Research*, 39, 293-306.
- House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, 241, 540-545.

- Huang, X. I., Zhang, M., Hui, M. K., & Wyer Jr, R. S. (2014). Warmth and conformity: The effects of ambient temperature on product preferences and financial decisions. *Journal of Consumer Psychology*, 24, 241-250.
- IJzerman, H., & Semin, G. R. (2009). The thermometer of social relations: Mapping social proximity on temperature. *Psychological Science*, 20, 1214-1220.
- IJzerman, H., & Semin, G. R. (2010). Temperature perceptions as a ground for social proximity. *Journal of Experimental Social Psychology*, 46, 867-873.
- IJzerman, H., Gallucci, M., Pouw, W. T., Weißgerber, S. C., Van Doesum, N. J., & Williams, K. D. (2012). Cold-blooded loneliness: Social exclusion leads to lower skin temperatures. *Acta Psychologica*, 140, 283-288.
- IJzerman, H., Janssen, J. A., & Coan, J. A. (2015). Maintaining warm, trusting relationships with brands: Increased temperature perceptions after thinking of communal brands. *PloS one*, 10, e0125194.
- IJzerman, H., Schrama, M., & Pronk, T. (2016a). Socially thermoregulated thinking: How past experiences matter in thinking about our loved ones. *Available at SSRN: papers.ssrn.com/sol3/papers.cfm?abstract_id=2807943*.
- IJzerman et al. (2016b). The Human Penguin Project: Complex social integration protects against colder climates. *Unpublished Dataset*.
- King, J. R., & Farner, D. S. (1961). Energy metabolism, thermoregulation and body temperature. *Biology and Comparative Physiology of Birds*, 2, 215-288.
- Kolb, P., Gockel, C., & Werth, L. (2012). The effects of temperature on service employees' customer orientation: an experimental approach. *Ergonomics*, 55, 621-635.

Koptjevskaja-Tamm, M. (2015). *The Linguistics of Temperature*. John Benjamins Publishing Company: Amsterdam, the Netherlands.

LeBel, E. P., & Campbell, L. (2013). Heightened sensitivity to temperature cues in individuals with high anxious attachment: Real or elusive phenomenon? *Psychological Science*, 24, 218 - 230.

Mandler, J. M. (1992). How to build a baby: II. Conceptual primitives. *Psychological Review*, 99, 587.

Messer, M., Imhoff, R., & IJzerman, H. (2016). Temperature cues bias the memory of trustworthiness of faces. *Unpublished Manuscript*.

McFarland, R., Fuller, A., Hetem, R. S., Mitchell, D., Maloney, S. K., Henzi, S. P., & Barrett, L. (2015). Social integration confers thermal benefits in a gregarious primate. *Journal of Animal Ecology*, 84, 871-878.

McFarland, R., Henzi, S. P., Barrett, L., Wanigaratne, A., Coetzee, E., Fuller, A., ... & Maloney, S. K. (2015). Thermal consequences of increased pelt loft infer an additional utilitarian function for grooming. *American Journal of Primatology*, 78, 456 - 461.

Meiri, S. (2011). Bergmann's Rule—what's in a name? *Global Ecology and Biogeography*, 20, 203-207.

Nedergaard, J., Bengtsson, T., & Cannon, B. (2007). Unexpected evidence for active brown adipose tissue in adult humans. *American Journal of Physiology-Endocrinology and Metabolism*, 293, E444-E452.

Nie, J., Park, M., Marin, A. L., & Sundar, S. S. (2012, March). Can you hold my hand? Physical warmth in human-robot interaction. In *Human-Robot Interaction (HRI), 2012 7th ACM/IEEE International Conference on* (pp. 201-202). IEEE.

Núñez-Villegas, M., Bozinovic, F., & Sabat, P. (2014). Interplay between group size, huddling behavior and basal metabolism: an experimental approach in the social degu. *Journal of Experimental Biology*, 217, 997-1002.

Ricquier, D., Mory, G., Nechad, M., Combes-George, M., & Thibault, J. (1983). Development and activation of brown fat in rats with pheochromocytoma PC 12 tumors. *American Journal of Physiology-Cell Physiology*, 245, C172-C177.

Satinoff, E. (1978). Neural organization and evolution of thermal regulation in mammals. *Science*, 201, 16-22.

Schilder, J. D., IJzerman, H., & Denissen, J. J. (2014). Physical warmth and perceptual focus: A replication of IJzerman and Semin (2009). *PloS one*, 9, e112772.

Suchecki, D., Mozaffarian, D., Gross, G., Rosenfeld, P., and Levine, S. (1993). Effects of maternal deprivation on the ACTH stress response in the infant rat. *Neuroendocrinology* 57, 204–212.

Vess, M. (2012). Warm thoughts attachment anxiety and sensitivity to temperature cues. *Psychological Science*, 23, 472-474.

Van Acker, B., Kerselaers, K., Pantophlet, J., & IJzerman, H. (in press). Homelike Thermoregulation: How physical coldness makes an advertised house a home. *Journal of Experimental Social Psychology*.

Waxler-Morrison, N., Hislop, T. G., Mears, B., & Kan, L. (1991). Effects of social relationships on survival for women with breast cancer: a prospective study. *Social Science & Medicine*, 33, 177-183.

- Weaver, I. C., Cervoni, N., Champagne, F. A., D'Alessio, A. C., Sharma, S., Seckl, J. R., ... & Meaney, M. J. (2004). Epigenetic programming by maternal behavior. *Nature Neuroscience*, 7, 847-854.
- Williams, L. E., & Bargh, J. A. (2008). Experiencing physical warmth promotes interpersonal warmth. *Science*, 322, 606-607.
- Janský, L. (1973). Non-shivering thermogenesis and its thermoregulatory significance. *Biological Reviews*, 48, 85-132.
- Zhong, C. B., & Leonardelli, G. J. (2008). Cold and lonely: Does social exclusion literally feel cold? *Psychological Science*, 19, 838-842.

Humans, Nature, and Ethics

By GREGORY E. KAEBNICK

Does the idea of “nature” provide any kind of ethical touchstone to guide and to limit human impacts on ecosystems or the biochemical basis of life? And does the idea of “human nature” similarly provide any kind of moral structure to govern our use of biotechnological means to alter human beings? Many would say no to both questions too quickly, just as many others would too quickly say yes. I believe that we must take a more complex and nuanced position on these fundamental questions. To argue against something—such as human applications of biotechnology for enhancement of traits—because it will change human nature or is unnatural implies that we know what human nature is, when surely human nature is amorphous and slippery at best. The difficulty of pinning down human nature is one reason that attitudes about nature cannot be plausible unless they are limited and complicated.

In this essay, I argue that we may not need to know much about human nature to have moral concerns about changing it by means of biotechnology. Neither our conception of nature nor our conception of humanity need to be—or can plausibly be—essentialist and static. To attach moral significance to the conditions of our humanity, and to be wary of the technological manipulation of it, we do not necessarily need to specify exactly what it means to be human. We do not need to have a full theory of human nature in order to have moral concerns about changing it.

ESSENTIALIST VERSUS EVOLUTIONARY PERSPECTIVES

According to one influential philosophical tradition, to understand human nature is to grasp the essence of what it is to be human. As typically understood, an “essence” is the fundamental being or reality that a particular thing embodies. An essence explains the traits that a thing has. It is not reducible to those traits, however; it is unchanging and timeless. An essence has an existence of its own, and indeed it is, in a sense, more real than the items that partake of it. Further, essences are often held to relate things of different kinds to each other. An essence connects individuals into a larger class or kind; all the members of a given kind share an essence, and members of other kinds lack it. According to an ancient lineage of scholars whose work draws on Aristotle, a kind is what it is by rational necessity. It is part of this view that the overall universe is rationally ordered and necessary, and we can understand the order and necessity of the universe by grasping the essences that things in the universe embody.

However, essentialism is not the only way of understanding the concept of “human nature.” An alternative view, now salient in all post-modern thought and very significant in the biological sciences, is nonteleological evolution, pioneered by Darwin. When applied to the study of human beings, an evolutionary view makes no claim for the rational necessity of human nature, or for its immutability and timelessness; nor does it claim that an account of human nature will show that human nature is rationally related to the rest of the universe. There need also be no requirement that what makes humans human is some

trait that the members of other species entirely lack. Typically, looking at traits allows one to recognize species, but the traits that allow us to recognize humans as humans might be found in some measure in other animals. And ultimately, in an evolutionary account, what really distinguishes species is not any claim about what traits characterize the members of the species, but the causal story that can be told about how the species appeared on the scene and how, through reproduction, it persists.

On an evolutionary view, then, “human nature” does not refer to an unchanging essence. Instead, it describes functions; it tells us what the members of the kind happen to be like. From this perspective we should expect to better understand human nature by studying our taxonomic neighbors, as Mary Midgley argues in *Beast and Man*. What distinguishes human beings from other animals is typically held to be their possession of various capacities related to cognition, such as language, rationality, tool-making, morality, and culture, but there is no need to establish that any of these capacities are possessed *only* by humans; indeed, the evidence is mounting that they are capacities or extensions of capacities that animals also possess in differing forms and degrees. At the same time, as Midgley also emphasizes, we need not restrict ourselves to biology to learn about human nature. We will have to study humans sociologically and anthropologically, as Paul Ehrlich does in *Human Natures: Genes, Cultures, and the Human Prospect*, in which he argues that there is no unitary account of human nature, and that, given the significance of culture in human ways of living, there are instead multiple human natures.

Moreover, the idea of “human nature” can refer both to how individual human capacities are acquired and to general claims about human capacities. Human bodies and faces tend to look a certain way, and that is a fact of nature. But there is also a surprising degree of variation, and that, too, is a fact of nature. Plainly, there is no single, overarching definition of “nature” that applies to all of the ways in which the term is used and always shows clearly what the correct usage is. However, both in rejecting the essentialist understanding of “human nature” and in allocating only a limited role to assertions about human species norms, we shift the focus from general claims about what human beings are like to a recognition of diversity, complexity, and individual variation. To do so is to give up pretensions to a commanding knowledge of what

human beings are really like.

HUMAN NATURE AS THE BASIS FOR MORALITY

The moral concerns people have about modifying human nature are also various. Like the different views about what a concept of human nature is, views about the connection between human nature and moral value can have diverse implications for what one knows about human nature.

Here I want to consider the view that the concept of human nature represents the very foundation for morality. This view implies that, if our understanding of human nature was erroneous or incomplete, then many of our moral judgments would be unreliable. Everyone agrees that an adequate understanding of human nature is necessary in order to ensure that moral judgments square with the facts on the ground. For example, if we recommend punishment because we believe that it helps people rehabilitate themselves, but that belief is mistaken, then our judgments about punishment are unreliable. Our values lead to specific moral positions only in light of premises concerning relevant facts. But if human nature is understood as the very basis for morality, then our moral judgments may be wrong not only on factual premises but on values

 Kass thinks... that the cosmos is rationally ordered; that humans—highest of the higher organisms—have their proper place in the overall order; and that understanding their nature is ...a matter of ...gaining special insight into larger mysteries.

premises as well. Thus, to the extent we think we know what our values are, we must have a command of human nature.

Leon Kass is often thought to provide a clear example of this way of thinking about the moral relevance of human nature. Kass himself explicitly denies this view.¹ Moreover, his method is not what one would expect if this were his view. The natural method for basing moral guidance

directly on human nature would be first to set out an account of human nature and then to apply it as needed, but Kass’s method is typically to start by considering questions of meaning. In a chapter about the creation of human embryos in the laboratory, the philosophical discussion begins with a section subti-

tled “The Meaning of the Question,” and Kass explains that his “orientation” is “that before deciding what to do, one should try to understand the implications of doing or not doing.”² Kass then connects these, not to an account of human nature, which would offer various claims about what humans *are*, but to the “idea of humanness,” which is a question of how we think about ourselves—a topic for poetry as much as for science.

This method seems to commit Kass only to a limited theory of human nature. He is making claims about what is species-typical for humans, but the claims do not amount to a complete account of what is human and what falls outside the category. Moreover, many of the claims he offers are about such basic features of human life—sexual procreation, growing old, and passing away—that they encompass not only all humans but all animals. Kass’s theory is best rebutted not by challenging his theory of human nature but by challenging the claims he makes about its moral relevance.

Nonetheless, there are glimmers in Kass’s writings of a grander vision. He has a tendency, for example, to speak broadly of human nature as a kind of touchstone or guiding light in thinking about biotechnology. “Beyond Therapy,” a report from the President’s Council on Bioethics and heavily influenced by Kass, asserts that “only if there is a *human* ‘givenness,’ or a given humanness, that is also good and worth respecting, . . . will the ‘given’ serve as a *positive* guide for choosing what to alter and what to leave alone.”³ Also, it is striking that Kass reaches skeptical conclusions about enhancement every time he considers it; though the method is case by case, the underlying agenda is general. If human nature is not a straightforward moral guide, it nonetheless provides something close to a guide. Finally, there is an undercurrent in Kass’s writings of essentialism. Kass emphasizes the limits of science and empiricism and the room, and need, for alternative ways of apprehending human life. “Our current evolutionary orthodoxy,” he notes, “has, in

“...if biotechnology can significantly change human capabilities and life trajectories but is not available to most people, then it risks undermining our common sense of humanity...[and] the capacity for human sympathy.

fact, little to say about the true origin of life or about ultimate causes, not only of life but of all major biological novelty. It cannot account for the emergence of higher organisms.” We need to turn, Kass tells us, to “unorthodox biologists,” and in particular to Aristotle, “who emphasized questions of being over becoming, form over matter, purposiveness over moving parts, and wholes over parts; for whom the soul was not an ethereal spirit or a ghost-in-the-machine but an immanent and embodied principle of all vital activity; and for whom science was a refined and ever-deepening reflection on the natures and causes of the beings manifest to us in ordinary experience.”⁴

It is hard to read such passages without concluding that Kass thinks, at some level, that the cosmos is rationally ordered; that humans—highest of the higher organisms—have their proper place in the overall order; and that understanding their nature is not merely a matter of collecting observations about what humans are like, but also of gaining special insight into larger mysteries.⁵ These grander ambitions for deploying the concept suggest a commitment to a much stronger theory of human nature than Kass ever attempts to provide.

HUMAN NATURE AS A CONDITION OF MORALITY

“...certain ways of using enhancement lead to an imbalance in two sorts of relationships to human nature—an accepting relationship, in which we see nature as a gift, and a perfectionist relationship, in which we strive to improve it. The ideal is to hold these in tension with each other...

Another way of thinking about the moral relevance of human nature is to see it as a logical requirement of (human) morality. Francis Fukuyama takes this approach. Fukuyama is also the clearest case of someone opposed to enhancing human nature who rests the argument on an overarching theory of human nature. Fukuyama famously claims that human nature “is the sum of the behavior and characteristics that are typical of the human species, arising

from genetic rather than environmental factors.”⁶ Thus, humans are distinguished by an overall set of traits, rather than by any one trait; Fukuyama does not

attempt a complete list. In fact, the set would have to be somewhat indeterminate, if only because any attempt to specify “fundamental facts” tends to be indeterminate. Further, the set will consist of ranges of traits rather than precisely specified traits. Because traits are a function of environmental as well as genetic factors, the set of traits “arising from genetic factors” will be unstable; “normal human height,” for example, can change over the generations due to changes in diet. Nonetheless, out of this overall general understanding of the range of traits possible given the human genome emerges what is distinctively human, which Fukuyama calls “the human essence” or “Factor X.” This is not itself a trait but an emergent property that depends on the entirety of human traits. Thus, though Fukuyama holds that human nature is definable, he does not hold that we can easily articulate human nature:

“The point of giftedness is that we do not know exactly what to expect in human nature, so we should foster ... an “openness to the unbidden.”

If what gives us dignity and a moral status higher than that of other living creatures is related to the fact that we are complex wholes rather than the sum of simple parts, then it is clear that there is no simple answer to the question, What is Factor X? That is, Factor X cannot be reduced to the possession of moral choice, or reason, or language, or sociability, or sentience, or emotions, or consciousness, or any other quality that has been put forth as a ground for human dignity. It is all of these qualities coming together in a human whole that make up Factor X.⁷

Fukuyama’s problem with enhancement technologies is that if we shift human nature beyond the pale of the traits that our genes make possible, then we will disrupt our understanding of human dignity and, therefore, of human rights. Given his understanding of “the human essence” as emergent from the overall set of human traits, Fukuyama maintains a broad opposition to enhancement. “What is it we want to protect from any future advances in biotechnology? The answer is, we want to protect the full range of our complex, evolved natures against attempts at self-

modification.”⁸ In other words, it is not only language and rationality but also the entire set of behavioral and physical characteristics that concerns Fukuyama.

I believe that the core problem with Fukuyama’s argument is that he attaches value primarily to human species norms, with the added complication that he sees the norms as established genetically. We have to be able to enumerate the traits we must watch, fix their appropriate ranges, and sort out the genetic contribution to them. But getting a handle on all this—and then sorting out the genetic versus the environmental contributions to the traits we choose to track—has proven difficult. Another weak spot is Fukuyama’s flirtation with essentialism. His broad and stringent set of traits that should not be genetically modified amounts to an attempt to define decisively what falls into the human category and what falls outside. But this will give some perplexing results.⁹ It may imply, for example, that Shaquille O’Neal, whose height is certainly anomalous, is not fully human. Fukuyama is aware of this danger, and he takes pains to emphasize that traits vary greatly and that gene-environment interactions can shift the entire range of traits over time. In that case, however, enhancement that does not bump a person beyond the range of normality might be unobjectionable, and enhancement that shifts someone outside the range of normality might not *always* make human dignity and human rights inapplicable. Enhancement would seem to pose a problem only when it occurs often enough and dramatically enough to pull apart the statistical curves that describe normal ranges of human traits. It is broad social trends that we are really concerned about, not individuals.

A nonessentialist version of Fukuyama’s general approach seems possible. Paul Lauritzen argues that if biotechnology can significantly change human capabilities and life trajectories but is not available to most people, then it risks undermining our common sense of humanity, which could undermine the capacity for human sympathy.¹⁰ The starting point for this thought is that human identity is bound up with human biology, such that “a new biology might give rise to a new psychology.” A new psychology would lead, in turn, to a new ethics. In particular, worries Lauritzen, it would challenge our conception of human rights. “The most persuasive account of human rights,” he writes, “is framed in relation to the notion of a stable human nature.” The fear, then, “is that biotechnology will change the species-typical characteristics shared by all humans. If that happens, and if rights are tied to

a conception of human nature that is in turn rooted in a biological reality, then biotechnology threatens the very basis of human morality as we know it.”

In Lauritzen’s view, then, it is critical to human morality that there is a stable human nature and that humans all recognize that there is a stable human morality. Lauritzen is not concerned with determining what is inside and what is outside the human category. His point is only that we must have some ability to describe important human characteristics that people of different races, ethnicities, sexes, and nationalities share in roughly the same measure.

THE RELATIONSHIP BETWEEN HUMANS AND NATURE

Another way of arguing for the moral significance of human nature is to argue that a certain kind of relationship to it is morally significant. Michael Sandel and Jürgen Habermas exemplify this approach. Sandel argues that a certain relationship to human nature is both valued in itself and vital for various things that we value in human society, and Habermas claims that a certain relationship to human nature is vital for equal membership in the moral community.

Sandel’s argument for worrying about enhancement is broad ranging, and in places he seems to develop arguments that follow consequentialist lines. His primary argument, though, is that certain ways of using enhancement lead to an imbalance in two sorts of relationships to human nature—an accepting relationship, in which we see nature as a gift, and a perfectionist relationship, in which we strive to improve it. The ideal is to hold these in tension with each other, but enhancement pushes us away from the first and toward the second. Widespread use of enhancement would “represent the one-sided triumph of willfulness over giftedness, of dominion over reverence, of molding over beholding.”¹¹

Sandel goes on to say why losing “the ethic of giftedness” would be unfortunate. Losing the ethic of giftedness would undermine “three key features of our moral landscape—humility, responsibility, and solidarity.” This claim could be understood as a consequentialist point—if we lose these key constraints on our behavior, many people will end up worse off—or it might be understood as pointing out conceptual implications—if we lose these aspects of the “moral landscape,” we could not but feel that as a huge loss. Sandel plainly hopes, though, that many of his readers will feel the loss of giftedness itself already as a loss.

It is partly to show the import of losing giftedness itself that he tries to show how it is bound up in sports and in parenthood, such that if we lose the ethic of giftedness, then sports and parenthood will be diminished—“the drive to banish contingency and to master the mystery of birth diminishes the designing parent and corrupts parenting as a social practice governed by norms of unconditional love.”¹² Sandel’s argument is not limited to sports and parenthood, however; he intends these discussions to exemplify a larger point about giftedness.

For my purposes, the important point is that Sandel can speak of the human relationship to bodily nature without making any overarching claim about human nature itself, other than that the traits people have depend on the bodies they have, and that traditionally people have acquired their bodies—and, therefore, their traits—through contingent processes rather than through design. The point of giftedness is that we do not know exactly what to expect in human nature, so we should foster what Sandel, borrowing from William May, calls an “openness to the unbidden.” But such claims fall well short of a theory of human nature.

Contingency is also critical in Habermas’s case against enhancement. We are able to live together in communities and engage each other as equals because we all share some sort of “prior ethical self-understanding”—an understanding of who we are that makes it possible for us to see ourselves as “ethically free and morally equal beings.”¹³ The critical element in this self-understanding is an awareness that we are embodied and that our bodies are our own, in the sense that we do not acquire them from other people; they are products of fate or nature.

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“Moral views about human nature, even if widely shared, might not be the kind of thing we think suitable for legal enforcement. Perhaps the moral attitude toward human nature is a kind of ideal one holds for the relationship between humans and nature.”

able to assume that “we act and judge *in propria persona*—that it is our own voice speaking and no other.”¹⁴

Habermas worries that this assumption is at risk if a child knows that she has been genetically enhanced by her parents, for then the parents’ goals are present directly in her body. The processes of childrearing and socialization may also impose the parents’ goals on the child, but the child can in principle reject these, and Habermas supposes that such goals will not be present in the child’s body in the same way. Of course, the child might accept her parents’ goals as her own, and if she does, she will not feel deprived of her own voice. But because we cannot be sure that children’s and parents’ goals will harmonize, genetically enhancing children “jeopardizes a precondition for the moral self-understanding of autonomous actors.” Thus, parents should approach parenthood with an “expectation of the unexpected.”¹⁵

Whether either Sandel’s or Habermas’s concerns are ultimately persuasive depends on pursuing moral and political questions that lie beyond the scope of this essay. Sandel’s argument could be understood simply as identifying and defending a personal moral ideal, one that many people share and that Sandel wants to recommend, but that he would not seek to enforce through public policy. Habermas, however, must be aiming at public policy. To wrongly prevent some people from joining the moral community is to commit a grave injustice that must be opposed by law.

Both positions rest on claims about human nature that are modest and defensible. Neither is making any claims about human beings’ essential nature. Nor are they arguing that a normal human range of traits is what we value. Rather, it is the *relationship* of each person to his or her own nature that Sandel and Habermas are concerned about.

The key point Habermas wants to make is that to be a person is to exist in a body that is one’s own and is not the directed creation of other people (or of the community as a whole). The bodies of free and equal persons do not incorporate the intentions of other members of the community. To establish this concern and perspective, Habermas need not thoroughly catalogue the traits that make up human nature, nor come up with a *definition* of human nature that sets out a criterion for those traits. Further, Habermas’s emphasis on contingency does not imply that human nature is fixed. It might indeed change, but the change must itself be contingent. Natural evolution seems acceptable, for example. The constraint Habermas would

impose is only on how the change occurs; some members of the community should not be able to deliberately intervene in the bodies of other members.

The complexity of the genes’ contribution to actual human life may qualify Habermas’s and Sandel’s concerns about modifying children. Parents’ success at using genetic technologies to *make* their children turn out one way rather than another is likely to vary greatly, depending on what traits they have in mind for their children, and it may well be that a majority of the traits parents would want to produce lie beyond genetic control. It does not take complete success at controlling a trait to raise concerns, however. Completely controlling a trait might be the limit case. Habermas would be troubled if an intervention falls short but leaves a lasting reminder for the child, *on* the child, of what the parents wanted the child to be. Sandel’s worry that the child is not regarded to a sufficient degree as a gift depends on the parents’ attitudes, which (Sandel supposes) depend in part on parents’ capacity to carry out their own plans. But parents might fail to regard a child as a gift even though they have little or no ability to modify the child’s given traits.

If concerns about genetic interventions are explained in terms of parents’ attitudes and children’s self-understanding, then plainly there is no sharp line demarcating genetic from environmental interventions. To the degree that an environmental change leaves a permanent reminder of the parents’ own intentions for the child (consider surgery to Westernize the eyes of an Asian child adopted by Western parents), it ought to generate both Habermas’s and Sandel’s concerns every bit as much as it would if accomplished through genetic intervention. The genes are not special repositories of value. The point is rather that the relationship in which we stand to human nature(s), and to the natures of our children, is a matter of human value.

CONCLUSION

Moral views about human nature, even if widely shared, might not be the kind of thing we think suitable for legal enforcement. Perhaps the moral attitude toward human nature is a kind of *ideal* one holds for the relationship between humans and nature. It might be similar in ways to some ideals we have for relationships between humans, such as that a person tends to treat others with warmth or generosity. Such an ideal would not issue in blunt pronouncements that something is right or wrong, permissible or impermissible.

For a person who holds it, it would be action-guiding, and that person might think better of other people who demonstrate it—indeed, we might still think it an important feature of the moral life—but at the same time, we would not expect everybody to have it, and we would stop well short of thinking that people who lack it are to that degree *immoral*. They just do not live up to a standard we set for ourselves.

Perhaps, too, this gives one final reason that one need not have a full theory of human nature to have moral qualms about altering it. If a liberty-restricting government policy on, say, research into human cloning rests on claims about human nature, then the requirement that those claims be publicly accessible and assessable raises the bar for whatever we might claim

about human nature. A publicly enforceable moral standard would require a convergence of opinion about human nature, a collective weighing and sifting. A personal moral standard can be based on one's own considered assessments, and perhaps even on one's own best guesses.

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NOTES

- 1 L.R. Kass, *Life, Liberty, and the Defense of Dignity: The Challenge for Bioethics* (San Francisco, CA: Encounter Books, 2004), 296.
- 2 Kass, *Life, Liberty, and the Defense of Dignity*, 85.
- 3 President's Council on Bioethics, *Beyond Therapy: Biotechnology and the Pursuit of Happiness* (Washington, DC: President's Council on Bioethics, 2003), 289.
- 4 Kass, *Life, Liberty, and the Defense of Dignity*, 288, 294.
- 5 Kass, *Life, Liberty, and the Defense of Dignity*, 296. Kass emphasizes the importance of mysteries here.
- 6 F. Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York: Farrar, Straus & Giroux, 2002), 130.
- 7 Fukuyama, *Our Posthuman Future*, 171.
- 8 Fukuyama, *Our Posthuman Future*, 172.
- 9 Cf. N. Agar, *Liberal Eugenics: In Defence of Human Enhancement*, (Oxford, U.K.: Blackwell, 2004).
- 10 P. Lauritzen, "Stem Cells, Biotechnology, and Human Rights: Implications for a Posthuman Future," *Hastings Center Report* 35, no. 2 (2005): 25-33.
- 11 M. Sandel, *The Case against Perfection: Ethics in the Age of Genetic Engineering* (Cambridge, MA: Belknap Press of Harvard University Press, 2007), 85.
- 12 Sandel, *The Case against Perfection*, 82-83.
- 13 J. Habermas, *The Future of Human Nature* (Cambridge, U.K.: Polity Press, in association with Blackwell, 2003), 38-41.
- 14 Habermas, *The Future of Human Nature*, 57.
- 15 Habermas, *The Future of Human Nature*, 63, 58.

Revelation and the Essentiality of Essence

Franck Lihoreau

Abstract: It is usually agreed that the *Revelation Thesis* about experience – the idea that the knowledge we gain by having an experience somehow “reveals” the essence, or nature, of this experience – only requires that we know the essence of the experience, not that we know, of this essence, that it is the essence of the experience. I contest this agreement. In the light of what I call the “Essentiality of Essence Principle” – the principle that whatever is in the essence of something is also essentially so – I argue that the Revelation Thesis does require that we know, of the essence of an experience, that it is the essence of the experience, and draw some conclusions about the plausibility of that thesis.

Keywords: essentiality of essence principle, experience, qualia, revelation thesis

1. The Revelation Thesis about Experience

This paper is concerned with the so-called ‘Revelation Thesis’ about experience,¹ the idea that the knowledge we gain by having an experience ‘reveals’ the essence, or nature, of this experience, what it is or what it takes to be that experience.

Often formulated in relation to *qualia* – the phenomenal properties instantiated in our experiences – as the claim that *when we have an experience with quale Q, we thereby (are in a position to) know the essence of Q*,² the relatively few philosophers who have paid attention to the thesis have disagreed on a number of points, the most important of which including the questions whether *Revelation* is to be considered part of our folk-psychological notion of experience (Lewis 1995 thinks so; Stoljar 2009 thinks not), and whether it should be dismissed as inconsistent with physicalism (Lewis 1995 and Stoljar 2009 think so; Damjanovic thinks not). (I shall briefly return to these questions in the last section.)

Yet, those philosophers all seem to agree on one point: on a proper formulation of the Revelation Thesis, the expression ‘knowing the essence, *F*, of a

¹ So named after Johnston 1992, also referred to, by Lewis 1995, as the “Identification Thesis”.

² Following Williamson 2000, Damjanovic (2012, 71-72) suggests interpreting ‘being in a position to know’ the essence of *Q* as meaning that the essence of *Q* is ‘open to one’s view,’ so that ‘all that must be done to know that [essence]’ is for us to reflect on our experiences. For our limited purposes, an intuitive reading of the expression will work as well.

quale *Q*' is to be understood as 'knowing that *Q* is *F*,' and *not* as 'knowing that *F* is the essence of *Q*.' In other words, they agree that there is a substantial distinction to be made between a 'weak' (or *de re*) version and a 'strong' (or *de dicto*) version of the Revelation Thesis:

(*Weak Revelation*) When we have an experience with quale *Q*, if it is in the essence of *Q* that *p*, we thereby (are in a position to) know *that p*.

(*Strong Revelation*) When we have an experience with quale *Q*, if it is in the essence of *Q* that *p*, we thereby (are in a position to) know *that it is in the essence of Q that p*.³

and that by *Revelation*, we ought to refer to the former version, not the latter.⁴

It is the legitimacy of this agreement which I wish here to consider. And I shall contest it on the grounds that *Weak Revelation* entails *Strong Revelation* as a special case. So that if it is in the essence of quale *Q* that *P*, *Revelation* does not only require that the experiencer know that *P*, but also that he know that it is in the essence of *Q* that *P*. Or so shall I argue in the light of a principle not generally discussed, but which I take to be as natural as can be when it comes to reasoning about essences (or natures).

³ In these two formulations and throughout the paper, *p* stands for any sort of proposition that can be true of a quale. I certainly acknowledge that distinguishing between knowledge of essential truths and knowledge of essential properties might be relevant in the context of a discussion of Revelation – Damjanovic 2012 is a good illustration –, yet not with respect to the purpose of the present paper in which *p* will be used to refer to any kind of claim that can be true of a quale (property ascriptions, identity claims, etc.).

⁴ Daniel Stoljar (2009), for instance, warns us that:

Knowing the essence of experience might be interpreted as knowing (e.g.) *that this itch is F*, where *F* is *in fact* the essence of the experience; or it might be interpreted as knowing *that F is the essence of this itch* (Stoljar 2009, 119)

and makes it clear that we ought to adopt the first formulation (for reasons that will be addressed in the last section); followed in this by Nic Damjanovic (2012), who explicitly assumes from the start that:

If it is in the nature of the taste of peaches that *p* then *Revelation* only requires that we know that *p*, and not that it is in the nature of the taste of peaches that *p* (Damjanovic 2012, 71, fn. 4).

On this point, most people who have lent some thought to the thesis have agreed with them. (An exception is Byrne and Hilbert 2007 who defend a form of *Strong Revelation*, but in relation to colours, rather than to experience. For this reason, this exception shall not detain us here).

2. The Essentiality of Essence

The principle I have in mind states that whatever is essential to something is also essentially so. To be precise, this 'Essentiality of Essence Principle,' as I shall call it, states that:

(*Essentiality of Essence*) For any thing (or class of things) X and any proposition p , if it is essential to X that p then it is essential to X that it be essential to X that p .

(Remark. I will use the expressions 'it is essential to X that p ' and 'it is in the essence of X that p ' interchangeably.) This principle follows, it will be seen, from basic, uncontroversial considerations regarding the connections between essentiality and necessity.

The question whether the essential *versus* accidental property distinction can be properly rephrased in modal terms has been, and still is a matter of dispute – most notably between those who think that being essential basically amounts to being necessary (a view often associated with Kripke 1980), and those who contend that essential properties cannot be analyzed in modal terms but need be characterized otherwise (for instance in definitional terms as in Fine 1994, or in explanatory terms as in Gorman 2005).⁵ There are, however, two undisputed and, I believe, undisputable claims that can be made, connecting essentiality with necessity on the one hand, accidentality with possibility on the other hand:

($E/\Box$) For any proposition p and any object (or class of objects) X , if it is essential to X that p then it is (metaphysically) necessary that p .

($A/\Diamond$) For any proposition p and any object (or class of objects) X , if it is accidental to X that p then it is (metaphysically) possible that not- p .

And these two claims, together with the following (also natural) claim:

($\neg E/A$) For any proposition p and any object (or class of objects) X , if p is true of X and yet it is not essential to X that p , then it is accidental to X that p .

are all that we need in order to derive the above Essentiality of Essence Principle.

To see this, let A be an object, P a proposition, and assume that P is not only true of A , but is also an essential truth about A (for instance, A could be water and P the proposition that water is made of H₂O molecules). In other words, assume that:

⁵ This is an oversimplified view of the debates. For a survey of the literature on the analysis of the essential/accidental property distinction, see Robertson and Atkins 2013.

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(1) It is essential to A that P

Then, by $(E/\Box)$:

(2) It is also necessary that P .

On the other hand, assume, for *reductio ad absurdum*, that:

(3) It is not essential to A that it is essential to A that P .

Then, by $(\neg E/A)$:

(4) It is only accidental to A that it is essential to A that P .

This, by $(A/\Diamond)$, implies that:

(5) It is possible that it is not essential to A that P .

Which, by $(A/\Diamond)$ again, implies that:

(6) It is possible that it is possible that not- P .

This, of course, is incompatible with (2) as a matter of basic modal logic. By *reductio*, (3) is false and as a consequence:

(7) If it is essential to A that P , it must also be essential to A that it be essential to A that P .

(So, for instance, if it is essential to water that it be made of H₂O molecules, then it is also essential to water that water be essentially made of H₂O molecules.)

Since A and P are arbitrary in the foregoing reasoning, we can thereby see that the Essentiality of Essence Principle follows from fairly uncontroversial claims regarding essentiality, accidentality and modality.⁶ It is this principle that will play the pivotal role in my argument against considering *Weak Revelation* and *Strong Revelation* as if they were two substantially different theses.

3. From Weak to Strong Revelation

In the light of the Essentiality of Essence Principle, it should clearly appear that *Weak Revelation* entails *Strong Revelation* as a special case.

For consider *Weak Revelation* again:

(*Weak Revelation*) When we have an experience with quale Q and it is in the essence of Q that p , we thereby (are in a position to) know that p .

Suppose that, in fact:

⁶ Although I have derived the Essentiality of Essence Principle from claims connecting essentiality/accidentality talk with necessity/possibility talk, it is worth mentioning that this principle is also a theorem of the 'logic of essence' associated with Kit Fine's non-modal, definitional approach to the concept of essence, as found in Fine 1995 and Correia 2000. I take this as a further reason to endorse the principle.

(1) We have an experience with quale Q

and assume that:

(2) It is in the essence of Q that P

for some arbitrary Q and P .

From this latter assumption, (2), and the Essentiality of Essence Principle, it follows that:

(3) It is in the essence of Q that it is in the essence of Q that P .

Now, given (3), we can substitute 'it is in the essence of Q that P ' for p in *Weak Revelation* above, so that we get:

(4) If we have an experience with quale Q and it is in the essence of Q that it is in the essence of Q that P , we thereby (are in a position to) know that it is in the essence of Q that P .

And from this, together with the conjunction of (1) and (3), it follows by *modus ponens* that:

(5) We thereby (are in a position to) know that it is in the essence of Q that P .

We may therefore conclude that:

(6) If we have an experience with quale Q and it is in the essence of Q that P , we thereby (are in a position to) know that it is in the essence of Q that P .

That is, we get *Strong Revelation*.

Therefore, assuming the truth of the Essentiality of Essence Principle, *Strong Revelation* is but a special case of *Weak Revelation*. In other words, if it is in the essence of a phenomenal property Q that P , the Revelation Thesis requires not only that we know P , but requires that we know P to be essential to Q as well. Hence, the agreement found in the literature on the supposedly substantial distinction between a weak and a strong version of *Revelation* is ill-grounded.

4. Is (Strong) Revelation Plausible?

Now, what bearings does this have on the plausibility of the Revelation Thesis as part of a theory of experience? We just established that *Weak Revelation* entails *Strong Revelation* as a special case. This should sound like bad news for advocates of the Revelation Thesis. Here are two reasons why.

(A) A first point that might be pressed is that, as Stoljar (2009) points out, *Strong Revelation* amounts to requiring experiencers to antecedently possess some concept of essence, while "surely it is implausible that those who are itchy require the concept of essence." Stoljar might be right on this but what he says needs a little supplementation.

(i) If, as Stoljar thinks, knowing something to be the essence of a given quale requires possessing the concept of essence *in general* (rather than the concept of the essence of this or that quale in particular) – which seems to be Stoljar’s intended interpretation –, then I agree with him that *Strong Revelation* can hardly be true. Whatever meaning ‘possessing the concept of essence’ might have – whether we understand it as being able to articulate (some of) its conditions of application, or simply as being able to exercise, even unreflectively, that concept with (some) success, or as merely requiring that one have some notion of what makes a thing the thing it is –, people (even professional metaphysicians) surely have had lots of experiences long before they possessed the concept of what makes a thing the thing it is.

(ii) If, on the other hand, knowing something to be the essence of a quale requires possessing the concept of the essence of this quale *in particular* (rather than the concept of essence in general), this is likely to tense up the ears of anyone who thinks that the notion of qualia is to play a role in a proper understanding of experience. And the reason for this is that *Revelation* could easily be used in a sceptical argument against qualia talk. The argument in question would go like this. If knowing something to be the essence of a quale requires possessing the concept of this quale, then (*Strong*) *Revelation* entails that (1) one cannot have an experience with a quale *Q* unless one first has some notion of what makes *Q* the thing it is; but (2) one cannot have some notion of what makes *Q* the thing it is unless one could and did attend to *Q* in the first place; but, of course, (3) one cannot attend to *Q* at all before one has an experience with *Q*; therefore, (4) one could never have an experience with *Q* at all! – a result that a qualia theorist would not be willing to accept.

(Remark. Although such considerations incline me to agree with Stolar that *Strong Revelation* is implausible, I disagree with him in that he takes that implausibility to be a reason why proponents of *Revelation* – of which, by the way, he is not – should retreat to its *Weak* version. For if *Strong Revelation* just is a special case of *Weak Revelation*, as I have argued, the implausibility of the former might so well be taken as a reason to dismiss the whole idea of *Revelation* in itself as implausible.)

(B) One might also press another point against proponents of the *Revelation* thesis, a point that echoes Lewis’s objection to the thesis. Considering it in its *Weak* version, Lewis has famously argued that *Revelation*, which he takes to be part of the folk theory of experience, should be rejected as false if physicalism is true, that is, “if qualia are physical properties of experiences, and experiences in turn are physical events.” For “then it is certain that we seldom, if ever, [know the nature of] the qualia of our experiences. Making discoveries in neurophysiology is not so easy!” (Lewis 1995, 328). Lewis concludes that our folk theory of qualia has to be revised.

I do not wish here to consider whether physicalism is true or false, or even whether it is compatible with *Revelation* or not (see Damnjanovic 2012 for a

compatibilist position on this latter question). Yet, I am confident that anyone sympathetic to Lewis's argument will find it at least as effective when directed at *Strong Revelation*. For if *Strong Revelation* were true, it would not only be easy to discover the neurophysiological correlates of the qualia of our experiences – e.g. that this pain is a C-fiber firing –, but also to discover ontological truths about these correlations – viz. that it is in the essence of this pain to be a C-fiber firing. This is likely to sound incongruous to many ears. What is more, note that this incongruity would hold even if physicalism were false: whatever properties, events, be they physical or not, whatever truths are part of the essence of an experience, (*Strong*) *Revelation* entails that these properties, events, truths, are revealed to us as such. But making discoveries in the metaphysics of mind, we might say, is not so easy either!

I have mentioned these two points – there may well be many more, which I leave it to others to press – just to give a feel of how problematic *Revelation* might turn out, once established the implication from its *Weak* to its *Strong* version. Establishing this implication was my main purpose here. If the essence of an experience is ever revealed to us, then it is revealed to us as such.

References

- Byrne, Alex and David R. Hilbert. 2007. "Colour Primitivism." *Erkenntnis* 66: 73-105.
- Correia, Fabrice. 2000. "Propositional Logic of Essence." *Journal of Philosophical Logic* 29: 295-313.
- Damjanovic, Nic. 2012. "Revelation and Physicalism." *Dialectica* 66: 69-91.
- Fine, Kit. 1994. "Essence and Modality." *Philosophical Perspectives* 8: 1-16.
- _____. 1995. "The Logic of Essence." *Journal of Philosophical Logic* 24: 241-273.
- Gorman, Michael. 2005. "The Essential and the Accidental." *Ratio* 18: 276-289.
- Johnston, Mark. 1992. "How to Speak of the Colours." *Philosophical Studies* 68: 221-263.
- Lewis, David. 1995. "Should a Materialist Believe in Qualia?" *Australasian Journal of Philosophy* 73: 140-144. Reprinted in his *Papers in Metaphysics and Epistemology*, 325-331. Cambridge: Cambridge University Press. All references are to the reprinted version.
- Robertson, Teresa and Philip Atkins. 2013. "Essential vs. Accidental Properties." *Stanford Encyclopedia of Philosophy*. <http://plato.stanford.edu/entries/essential-accidental/> (Retrieved on July 14, 2014).
- Stoljar, Daniel. 2009. "The Argument from Revelation." In *Conceptual Analysis and Philosophical Naturalism*, eds. David Braddon-Mitchell and Robert Nola, 113-138. Cambridge: MIT Press.
- Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.

On the Natural Knowledge of the Real Distinction of Essence and Existence

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Introduction

IN THE FOURTH CHAPTER of his work *On Being and Essence* or *De Ente et Essentia*, St. Thomas Aquinas distinguishes essence and existence in physical things in an argument known as the *intellectus essentiae*, or knowledge of essence, argument. In recent literature this argument and the character of its conclusion often is depicted as merely conceptual in nature. Whereas earlier commentators¹ held that the argument demonstrates (at least indirectly) or intuitively manifests real distinction of essence and existence in physical things, from the 1960s onward medievalists and

¹ For example, earlier in the 20th century, R. Garrigou-LaGrange, in (among many other places) *God: His Existence and His Nature*, trans. Dom Bede Rose O.S.B. (New York: Herder, 1936), 555 in the Epilogue; also Jacques Maritain, *The Degrees of Knowledge*, trans. Gerald Phelan, ed. Ralph McInerny (Notre Dame, IN: University of Notre Dame Press, 1995), 131, note 117. Many of the great commentators held this view, e.g., John of St. Thomas (cited to this effect by J. Maritain in his passage cited above), *Curs. Phil., Log.*, part 2, q. 3, a. 1; and there is more than a shade of this understanding in Domingo Báñez, who seems to interpret it even more widely, *Scholastica Commentaria in Primam Partem Summae Theologiae St. Thomae Aquinatis* (Valencia: Editorial F. C. V. A., 1934), 141, commentary on q. 3, a. 4: “Caeterum quidditas aliarum rerum praeter Deum, abstrahit ab esse actu,

Thomist scholars of note,² as well as non-Thomists,³ have insisted that the argument achieves only a conceptual distinction between essence and existence. This sea-change in the appreciation of the *intellectus essentiae* argument reflects deeper metaphysical and epistemic shifts. Accordingly, it merits further consideration.

Within the brief compass of one essay it is not possible to respond in detail to all the arguments brought by critics of the

ven non esse actu. Unde perfecte potest diffiniri secundum hanc abstractionem.”—“As to the rest, the quiddity of things other than God abstracts from existing or not existing. Thus the quiddity can be perfectly defined as an abstraction.” This point seems to be taken by Bañez as a necessary sign of the truth—for which he argues in the paragraphs preceding this passage—that *esse* is the first act of every form and being. The most renowned commentators on Aquinas—setting aside Suarez, who clearly differs with St. Thomas—seem to show a marked aversion to treating arguments for real distinction that are rooted in our knowledge of essence as merely conceptual. For a more recent assessment within this tradition, see Lawrence Dewan, OP, “St. Thomas, Joseph Owens, and the Real Distinction Between Being and Essence,” *The Modern Schoolman* 61 (1984): 145–56.

² Among several other authors, the following are conspicuous: Leo Sweeney in his *A Metaphysics of Authentic Existentialism* (New York: Prentice Hall, 1965); idem, “Existence/Essence in Thomas Aquinas’s Early Writings,” *Proceedings of the American Catholic Philosophical Association* 37 (1963): 97–131; Joseph Owens, “Quiddity and Real Distinction in St. Thomas Aquinas,” *Medieval Studies* 28 (1965): 1–22; idem, “A Note on the Approach to Thomistic Metaphysics,” *The New Scholasticism* 28 (1954): 454–76; Armand Maurer’s introductory essay to St. Thomas Aquinas’s *On Being and Essence*, trans. and ed. by Armand Maurer (Toronto: Pontifical Institute for Mediaeval Studies, 1968), 7–27; John Wippel, *Metaphysical Themes in Thomas Aquinas* (Washington, D.C.: Catholic University of America Press, 1984), chapter five.

³ Anthony Kenny, *Aquinas* (Oxford: Oxford University Press, 1980). Of course, unlike the Thomistically-inclined medievalist critics, Kenny considers the real distinction between essence and existence itself to constitute a conceptual confusion—largely because his nominalist presuppositions do not permit him to entertain the possibility that essence may—as St. Thomas affirms—exist in two radically distinct ways, in one way in the thing, and in another in the intellect. This appears similar to the Russellian insistence that the mind properly knows not being and essence, but propositions.

validity of the *intellectus essentiae* proof. Instead this essay attempts to do four things:

1. It urges considerations that militate against a merely conceptual or logical reading of St. Thomas's argument;
2. it responds to the most strategic criticisms of the validity of the argument;
3. it attempts to explain and properly emphasize the superior natural accessibility and intuitive force of the *intellectus essentiae* argument while also briefly suggesting the importance of its implications; and finally
4. it highlights the antirealist and fideist implications that ensue upon the denial of the validity of the *intellectus essentiae* argument.

Arguably these last implications are not unrelated to consequent distortions in theological and philosophic method that meld with postmodern themes.

As to the order of exposition: first I will analyze the *intellectus essentiae* argument and address what seem to be the most strategic objections to it; secondly, I will address the importance of this argument and the radical implications cast by its denial.

I. Summary and Analysis of Argument

As articulated in *De Ente* the argument is extremely succinct. It occurs in the context of attempting to explain why it is that separate substances are not—as beings lacking matter—effectually pure acts or so many gods. For were matter to be the only potential principle, then insofar as separate substances lack matter clearly such substances would not be limited by any potential principle. To make things more difficult, it is the consistent teaching of Aquinas that we have no quidditative knowledge whatsoever either of God or of separate substance.⁴

The first step in St. Thomas's argument addressing this issue begins by making a distinction between essence and existence in physical things. This distinction is based upon the truth that within

⁴ Cf. chapters 41–44 of *Summa contra Gentiles* Book 3.

the act whereby we know material quiddity we do not—in that selfsame act—know existence. It goes as follows:

For whatever is not in the concept of an essence or quiddity comes to it from outside and makes a composition with the essence, because no essence is able to be understood without its parts. But every essence or quiddity can be understood without knowing anything about its being: I can understand, for instance, what a man or a phoenix is and still not know whether it has being in actual nature. Therefore it is clear that being is other than essence or quiddity. Unless perhaps there is something whose quiddity is its very being, and this is not possible unless the thing be one and primary. . . .⁵

It is noteworthy that it is the essence of which Thomas speaks, and not merely the concept of the essence. That is, his language here is first-intentional language—his conclusion is that “being is other than essence or quiddity,” not simply that “being is other than the concept of essence or quiddity” although this too is true. Moreover, his choice of example is conspicuous, namely a real physical being (man) and an imaginary one (the phoenix). It is true that the phoenix example is distracting, inasmuch as essence as referring to a possible that God might create is distinct from essence as referring to a real principle of being in this given created order. But the character of the argument may be sustained quite apart from this element.

There is reason for Thomas to advert to the phoenix example. Because without *esse* no essence will be, and inasmuch as anything that God may possibly cause—which is to say, anything which is not intrinsically contradictory—is such that God knows what its

⁵ Translation of passages from *De Ente et Essentia* are from the Leonine Edition of St. Thomas's works, *Opera Omnia*, vol. 43 (Rome: Editori di San Tommaso, 1976), 376–77: “Quicquid enim non est de intellectu essentie uel quiditatis, hoc est adueniens extra et faciens compositionem cum essentia, quia nulla essentia sine hiis que sunt partes essentie intelligi potest. Omnis autem essentia uel quiditas potest intelligi sine hoc quod aliquid intelligatur de esse suo: possum enim intelligere quid est homo uel fenix et tamen ignorare an esse habeat in rerum natura; ergo patet quod esse est aliud ab essentia uel quiditate. Nisi forte sit aliqua res cuius quiditas sit ipsum suum esse, et hec res non potest esse nisi una et prima. . . .”

essential principle *would be*, there is some sense in speaking of substances that God could create and of their essences as possibles. Any non-selfcontradictory finite quiddity taken apart from *esse* is in relation to God a possible. The phoenix example highlights this truth that quiddity is not simply of itself actual, as it includes existence neither as an essential note of an essence nor as one of the formal parts of the essence, nor as identical with essence.

Nonetheless, clearly essence as a real principle of being in the actually existing universe is a better metaphysical and epistemic starting point for us than is an imaginary being. For while God can create anything that is not intrinsically contradictory, we only know what God causes or even might cause in relation either to real evidence of actual nature or to supernatural revelation. This is to say that even our knowledge of the possible presupposes prior contact with actual being, and that we abstract essences from actually existing things. Hence what is naturally possible on the supposition of a given order of nature is distinct from what is absolutely possible to the power of God, and our reasoning regarding the real must proceed on the basis of the first, i.e., our reasoning most fruitfully begins with what is naturally possible on the supposition of the given order of nature: on the basis of essence as a real principle of actual being, or actualized essence. For we do not know all the ways in which God is imitable, do not know all that is possible to God, and know whatever we do know in relation to the order of being and nature actually caused by God. For these epistemic reasons, the abstraction of essence from actual being must take methodological precedence over essence identified as a possible in relation to God, although the second is implied and required by the first. If we read the phoenix example aright, we read it as a reference to the datum that essence as such is not, save through existential act, such that there are determinate essences creatable by God that are not created. But we know this to be true only because, first, we abstractively cognize essence derived from real being in the actual created order established by God, and so realize that essence is a potential principle in relation to supervening existential act.

Yet for the purpose of the *intellectus essentiae* argument any instance of essence as a real principle of being—man, for example—is sufficient. Even the essence of a once-but-no-longer real being,

such as the T-Rex, will suffice for the adequacy of the argument as pertaining to essence as a real principle. For in the selfsame act wherein we know such essence we do not formally regard existence, although it is doubtless true that the starting point for such abstraction is an actual being and hence an actualized essence.

Ergo, the seemingly anomalous aspect of the consideration of the phoenix or of an imaginary being—"seeming" because this consideration is imposed upon Thomas by the need to indicate the ontological status of finite quiddity in itself *vis-à-vis* God as a mere possible—does not imply that for St. Thomas the original foundation of our knowledge of essence is other than our abstractive cognition of it from *ens in rerum naturam*. For if nothing is, there is nothing to abstract. Rather, because there is an actual order of nature, essence as a real principle can be abstractively cognized, and when it is, it is realized that the object of this cognition does not include nor is it equivalent with existence. As we have seen, however, "Everything that does not belong to the concept of an essence or quiddity comes to it from outside and enters into composition with the essence, because no essence can be understood without its parts." Since we know essence without thereby in the same act knowing existence, in physical things essence must really be distinct from existence.

This raises the question what St. Thomas means by the "parts" of essence. It is quite clear throughout Thomas's work that he does not think that we easily or often gain comprehensive knowledge of the essences of material things. Because we do not possess such comprehensive knowledge, one might wonder what is to prevent existence itself from being an occult or hidden note of some physical being? If by "parts of essence" St. Thomas were to mean the "notes of the definition of an essence," then—because we do not know material quiddities sufficiently even to know their essential differences—the *intellectus essentiae* argument would appear unfounded because it would be predicated upon *ignorance*.

The critic might put it this way: "No essence can be understood without its parts"—but if "parts of essence" means the notes of a thing's definition we do not according to St. Thomas himself know all the "parts" of essence in most physical beings. Therefore, we cannot determine whether existence is really distinct from essence or quiddity in material things.

If “parts of essence” meant “notes of the definition” then this argument might hold. But this does not appear to be what St. Thomas means by the “parts” of essence. This is clear from the fifth chapter of *De Ente et Essentia* in which Thomas acknowledges that we do not know the essential differences of material natures. As he puts it:

For in sensible things their very essential differences are unknown to us; and thus they are signified through accidental differences that arise from essential differences, just as a cause is signified through its effect: thus ‘biped’ is posited as the difference of man.⁶

Now clearly he cannot have intended in the immediately preceeding chapter to claim that we possess sufficient knowledge of the “parts” of essence to conclude to a distinction of existence and essence in physical things, and *then* continued to argue *in the very next chapter* that *we do not know the parts of most physical things taken in exactly that meaning*. It is not impossible for an author unwittingly to contradict himself. But to say that Thomas does so within the compass of two brief chapters when another plausible reading is available seems unreasonable. Accordingly, since in the *intellectus essentiae* proof Thomas does not use second-intentional language—he speaks of essence and not merely of the concept of essence as being really distinct from existence (“being is other than essence or quiddity”)—we ought not to interpret “parts” in a manner that clearly will require us to hold a conclusion that contradicts that of St. Thomas *unless* either (a) no other meaning is reasonably available, or (b) we have some other pressing reason to suppose that Thomas has fallen into self-contradiction.

For this reason Joseph Bobik seems to be correct that the “parts” of the essences of physical things in question are not the *notes* of the definition of an essence, but the generic or most formal parts of essence in physical being: namely form and matter.⁷ After all,

⁶ Leonine: “In rebus enim sensibilibus etiam ipse differentie essentielles ignote sunt; unde significantur per differentias accidentales que ex essentialibus oriuntur, sicut causa significatur per suum effectum; sicut bipes ponitur differentia hominis.”

⁷ See Joseph Bobik, *Aquinas on Being and Essence, A Translation and Interpretation* (Notre Dame: University of Notre Dame Press, 1965), 163–70.

where else *can* we begin in considering separate substances than with our knowledge of physical things? We have no quidditative knowledge of separate substances whatsoever, a position that Thomas holds throughout his life. If we are then to reach essence and existence as real principles we can only garner them from physical things, because we have no direct access to them in either separate substances or God. For precisely the same reason that the phoenix example, while necessary, is nonetheless not reflective of the necessary starting point of human cognition of essence, the knowledge of the real distinction of essence and existence must be founded upon the knowledge of physical beings. This reason is that actuality is absolutely prior to possibility. Hence we must ground our knowledge of the real distinction of essence and existence in the only actual evidence available to us, which is the knowledge of essence and existence in physical beings. Human beings by nature lack quidditative knowledge of God and of separate substances, whereas we do have natural knowledge of essence in physical things.

Once we have established real distinction of essence and existence in physical things, it will then be reasonable to inquire further—as does St. Thomas when at the end of the *intellectus essentiae* argument he raises the *hypothesis* of the reality of a being in which essence and existence are identical. If we know essence and existence as real principles, *then* it will be meaningful to ask whether these principles may in any other case whatsoever be identical. But in order for this question to refer to *real principles* it is necessary that these principles be grasped as such at the initial stage of inquiry.

No argument can transmit to its conclusion what is not antecedently present in the premises. If there is knowledge of essence and existence as real and distinct principles in physical things, then we can meaningfully inquire as to the hypothetical case wherein they might be really identified, and conclude as does St. Thomas. That is, *if* there were indeed such a being in which essence and existence were identical, *then* there *could only be one* such being, because all the ways in which manyness accrue to being require potency and such a being *ex hypothesi* would lack any potential principle. But if we fail to know essence and existence as real principles in physical beings at the start, *then we will have no warrant for concluding anything about these as real principles at the end.*

To put the matter differently, *if we do not know these principles as real principles in the beings that are proportionate to our knowing powers, any conclusion we draw about them may be merely logical, and these principles themselves may then be chimeric rather than real.* Only if we are content with a purely conceptual conclusion does it make sense to begin with a purely conceptual distinction. But St. Thomas's conclusion is real—he does not use second-intentional language. Accordingly, to read the distinction at this phase as conceptual is either to distort the argument or to claim that Thomas unwittingly and confusedly drew real conclusions from purely conceptual premises.

But even if it be ceded that the argument must begin with our knowledge of material being, and that the parts of essence referred to by the argument are those of form and matter, it may be asked how we certainly know that form and matter *are* the generic parts of essence. And there may nonetheless still be lingering doubts as to whether existence may somehow be an occult or hidden note of essence. To address these concerns, it is helpful to remember that according to St. Thomas the proper object of the intellect is *quiddity in corporeal matter*. In *Summa Theologiae* 1, q. 84, a. 7, St. Thomas writes that “the proper object of the human intellect, which is united to a body, is a quiddity or nature existing in corporeal matter; and through such natures of visible things it rises to a certain knowledge of things invisible.”⁸ The latter point is as conspicuous as the former—we rise to a certain knowledge of separate substances—the subject matter of the fourth chapter of *De Ente et Essentia*—from the knowledge of material quiddity.

In q. 85, a. 6 of the *prima pars* of the *Summa Theologiae*, Thomas argues that:

... every faculty, as such, is per se directed to its proper object; and things of this kind are always the same. Hence, as long as the faculty exists, its judgment concerning its own proper object does not fail.—But the proper object of the intellect is the “quiddity” of a thing; and hence, properly speaking, the intellect is not at fault concerning this quiddity; whereas it may go astray

⁸ “Intellectus autem humani, qui est coniunctus corpori, proprium obiectum est quidditas sive natura in materia corporali existens; et per huiusmodi naturas visibilibus rerum etiam in invisibilibus rerum aliqualem cognitionem ascendit.”

as regards the surroundings of the thing in its essence or quiddity, in referring one thing to another, as regards composition or division, or also in the process of reasoning.⁹

He goes on to write in his response to the first objection that “in the absolute consideration of the quiddity of a thing, and of those things which are known thereby, the intellect is never deceived.”¹⁰ But clearly if existence were part of material essence, and yet when we knew material essence we did not know existence, we would be deceived.

⁹ “Quia ad proprium obiectum unaquaeque potentia per se ordinatur, secundum quod ipsa. Quae autem sunt huiusmodi, semper eodem modo se habent. Unde manente potentia, non deficit eius iudicium circa proprium obiectum.—Obiectum autem proprium intellectus est quidditas rei. Unde circa quidditatem rei, per se loquendo, intellectus non fallitur. Sed circa ea quae circumstant rei essentiam vel quidditatem, intellectus potest falli, dum unum ordinat ad aliud, vel componendo vel dividendo vel etiam ratiocinando.”

¹⁰ See also *ScG* 3, ch. 108: “Nulla virtus cognoscitivacirca proprium obiectum decipitur, sed solum circa extraneum: visus enim non decipitur in iudicio colorum; sed, dum homo per visum iudicat de sapore vel de specie rei, in hoc deceptio accidit. Proprium autem obiectum intellectus est quidditas rei. In cognitione igitur intellectus deceptio accidere non potest, si puras rerum quidditates apprehendat, sed omnis deceptio intellectus accidere videtur ex hoc quod apprehendit formas rerum permixtas phantasmatis, ut in nobis accidit.”—“No cognitive faculty is deceived about its proper object, but only about one that is outside its purview: thus the sight is not deceived in its judgement about colours; whereas deception may occur if a man judge by sight of taste, or of the species of a thing. Now, the proper object of the intellect is the quiddity of a thing. Consequently there can be no deception in the knowledge of the intellect, if it were to apprehend the mere quiddities of things, and all deception of the intellect would seem to occur through its apprehending forms mingled with phantasms, as is the case with us.” The whole of this article continues to the same effect, making the point that falsity enters into our judgement through composition and division but only by accident pertains to our apprehension of quiddity—“In operatione autem intellectus qua apprehendit *quod quid est*, non accidit falsum nisi per accidens, secundum quod in hac etiam operatione permiscetur aliquid de operatione intellectus componentis et dividensis.” See also the *Disputed Questions on Truth*, q.1 a. 12: “Quiditas autem rei est proprium obiectum intellectus: unde sicut

Thomas's teaching about the proper object of the intellect clarifies the conditions for meaningful error about material quiddity. We have noted his remark in the fifth chapter of *De Ente* that we are ignorant of the essential differences of physical things. According to Thomas we can also be mistaken about the essential natures of things. St. Thomas does not suppose that we see into and intuit whole and entire the essential nature of every being in a quasi-angelic *ecstasis* of objectivity. Rather he holds that error about essential nature may occur either because there is error in the composition affecting the definition—whereby we predicate of a nature what does not properly belong to it—or by virtue of simple ignorance. He repeats this account elsewhere, for example in his *Disputed Questions on Truth*. While this teaching identifies the preconditions for meaningful error about essence in physical things it also affirms the generic inerrancy of our knowledge of material quiddity.

To illustrate the latter point: The first man ever to see a whale in all likelihood did not know what it was. I once heard it said that Aristotle had three rather than two questions: not only “is it?” and “what is it?” but “what the hell is it?” Probably the first person to see it thought that the whale was a big fish. That isn't true. More-

sensus sensibilium proprium semper verus est ita et intellectus in cognoscendo quod quid est, ut dicitur in III *De anima*. Sed tamen per accidens potest ibi falsitas accidere, in quantum videlicet intellectus falso componit et dividit, quod dupliciter contingit, vel in quantum diffinitionem unius attribuit alteri, ut si animal rationale mortale conciperet quasi diffinitionem asini, vel in quantum coniungit partes diffinitionis ad invicem quae coniungi non possunt, ut si conciperet quasi diffinitionem asini animal irrationale immortale: haec enim est falsa ‘aliquod animal irrationale est immortale’.”—“The proper object of the intellect, however, is the quiddity of a thing. Hence, just as the sensing of proper sensibles is always true, so the intellect is always true in knowing what a thing is, as is said in *On the Soul*, Book III. By accident, however, falsity can occur in this knowing of quiddities, if the intellect falsely joins and separates. This happens in two ways: when it attributes the definition of one thing to another, as would happen were it to conceive that ‘mortal rational animal’ were the definition of an ass; or when it joins together parts of definitions that cannot be joined, as would happen were it to conceive that ‘irrational, immortal animal’ were the definition of an ass.”

over, with Thomas we may doubt that even now we know what the essential difference of the whale is. But we do know that there is a nature to be known, and we know that it is a material nature. We know that the whale is not merely an accident of the sea, nor an angel, nor God. While this is embarrassingly little to know about whales, it is a great deal to know about material quiddity—and the condition of possibility for our knowing this is the general adequation of the human mind to essence or quiddity in material things. The tripartite variant of the Aristotelian questions is more than merely facetious. The second question reflects the reality of the mind's general adequation to material essence poised at the beginning of its trajectory of discovery regarding some particular essence; while the third reflects the truth that this adequation—far from being a comprehensive immediate intuition of all the notes of any particular essence—is the condition not only for partial success but for intermittent and more or less constant frustration and failure as well. If the proper object of the human intellect is quiddity in corporeal matter, this generic *adequatio* is both the precondition for particular success and for the intelligibility of failure.

To use a phrase I am happy to steal from the currency of Fr. Lawrence Dewan, this means that we know the “quiddity of quiddities.”¹¹ If it means anything to say that the proper object of the intellect is quiddity in corporeal matter, then we *must minimally know what it means in general to be a quiddity in corporeal matter*—elsewise this proposition is *meaningless*. Absent generic knowledge of material quiddity, St. Thomas's teaching that material quiddity is the proper object of the intellect becomes tantamount to “we

¹¹ Given the immense scope of his publishing, I confess that I cannot recall precisely where I heard this phrase pass his lips. But I refuse to deny the world the use of a fine phrase merely because of the limits of my memory. See also Fr. Dewan's “St. Thomas, Joseph Owens, and the Real Distinction between Being and Essence,” especially 149: “I suggest that this argument should be read as ‘quidditatively’ as possible, that is, as a universal demonstration based on the ‘natures’ of essence and *esse*. Saint Thomas means quite formally the ‘every essence.’ He is speaking in the light of *what essence is*. Sensible experience yields a knowledge of essence, both that there is such a thing as essence, and what essence is. It is something that cannot be understood without all its parts, that is, every essence is recognized as

know not what” is the proper object of the intellect. While this may be a common postmodern motif, there seems no reason to attribute it to St. Thomas Aquinas.

It is the general knowledge of material quiddity that makes possible our discovery both of matter as a potential principle and of form in physical things. For if the human intellect is not generically adequated to material essence, clearly our knowledge of the generic *parts* of essence becomes impossible. It is this native contact of the human intellect with the evidence of material nature which founds our perception that what makes a thing liable to undergo *substantial change*—what makes a thing susceptible to *become what it is not*—cannot be identically the same principle which makes a thing *actually to be what it is*. That which is the principle of determinacy is not simultaneously that which is the principle of indeterminacy within physical things: a principle is not and cannot be simultaneously and in the same respect a principle of act and of potency.

The evidence for hylemorphism is strongly related to the distinct question of the proper locus of determinacy (that is, the issue whether there are substantially unified “higher” natures or whether to the contrary pluriformism provides a correct account). But the issue of the proper locus of determinacy in physical things already presupposes the discovery of form. It also presupposes the discovery of the distinction of form from matter as from:

1. the capacity of a formed thing *for* such form;
2. the capacity for the accidental form of quantity whereby individuals may be plurified within a species; and
3. the capacity to receive a substantially different form.

some sort of *complete* reality: to grasp essence is to grasp a completeness. In that sense, it is *indivisible*. Moreover, every essence can be grasped without considering actual existence. That is why abstractive knowledge is genuine knowledge of the real, though it is imperfect knowledge.” I am wholly in concurrence with this insistence that the argument be read as “‘quidditatively’ as possible” and that St. Thomas “is speaking in the light of *what essence is*” and means quite formally the “every essence”. I should add only that this first and proportionately concerns “every material quiddity” and is founded upon the general adequation of the mind to its proper object, quiddity in corporeal matter.

Even the elements, anything whatsoever that has determinate structure, must just so far be affirmed to possess form. Insofar as some determinate structure follows upon or ceases after causal action, clearly the reality of a principle of indeterminacy or matter is inseparable but nonetheless distinct from form. In passing it is worthwhile to note that the tendency to conceive matter as a real subject like an ocean which takes various shapes is not adequate to the evidence. For matter is a principle of being, but what exists is the physical subject itself which has these principles. Apart from some being characterizable by these principles, there is no physical being. In any case, the very discovery of form and matter as principles is rooted in the generic adequation of the intellect to quiddity in material things.

From a philosophic point of view, supervening on both the knowledge of common sense and knowledge in positive science is an actually *affirmative* basis for all the falsifications which enable us to weed out bad accounts of physical things. As St. Thomas suggests in *De Potentia* V, 7, “the understanding of negatives is always based on affirmatives” or, as I like to put it, *every negation presupposes a prior affirmation*. The affirmative basis presupposed to meaningful error about essence in material things is the generic adequation of intellect to material quiddity. The very existence of essence in material things as a *target for inquiry* that so often eludes and frustrates our efforts to know the natures of particular beings is evidence of this generic adequacy of mind to material quiddity. One may consider the same point more fundamentally: when St. Thomas states that we lack knowledge of the differences of physical things, how is it possible for him to know that we lack such knowledge? Consider what must be known for this to be a pertinent utterance: it must be known that difference is *pertinent* to material essence; that essence is found in physical things; and that we know enough about such essence to be aware of that which we lack in our knowledge.

This suggests that the argument for real distinction of essence and existence that is founded upon our knowledge of material quiddity is built upon the firmest possible foundation we might provide, for this foundation is the very proper object of the intellect itself. No superior place to repose one’s metaphysical structure might be found in all the varied domains of knowledge. But if,

counterfactually, we were habitually and continually to mutate essence by considering it to be complete without one of its essential parts—namely, existence—then material essence could not be the proper object of the intellect, because the intellect would not be generically adequated to it. Accordingly it could neither make sense to be aware of failing to understand some particular physical essence, nor make sense to be aware that we lack knowledge of difference in physical essence generally. But both of these propositions are contrary to fact.

The “parts” of essence spoken of in *De Ente et Essentia* are form and matter. Now it is very clear that existence is not matter, as matter is potency and existence is clearly act, the actual being of a thing. Likewise it is clear that in material things existence is not form, because in material things form is known as really distinct from being. It is affirmed to be or not to be—form is not, simply as form, sufficient to constitute a being in the absence of the *actus essendi*. Moreover, were a form identical with existence, then Parmenidean implications would beset us, for such a form would be self-existent (unlike the forms of physical things) and infinite.

Yet what of the claim that existence might after all be a hidden or occult note of essence? This is a claim which is so clearly contrary to the evidence that St. Thomas does not permit it to delay his approach to the central question of the fourth chapter of *De Ente* regarding separate substances. Yet the answer is clear. *If* existence is an occult or hidden note of a material essence, *then* we shall need to argue that one and the same essence contains *both* a principle whereby it may be *substantially transmuted* so that *the same being* will no longer *be*—namely, a principle of *matter*—while simultaneously containing a principle whereby matter *can never be substantially transmuted but must ever be within the same essence*—namely *esse* or *actual existence*. This is to posit an intrinsic impossibility, namely an internally self-contradictory essence that at one and the same time potentially may be essentially altered while nonetheless *it also must immutably and actually be* just as it is. Such an internal self-contradiction is simply impossible. It is not to be confused with a substance possessing an intrinsic potential for corruption which is emended through an *extrinsic* principle, for clearly the latter would not involve a self-contradictory

essence. But for actual existence to pertain to a given essence as such—which means that this essence immutably and essentially *is*—while at the same time this given essence as such is potentially transmutable and so is essentially changeable, is a simple self-contradiction no more possible than is a round square or a conclusion that is simultaneously and in the same respect true and false.

Further, essence in material things is not a principle that necessitates the actual being of a thing—physical things are not self-existent. But if existence is an essential note of some physical nature, then this physical nature will necessarily exist, just as the triangle is by its essence necessarily three-sided. This does not correspond to the physical evidence. Moreover, if essence is held to be identical with existence in a creature, then the creature is alleged to lack any principle of potency whatsoever, to be *a se*, and must then be held to have only conceptual relations with other creatures—but this is manifestly contrary to the evidence. It also seems that if existence were to be construed as “part” of the essence then the other parts would (to be distinguishable therefrom) need to be characterized formally as non-existence: but how can “nonexistence” be part of an essence?¹²

There remains to oppose the *intellectus essentiae* argument only the radical philosophic counterargument that *existence or act is itself self-limiting* rather than limited only by a distinct potential principle. If this were true it would permit existence to comprise either part or all of an essence without the implication that the essence were self-existent and immutable in being; for then act would not be limited by the capacity for act but by itself. But this is contrary to what is intended by *act* as such, for insofar as we say a thing is we do not by that fact simultaneously denote or imply *that it is not*. When we trace the intention of the judgment of act, we see that act is limited by something distinguishable therefrom, which is a potential principle—not a subsistent *thing* but a *principle of being*. And with this realization we return once more to the intuitive

¹² Cf. Bobik, *Aquinas on Being and Essence*, 167. That the essence of every actual thing has “part” which is existence, and another “part” that is nonexistence, is unintelligible; whereas, to say that essence as such only *is* through the supervening of an act of a higher order, namely *esse*, is quite intelligible.

foundations of the real distinction in our native knowledge of material quiddity.

Of course, it is also true that *if* we argue that act as such is self-limiting, *then* we must hold either that God is not actual or that God is finite—a wake-up call for Suarezian theists about the probity of such an account. If act is held to be self-limiting on an *ad hoc* basis—that is, if the argument is that some acts (creaturely ones) are self-limiting whereas at least one act (the divine act of being) is not self-limiting but infinite and transcendent—*then it follows that whatever the ratio is for limitation of act is distinct from act*. If there is affirmed a case in which act is not self-limiting then it must be affirmed in principle that act qua act is not self-limiting (for if act as act were self-limiting there could be no such case in which act were not self-limiting). And this both requires of the mind and lures it to the discovery and identification of that principle whereby the actuality of being is limited. It is simply ineluctable that the given datum of being speaks itself to the mind as implying principles rather than merely *ad hoc* and unrelated and unrelatable judgments. These principles are not beings, but rather co-principles of being explicative of it as an intrinsically analogous object.¹³ It is in relation to our generically

¹³ This is a conspicuous point regarding *esse*: it is not a being, but a superformal or superessential principle of being. The creature's *esse* does not in its own right exist, but rather what exists is a subject having an essential nature. *Esse* is in a sense both most formal/superformal and final. The initial full perfection of a thing's being is the termination of its causation and hence the full perfection of a thing's act of being is in this sense final *vis à vis* an extrinsic secondary cause. But it seems even more the case that *esse* is superformal or in other words most formal and actual, since the act of being is that whereby the subject of being and its essence *is*, and in cases of temporal coming-to-be each stage of a thing's genesis is *pari passu* with its coming into being. And in this sense *esse* is the first act of every form or nature. The lines of St. Thomas from the *ST* 1, q. 4, a. 1, ad 3 seem to affirm that for him *esse* "consideratur ut formale et receptum," that is, is considered as formal and received. To quote the whole: "Dicendum quod ipsum esse est perfectissimum omnium; comparatur enim ad omnia ut actus. Nihil enim habet actualitatem, nisi in quantum est; unde ipsum esse est actualitas omnium rerum, et etiam ipsarum formarum. Unde non comparatur ad alia sicut recipiens ad receptum, sed magis sicut receptum ad recipiens. Cum enim dico esse hominis, vel equi, vel cuiuscumque altereius, ipsum

adequated knowledge of essence that it is discovered that there is that (*esse*) whose relation to essence is as form is related to matter, and that what is most formal in the intrinsically analogous *ratio* of being is *esse*.

Often the textual argument is made that if St. Thomas held the *intellectus essentiae* argument to be valid in *De Ente et Essentia*, he could after all stop the progress of the fourth chapter at this point. Such criticism implies that since he does not stop at this point the

esse consideratur ut formale et receptum, non autem ut illud cui competit esse.”—“It should be said that existence is the most perfect of all things, for it is compared to all things as act. For nothing has actuality save insofar as it exists; wherefore existence is the actuality of all things, even of forms themselves. Thus it is not compared to other things as the receiver is to the received, but rather as the received to the receiver. When therefore I speak of the existence of man, or horse, or anything else, existence is considered as a formal principle and received, but not as that which exists.” One notes that the use of “things” in this translation clearly is a figure of speech (“Dicendum quod ipsum esse est perfectissimum omnium”), and obviously not the teaching of Giles of Rome. Likewise, Bañez persistently speaks of essence and existence as of two different things, but contrary to the claims of some medievalists this may merely be a figure of speech intended to emphasize their real distinction. For there is no reason to suppose that Bañez thought essence and existence to be distinct *subsistents*, while there is pronounced reason to think the contrary. Bañez speaks of *esse* as the act of essence, such that there is no essence apart from *esse* (and clearly a *nonexistent* essence is not a subsistent), and held that essence is only intelligible in its ordering to *esse* either potentially or actually. Bañez also considers that *esse* is not only the last but the first act, since it perfects every other act and forms are to *esse* as potency to act. So, quite apart from possible errors of Bañez with respect to the authenticity of texts, and even given his use of this misleading expression of existence and essence as two different “things”, his doctrine of the real distinction appears to indicate that *esse* and essence are not in themselves subsistents. That is, with or without reference to error on the part of Bañez in judging the authenticity of manuscripts, one can quite otherwise account for his use of this linguistically seductive but misleading phraseology without implying the error that essence and existence are literally “things” or subsistents—especially given the author’s clarity in teaching that *esse* is the act of every form or nature. See his Commentary on *ST* 1, q. 3, a. 4, in his sixth conclusion about existence, *Scholastica Commentaria in Primam Partem Summae Theologiae St. Thomae Aquinatis* (Valencia: Editorial F. C. V. A., 1934).

real distinction has yet to be established. But this analysis founders on one critical point. Establishing the real distinction in physical things is a *necessary* but *not a sufficient* condition for arguing that if there were a being in which essence and existence were identical there could only be one, so that *a fortiori* in all other cases essence and existence are really distinct. But because the distinction of essence and existence in physical things is not yet a universal distinction throughout all finite being, this further argument is required if Thomas is to address the very subject of the fourth chapter—which is not essence in physical things, but rather the difficult case of separate substance. Thomas is aiming to address how it is that one may know in the absence of quidditative knowledge of such substances that they possess a potential principle, and he attends to this question by an argument that universalizes the real distinction of essence and existence throughout finite being. In other words, since the fourth chapter expressly and specifically concerns separate substance and not merely physical being, the *intellectus essentiae* proof regarding essence and existence in physical beings is but a starting and not an ending point in this consideration. So the suggestion that were the *intellectus essentiae* proof sufficient to establish real distinction of essence and existence in physical things that the chapter could end forthwith, is nullified by the very nature of the remote purpose for which Thomas deploys the *intellectus essentiae* argument.

The *intellectus essentiae* argument cannot terminate Thomas's consideration in this chapter because its role is to provide the initial foundation for the ensuing argument that there is only one even *hypothetical* case in which essence and existence *could be* identical (because all the ways in which being may be plurified imply potency, but the nature of the hypothesis of identity of essence and existential act excludes all such potency).¹⁴ This conclusion

¹⁴ Wippel argues that after St. Thomas poses the *intellectus essentiae* argument, if he thought it established real distinction, "it would seem that he could immediately conclude that existence comes to essence from without and enters into composition with it. Interestingly enough, however, he will appeal to the point that existence comes from without only when introducing what I shall regard as the third phase of his argumentation . . ." See 112–13 in his *Metaphysical Themes in St. Thomas Aquinas*, cited above. The

achieved, Thomas can then conclude *a fortiori* that *in all other cases* (apart from one, only hypothetically possible instance) existence and essence are necessarily really distinct. This at one stroke addresses the case of separate substances, for if there is only one even plausible and hypothetical case in which essence and existence might be one, it follows in every other case—including that of separate substances—that they are distinct. Only after having universalized the real distinction between essence and existence

first point to note about this is that it while it is true that he appeals to this point only later, it is logically derivable from his given conclusion. For if *esse* is not essence, and if essence cannot be without *esse*, then *esse* must derive from an extrinsic source. But of course, until it has been shown that the separate substances are not so many absolutely pure acts lacking any potential principle or limit—until we are in possession of the argument why it is that there cannot be multiple absolutely perfect beings—we are not yet philosophically escaped from polytheism. So while at this stage in the argument it *is* clear that the real distinction in physical things indicates that *esse* comes to the finite physical thing from outside, this does not yet establish that the extrinsic source is one unique Creator who is *ipsum esse*. First it must be shown that the separate substances are not unbounded pure acts each of which might create. Thomas cannot yet conclude that both physical beings and separate substances depend for their being upon one Supreme Being Who is the Creator. So, while St. Thomas clearly *could* draw the conclusion that existence comes to physical things from without at this stage—a conclusion which appears obvious—his strategic purposes are not served by doing so at this point. For this in itself will not yet lead to an answer either to the problem of separate substances or to an existential proof for one unique Creator unless *first* St. Thomas demonstrates the universality of the real distinction of essence and existence throughout finite being, showing that it pertains to all being with *but one possible unique exception*. And this is precisely what St. Thomas does. As he is developing a coherent argument about the separate substances, he draws the implications he needs much as a general moves forward troops to the line—when and as they forward the strategic purpose of the endeavour. For the point is not to draw every implication that may be drawn as soon as it may be drawn, but to advance the argument by drawing inferences in an ordered way from the evidence. This is simply to note that St. Thomas's strategic purpose regards the separate substances and their relation to God, in relation to which real distinction of essence and existence in physical things is but a preamble.

does Thomas offer his properly existential proof for the existence of God:

Everything that pertains to a thing is either caused by the principles of its nature, as risibility in man, or comes to it from an extrinsic principle, as light in the air from the influence of the sun. Now it cannot be that being itself is caused by the form or quiddity of a thing—I mean as by an efficient cause—because that thing would then be its own cause and it would bring itself into being, which is impossible. Therefore it follows that everything whose being is other than its nature has its being from another. And because everything that exists through another is reduced to that which exists through itself as to its first cause, there must be something that is the cause of being for all other things, inasmuch as it is pure being. Otherwise we would go on to infinity in causes, for everything that is not pure being has a cause of its being, as has been said. It is evident, then, that an intelligence is form and being, and that it holds its being from the first being, which is pure being; and this is the first cause, or God.¹⁵

Of course, it might be argued that because this proof for the existence of God is not elsewhere clearly set forth in Thomas's work, that the quoted passage lacks the form of a proof. But this is clearly vain. With similar reason one might say that because New York does not exist elsewhere (say, in Idaho) it lacks the form of a city, or because the mayor of New York does not exist elsewhere (say, on Mars) he lacks the form of man. The passage cited is clearly

¹⁵ "Omne autem quod conuenit alicui uel est causatum ex principiis nature sue, sicut risibile in homine; uel aduenit ab aliquo principio extrinseco, sicut lumen in aere ex influentia solis. Non autem potest esse quod ipsum esse sit causatum ab ipsa forma uel quidditate rei, dico sicut a causa efficiente, quia sic aliqua res esset sui ipsius causa et aliqua res se ipsam in esse produceret: quod est impossibile. Ergo oportet quod omnis talis res cuius esse est aliud quam natura sua habeat esse ab alio. Et quia omne quod est per aliud reducitur ad id quod est per se sicut ad causam primam, oportet quod sit aliqua res que sit causa essendi omnibus rebus eo quod ipsa esse tantum; alias iretur in infinitum in causis, cum omnis res que non est esse tantum habeat causam sui esse, ut dictum est. Patet ergo quod intelligentia est forma et esse, et quod esse habet a primo ente quod est esse tantum, et hoc est causa prima que Deus est."

an argument. As the premises yield a valid conclusion, and Thomas nowhere renounces this argument but seems everywhere to reason in ways consistent with it, we are better advised seriously to appropriate it than to avert our gaze as though the significance of a text were merely an index of the number of times it appears.¹⁶

If critics could find an express renunciation of this reasoning, the case might be different. But there is nothing in the further elaboration of the metaphysics of *esse* which suggests that Thomas rejects the validity of this proof for God as unique cause of being for all finite things. One might also point out that whereas this theistic proof is well and intuitively buttressed by the evidence that supports the *intellectus essentiae* argument, nonetheless developing this proof for the existence of God philosophically requires a metaphysical and epistemic sophistication that is less requisite to proofs that begin straightforwardly simply from sensible data. By contrast with a sensible starting point, to begin with the analogically common metaphysical objects of being and essence—and specifically to start with quiddity in corporeal matter—is to reason from a starting point simultaneously intuitive and omni-accessible while also comparatively more rarified because more removed from sensation. This latter datum alone can help to explain why this version of the existential proof for God as unique cause of the being of all finite things is not more frequently and expressly employed in Thomas's writings.

The intuitivity and incisiveness of this account is matched by a greater remotion or distance from sensation which renders it simultaneously excellent for an introduction to metaphysics, and less excellent for the instruction of those whose minds do not rise to the metaphysical level. Accordingly its implicit presence in the metaphysical background of many of St. Thomas's more general works, and its express presence in the only introduction to metaphysics ever written in his own name rather than veiled in the object of commentary on the work of another (albeit a diaphanous veil in

¹⁶ It is true that the passage is not preceded by the title: "Existential demonstration of God as Creator." But given that the premises are sound and lead to this conclusion by valid inference, it appears to be a demonstration. Likewise, " $2 + 2 = 4$ " should in the absence of any pressing reasons to think otherwise be taken as an arithmetic expression, even if not so labelled.

cases such as the *Scriptum on the Sentences*) more than justify refusal to ignore it merely because it is where it is and is not where it is not.¹⁷

It is conspicuous that Etienne Gilson's renowned refusal to acknowledge the formal character of this existential proof of God as unique cause of all finite being, proceeds *pari passu* with his denial of any even indirect philosophic demonstration for the real distinction as such.¹⁸ This move, much embraced by some contemporary theorists in the *Communio* circle,¹⁹ plunges the metaphysical foundations

¹⁷ The argument here and of the prior two paragraphs is of course directed to the objection of Etienne Gilson ("La preuve du De ente et essentia," *Acta III Congressus Thomistici Internationalis: Doctor Communis* 3 [1950], 257–60). Or, as he puts it in his "Trois leçons sur le probleme de l'existence de Dieu," *Divinitas* 1 (1961): 27, "Bien plus, la ou saint Thomas propose explicitement des preuves de l'existence de Dieu, il ne fait pas usage de ce raisonnement. Ce n'est pas l'une des *quinque viae*, et il n'est pas inclus dans la synthese si complete du *Contra gentiles*. D'ou cette simple question: est-ce ou n'est-ce pas une preuve de l'existence de Dieu?" But perhaps the Angelic Doctor did not suppose that introductory theological works and apologetic works necessarily needed to articulate the summit of metaphysical insight when articulating arguments for the existence of God. More to the point than Thomas's decision not to bring this forth in his listing of proofs elsewhere is the question: are not the proofs he does bring forth such as to be consistent with, and to receive their ultimate rationale in relation to, this proof? The answer is: yes, and most especially with reference to the fourth and third ways from the *Summa Theologiae*.

¹⁸ Cf. Gilson's *Elements of Christian Philosophy* (New York: Doubleday, 1960), 128: "No one has ever been able to demonstrate the conclusion that, in a caused substance, existence is a distinct element, other than essence, and its act." This raises questions whether Gilson identifies *esse* properly at the start. This point is made with exquisite clarity and force by Lawrence Dewan, OP, "Étienne Gilson and the Actus essendi," *Maritain Studies/Études Maritainniennes* 15 (1999): 70–96. Gilson's comment also leaves the mind puzzled by its blithe dismissal of the demonstrative force of arguments that Thomas clearly holds demonstrate real distinction of essence and existence in physical things such as the *intellectus essentiae* argument, where Thomas's conclusion is that "from this it is clear that being is other than essence or quiddity."

¹⁹ One notes the work of David Schindler, for whom a being is not even definable in precision from grace—a view which clearly denies the intelligibility of essence. See "Christology, Public Theology, and Thomism: de Lubac, Balthasar, and Murray," in *The Future of Thomism*, ed. Deal W. Hudson

of St. Thomas's thought into a fideist abyss. Surely it is worthy of note that in *De Ente et Essentia* St. Thomas provides us with philosophic analysis, and not merely with a scriptural gloss (howsoever profound) upon Exodus—and this is without prejudice to the judgment that the metaphysics of Exodus is the metaphysics of *esse*. Rather, what is naturally conspicuous to the philosopher is that the argument is set forth as knowably true even in precision from its theological fruitfulness. This of course implies the oft-controverted thesis that philosophic truth has implications for theology which ought not to be ignored.

Thomas's teaching in *De Ente et Essentia* is cognate with his work from the *Scriptum on the Sentences* written in roughly the same time period as was *De Ente et Essentia*. In this commentary the decisive points appear in language that is unmistakable:

The nature of being is found in all things, in some more nobly, in others less nobly, such that the natures of the things themselves are not the very being which they have. Otherwise, being would belong to the concept of the quiddity of any thing, which is false, since the quiddity of any thing can be understood without understanding whether the thing exists.²⁰

and Dennis W. Moran (Notre Dame: American Maritain Association, 1992), 253–54, note 9. Of course, not all members of this school adopt this stance.

²⁰ *Scriptum super libros Sententiarum* II, d. 1, q. 1, a. 1, resp., taken from *Aquinas on Creation*, trans. Steven Baldner and William E. Carroll (Toronto: Pontifical Institute of Medieval Studies, 1997). The English translation of one critical section of Thomas's commentary here cited should be used by every philosophic program and seminary in the country. The Latin text reads: "Invenitur enim in omnibus rebus natura entitatis, in quibusdam magis nobilis, et in quibusdam minus; ita tamen quod ipsarum rerum naturae non sunt hoc ipsum esse quod habent: alias esse esset de intellectu cujuslibet quidditatis, quod falsum est, cum quidditas cujuslibet rei possit intelligi etiam non intelligendo de ea an sit." This is of course precisely the same argument as is given in *De Ente et Essentia*. Armand Maurer and Joseph Owens argue that elsewhere in St. Thomas's commentary (I *Sent.* d. 8) he develops the *intellectus essentiae* argument in a way that cannot reasonably be thought to imply a real distinction of essence and existence. Their argument focuses upon Thomas's comparison of the "accidentality" of existence in relation to essence, *vis à vis* the accidentality of the relation of rational to animal. They argue that inasmuch as species and genus are not

Or, as Thomas states even more clearly, "I answer that not only does faith hold that there is creation but reason also demonstrates it."²¹ This is rather a large proposition to overlook. Inasmuch as for Thomas the philosophic conception of creation entails (1) no antecedent matter whatsoever, and (2) that nonbeing precedes being in finite things not temporally but by nature (such that apart from real dependence upon the extrinsic causality of God a finite thing will not be),²² it is clear that there is an existential proof for the reality of God. For the demonstration of creation of which

really but only conceptually distinct, the point of Thomas's intellectus essentiae argument must likewise be to conclude only to a conceptual distinction. But there is an answer to this criticism: Thomas is 1) comparing species to genus as act to potency, just as existence is to essence as act to potency, while 2) simultaneously illustrating one type of accidentality—the "accidentality" of being to essence—with the quite different accidentality of species to genus. Why do we say this? Firstly, because if he wanted to draw a second-intentional or merely conceptual conclusion, then he would not use terms of first intention but instead use second intentional or purely conceptual terms. To the contrary, his conclusion clearly pertains to essence and not merely to the concept of essence. Secondly, any comparison will fail in some respect, and this is all the more true given the uniqueness of the real distinction between essence and existence in finite things. If the point is to use comparison in order to highlight accidentality, then—especially since any other case will necessarily be quite different from that of the unique essence/existence relation in finite things—the type of "accidentality" involved is beside the point. Seen in this way, the available frame of comparison between the species/genus relation and the existence/essence relation is both that of act and potency, and of one type of accidentality in comparison with another. This interpretation of the text does not contradict St. Thomas's conclusions. It is unclear whether the scholars who prefer a merely conceptual reading are wary of defending St. Thomas's actual realism about the knowledge of essence from sceptical criticism, or whether, contrastingly, preoccupation with historical considerations suffice to divert them from this aspect of Thomas's teaching. See Joseph Owens, "Quiddity and Real Distinction in St. Thomas Aquinas," *Medieval Studies* 28 (1965): 1–22, as well as his fascinating work, *An Interpretation of Existence* (Houston: Bruce Publishing, 1968). See also Armand Maurer's translator's introduction to *On Being and Essence*, 2nd Ed. (Toronto: Pontifical Institute of Mediaeval Studies, 1968), 7–27.

²¹ II *Sent.*, d. 1, q. 1, a. 2, resp.

²² Cf. II *Sent.* d. 1, q. 1, a. 2.

Thomas speaks is nothing other than the causal inference from existential act limited by potency in finite things, to God as *Ipsum Esse subsistens per se*.

II. The Import of the *Intellectus Essentiae* Argument

In the context of *De Ente et Essentia*, the *intellectus essentiae* proof of real distinction of essence and existence in material things is the starting point for three sets of important conclusions. First, the real distinction of these principles in physical things (the conclusion of the *intellectus essentiae* argument) is the basis of further argument to the effect that this distinction is universal throughout finite being. Secondly, since the conclusion that even separate substances are not their own being follows upon the universalization of the real distinction, the *intellectus essentiae* argument is the remote foundation for this conclusion too. Thirdly, as the existential proof for the reality of God depends upon the universalization of the real distinction throughout finite being—and inasmuch as this universalization itself presupposes the discovery of essence and existence as really distinct principles in physical things—the *intellectus essentiae* argument stands at the font of this existential proof.

Its brevity belies its import. The *intellectus essentiae* argument is briefly stated because the point in any journey is not to tarry at the starting point, but to move to the appointed destination. Further, given what Thomas earlier argued in *De Ente et Essentia*, he might rightly have thought that the *intellectus essentiae* argument should already be sufficiently clear from his prior argumentation. In the third chapter of *De Ente et Essentia*, St. Thomas argues that essence exists in two distinct ways—in one way in the physical thing with all the accidents that ensue upon this mode of its being, and in another way in the soul, with the accidents that follow thereupon (such as species and genus). But this point is of itself sufficient to indicate that material essence is distinct from *existence*, for the same essence *is* in two radically distinct ways and hence it follows that essence is as such identical with neither. Material essence is identical neither with existence in quantified, signate matter nor with its existence in the mind, although it may be in (and hence *be identified* with) each. Of course, if essence in no way whatsoever is in intellectual intention, then objectivity in knowledge of essential

nature becomes impossible. Hence if one affirms objectivity regarding essential nature in physical things, one already implicitly affirms that essence and existence are really distinct. This epistemic grounding of the *intellectus essentiae* demonstration in the objectivity of human knowledge is extremely critical.²³

The datum that the selfsame essence that is in the thing is in the mind is the foundation for intellectual objectivity concerning essence in physical things. Were essence as a whole and in its proper meaning to be identical with existence or to include existence as a part, and were we to fail to know this in knowing essence, this would imply that material essence is generically unknowable. For on this supposition, the knowledge of essence would be mutative, that is, such knowledge would necessarily alter and distort essence by considering it without something necessary to the essence as such. It would then follow that the very affirmation of *De Ente et Essentia*—that the mind is generically adequated to essence as a whole—would be false, and conclusion to the unknowability of essence would be ratified.

Yet this claim that we generically deform essence in knowing it—a claim that calls to mind the claims of postmoderns such as Derrida to the effect that the word, and the word definitorily considered, is never the same²⁴—is or is not a real negation. If it is

²³ It is the loss of this epistemic grounding that on the one hand foreshadows the loss of the proportionate evidence that grounds the real distinction, and the swallowing up of this doctrine within theology as though it were merely a scriptural gloss or intra-theological *gestalt* rather than a naturally accessible truth; and, on the other hand, presages the failure to identify the anthropological import of the rational constitution of the human person. Many speculative paths cross here.

²⁴ Of course, the word definitorily considered is always in one sense different and even less than the word spoken. For the word spoken is in a different way than the word as *conceived*. The existential singularity of what we do always goes beyond the conceived universal “whatness” of our conception, just as the *actus essendi* goes beyond the essence actualized. This is a function of the ontological imperfection of creaturely intention and applies even to our thoughts (suppose we intend to think: but then we must wait to see *what* we actually will think). This manifests again that *the same* essence of the intention is in two ways, in one way conceived universally in the mind, and in another way in the very existential singularity of the act intended (even when this is a conceptual act—for the accidental being of

a real negation, then we must know upon what real evidence it is based. That is, we must know *how it is or can be known* that the mind generically deforms essence as a condition of knowing it. The affirmative precondition of the putative truth that our knowledge of essence is deformative and mutative seems to be a prior adequate knowledge of essence, but the very point of the negation under consideration is to deny the existence of such knowledge.

It is a commonplace of logic that proving the negative is the most difficult proof, and it is incumbent upon the one who claims that essence in physical things is as such not knowable to show that just as by the nature of “square” and “circle” a “square circle” is impossible, so by the nature of “essential nature” and “human knowledge” the “human knowledge of essential nature” is impossible. Further, any real reference to actual evidence by the one who denies all general knowledge of essence can be shown to entail affirmation of essence (formal defining features of *what* is actually being affirmed). In addition, such denial simply lacks any proportionate reason. For, were there no essential nature, then nothing could be known of anything (even accidents presuppose and are defined in relation to essence). Thus the claim that there is no essence amounts to a bad cognitive check which cannot be cashed or resolved into any appropriate evidentiary account.

The generic intelligibility of material essence is the precondition for particular real negations about essence. But the claim that the entire ontological category of essence is empty is equivalent to the claim that no real principle exists to correspond to our abstractive apprehension. This is for the denier to affirm his own actual ignorance of the nature of anything whatsoever, but from ignorance no real conclusion is implied save perhaps that to equate wisdom with ignorance is vain. At best, if one truly knows nothing, one cannot rationally draw any warranted conclusion—and this does not license the inference that knowledge is impossible. In point of fact, and notwithstanding the persistence of voluble

a thought or act of knowledge is *existentially* singular even though its nature qua abstracted object is universal rather than naturally limited and immersed in quantified matter). I am indebted for this profound and fecund insight to Dr. Thomas Sullivan of the University of St. Thomas, although the formulation in terms of the real distinction is my own.

deniers of essence, skeptics about the knowledge of essence do not fail to know that trees are not automobiles and that supernovas are not alligators. The cultivators of doubt about the generic knowability of essential nature do not lack all knowledge of the natures of things. Rather they merely indulge in an unwarranted negation which their own determinate affirmations suffice to contradict.

Abandoning the notion of essence as a real principle might make sense if real evidence could be brought that things lack a principle of intelligible structure which is also a principle of being. But the real evidence is that we natively seek—and persistently find—beings whose existence is specified and whose intelligibility is defined by essence. The generic intelligibility of material essence is presupposed to our detailed and oft-frustrated efforts to understand particular essential natures. Clearly essence determines and limits both the being of things and our inquiries concerning them.

The denial of essential nature is convertible with the claim that determinations pertain to nothing (for accidental determinations are defined in relation to essential ones). Thus the one who denies essential nature will have no reason to affirm either causal entailments or scientific explanations of any type.²⁵ It is the clearest indication of bad faith that those who deny the generic knowledge of essence exhibit by their actions a disbelief in their own denials: for clearly they act as though some judgments regarding essential nature are true, and some false (e.g., few such skeptics will act on the supposition that there is no essential distinction between mice and lions).

²⁵ Inasmuch as scientific reasoning implies inferences, the foundation of these inferences must be either intrinsic or extrinsic to what the inferences concern. But, if extrinsic, then the reason is found in relation to something else, and if this too is intrinsically indeterminate, and so on indefinitely, then no determinate ground of judgment can be founded. It will not help to claim that such determination is only accidental since this type of relation is defined by reference to the essential and the term is otherwise bereft of meaning. Hence the idea that all things might be “accidental” amounts to a denial of causal entailment as such, and by a short and swift route leads to the denial of scientific explanation. Just as efficient causality presupposes final causality—because if one thing is not ordered to a determinate end then what reason could there be either for the initiation or cessation of action?—similarly, efficient causality manifestly presupposes formal causality, for else there is nothing determinate to cause or to be caused.

Perhaps the most significant disputes regard *the manner in which* determinations are found in nature—what above is described as the question of the locus of determination—but such disputes presuppose that essential determinations do indeed exist in nature. One of the largest of such disputes lies between atomists—who limit essential nature to lowest common denominator objects—and more classical realists. In particular, Aristotelian and Thomistic realists refuse to reject the evidence of higher-level unities that comprise a greater synthesis in being and act, and which give evidence of a greater actual unity—evidence that more comprehensive forms by their nature possess the powers of lower forms in a more eminent manner.

But even reductionist, atomist, or pluriformist arguments presuppose that at some level the affirmation of essential determination is intelligible. Even should essence wrongly be thought only to pertain to lowest common denominator unities or micro-entities such as particles; or should the reality of higher and more comprehensive forms possessing the powers of lower forms in a higher manner be denied; even so, there is retained some (truncated) affirmation of essential nature. I make this point not to aver sympathy for either atomism or pluriformism, but rather to intimate the ineluctability of essence.

Anyone who is willing to affirm that there are determinations in nature and that not all of these are accidents has affirmed some real principle of essence. From this point forward, it remains only to determine how realistic the account of essence shall be. While it is on this point that atomists and pluriformists founder in comparison with the realism of St. Thomas's analysis, all must concur in rejecting the chimeric thesis of the generic unknowability of essence.²⁶

²⁶ Even the periodic table of the elements presupposes form, since one element is distinguished from another. Thus even were one to suffer the sad fate of being a reductionist it is not at all clear that one would win free of the implications of the *intellectus essentiae* argument, since one is still confronting the generic parts of essence—form and matter—and just as obviously these parts are not identical with existence. As for pluriformism, it fails not in failing to affirm form or essence, but in denying the real evidence that there are comprehensive essences that contain certain powers of lower beings in a higher and formally unified way.

If we do not embrace a pathologically unintelligible negation of the knowability of material essence as such but still wish to deny Thomas's teaching that the proper object of the intellect is quiddity in corporeal matter, we are left with some species of Platonism. That is, the remaining option would appear to be the simple denial that the proper object of the intellect is material essence as opposed to subsistent Forms or separated universals. While Thomas's analysis of the doctrine of Forms lies beyond the reach of this essay, it must be noted that those who seek knowledge of what some physical thing is are aware that they are seeking not a separate substance but rather to understand the essence or nature of the physical thing in question. And this already contains, in germinus, the arguments with which Aristotle and St. Thomas vindicate the possibility of genuinely terrestrial knowledge.

Thomas's doctrine does not suggest that we are comprehensors who intuitively read off the essences of things whole and entire with instantaneous knowledge of all essential notes. Rather, for Thomas, the generic adequation of mind to material quiddity enables us to grasp the formal parts of essence, the ontological limits of material being, and to inquire about particular material natures. But this last inquiry is prosecuted with only gradual success, and with many limitations and imperfections. The history of science appears to substantiate this realization of the limits and imperfections of our knowledge of physical things.

The very condition for the effort to know some particular nature thus is precisely the generic intelligibility of material quiddity. It is this generic intelligibility that delineates the target zone in relation to which the ebb and flow of hypothesis, falsification, and diverse types of confirmation may occur. This is a judgment of importance for natural philosophy and for philosophy of science. For the ontological categories which positive science empirically instantiates *illuminate* the instantiations, in a way similar to the manner in which substance is the principle of accidents. This is another way of saying that the four causes—including the final cause—are illustrated in the actual achievements and conduct of positive science, often even contrary to the intentions of the scientists themselves.²⁷ In any case,

²⁷ See here Etienne Gilson's fine work, *From Aristotle to Darwin and Back Again*, trans. John Lyon (Notre Dame: University of Notre Dame Press,

if we do not know what a target is, or deny the general intelligibility of there being a target, then neither the idea of hitting nor the idea of missing the target can make sense. This is the postmodern delusive muddle in which many thinkers—and perhaps even some medievalists—seem to be trapped, but for which no excuse is to be found in St. Thomas's analysis.

St. Thomas's argument that essence exists in two ways—in one way in the thing, and in another, in the mind—is not only the epistemic foundation for the *intellectus essentiae* argument, but a critical account of the nature of rational objectivity. This in turn implies an anthropological judgment that the human person has a power whose exercise is only extrinsically conditioned by any physical nature. For the power of objective cognition is one whereby an essential nature may be received in its totality in the *intentional* and not physical order. One does not become an elephant by knowing elephant nature: the power to know a nature universally is not a particular physical power.

The power to conform one's mind to whatsoever the evidence of nature is—which is required for objectivity—is defined in a way that excludes merely subjective material or physical determination. For physical or subjective material determination would preclude the possibility of measuring one's judgment by the evidence. If what determines my judgment of "X" is some particular subjective function or physical determination that serves as or causes a subtle cognitive material "copy" of "X"—and if "X" cannot otherwise be known—then there is no way to go to the object to check our judgments and objectivity disappears. Objectivity requires that the essence in the thing be the same essence which is known, and this formulation of essence existing in two ways demarcates an important theme for epistemology and philosophic anthropology.²⁸

1984), wherein he shows that the more systematically biological scientists have striven to abandon the teleological ordering of nature, the more thoroughly they end by presupposing and implicitly affirming this very notion.

²⁸ It might be thought that *ST* 1, q. 50, a. 2 somehow contradicts this emphasis. In this article St. Thomas argues that the intellect apprehends things in their own mode rather than in the mode of the things themselves, such that material things exist more simply in intellectual intention. But this is simply an inference from the principle that whatever is received is received

Of course, the importance of the *intellectus essentia* argument for the existential proof for God as *tantum esse* is manifest. The proposition that essence is in two ways (in the physical thing and in the mind), together with the *intellectus essentiae* argument for the real distinction to which it leads, engages the most central epistemic, anthropological and metaphysical issues of philosophy.

III. Conclusion

Karl Popper is famed for his view that the best theories are the most comprehensive in implications and hence both the most protean and the most easily “falsifiable.” Although he initially considered this to pertain only to positive science, he later came to admit that theoretical falsification could pertain to metaphysical theses (although he never wholly escaped the positivist legacy of placing certain unwarranted limits on the nature of metaphysics²⁹). Placing this Popperian consideration in its richest theoretical context, by its light St. Thomas Aquinas’s *intellectus essentiae* argument may be seen as an exceedingly rich theoretic analysis. Its myriad epistemic and ontological implications—

according to the mode of the receiver. As the receiver here is an immaterial principle, it receives its objects immaterially. The argument made by St. Thomas in *De Ente et Essentia* that essence is in two ways—in one way in the mind and in another in the thing—is entirely consistent with this point. One does not physically become an elephant in knowing elephant nature, and yet the elephant nature does exist in intellectual intention with all the accidents ensuing therefrom (such as species and genus) in a diverse mode from the way this *same nature* exists in individual elephants with all the accidents (quantification of matter, qualities, relations) ensuing from this mode of being.

²⁹ See Karl Popper, *Unended Quest: An Intellectual Autobiography* (London: Fontana, 1976). He seems to have restricted the realm of metaphysical knowledge to regulative theories governing the trajectory of research in, and conclusions from, positive science. Thus on this point he arguably was a casualty of the positivist temptation he otherwise so steadfastly avoided as there is no reason to concur in this unfounded restriction of the scope or adequacy of metaphysical knowledge. The intelligibility of being is implicitly presupposed by the intelligibility of being *propter quid* or in a certain respect, the intelligibility of *ens mobile* implicitly but really presupposes the intelligibility of *ens commune*.

which reach from philosophy of nature, philosophic anthropology, theory of knowledge, and philosophy of science to metaphysics and theology—merit great attention, detailed analysis, and high regard.

Thus, in conclusion, whereas the intuitivity of the *intellectus essentiae* argument often is frowned upon as demonstratively weak and inferior in profundity and rigor by comparison with other routes to the real distinction, *sed contra*: this argument clearly is presupposed by all the rest. Accordingly it befits it that it is of all such arguments for the real distinction the most intuitively accessible; that it occurs with prominence in the only introduction to metaphysics Thomas ever wrote in his own name; and finally that it provides the foundation for the demonstration of the universality of the real distinction of essence and existence throughout finite being, and thus provides the remote foundation for the demonstration of the dependence of all finite reality upon the unique and primary cause of being, the Creator God Who is *tantum esse, ipsum esse subsistens per se*. N V

MARITAIN, GILSON, AND FABRO ON KNOWLEDGE OF THE ACT OF BEING (*ESSE*)

Paul Gerard Horrigan, Ph.D., 2014.

Jacques Maritain,¹ Étienne Gilson,² and Cornelio Fabro³ have all written on knowledge of the act of being (*esse*).⁴ Jacques Maritain⁵ holds the position that we are able to have an intuition of *esse*.⁶

Étienne Gilson maintains that we do not strictly have a concept of *esse*, and that the act of being (*esse*) is grasped in the second operation of the mind, that is, in judgment (principally in judgments of existence, but also, as Wippel explains working on the studies of Gilson, in judgments of attribution⁷).

Wippel writes, explaining the position of Gilson, that “*esse* as used here signifies the actual existence of a thing. It is this which is captured through judgment. ...The verb ‘is’ as it appears in propositions is sometimes predicated in its own right, as when we say: ‘Sortes *is*.’ By this we wish to indicate that Sortes is in reality, i.e., that he actually exists. As Gilson develops this point, the verb ‘is’ often appears in what we may describe as existential judgments, or judgments of existence.”⁸ But, Thomas continues, on other occasions the verb ‘is’ is not

¹ J. MARITAIN, *Réflexions sur la nature blessée et sur l'intuition de l'être*, “Revue Thomiste,” 68 (1968), pp. 5-40.

² É. GILSON, *Propos sur l'être et sa notion*, in *Studi tomistici (III): San Tommaso e il pensiero moderno*, Rome, 1974, pp. 7-17.

³ C. FABRO, *La nozione metafisica di partecipazione secondo S. Tommaso d'Aquino*, S.E.I., Turin, 1963 ; C. FABRO, *Partecipazione e causalità secondo S. Tommaso d'Aquino*, S.E.I., Turin, 1963; C. FABRO, *Dall'essere all'esistente*, Morcelliana, Brescia, 1965 ; C. FABRO, *The Transcendentality of “Ens-Esse” and the Ground of Metaphysics*, “International Philosophical Quarterly,” 6 (1966), pp. 389-487 ; C. FABRO, *Notes pour la fondation métaphysique de l'être*, “Revue Thomiste,” 66 (1966), pp. 214-237.

⁴ Studies on knowledge of the act of being (*esse*): B. J. MULLER-THYM, *The ‘To Be’ Which Signifies the Truth of Propositions*, “Proceedings of the American Catholic Philosophical Association,” 16 (1941), pp. 230-254 ; R. J. HENLE, *Existentialism and the Judgment*, “Proceedings of the American Catholic Philosophical Association,” 21 (1946), pp. 40-52 ; R. W. SCHMIDT, *The Evidence Surrounding Judgments of Existence*, in *An Etienne Gilson Tribute*, edited by C. J. O'Neil, Bruce, Milwaukee, 1959, pp. 228-244 ; J. OWENS, *Aquinas on Knowing Existence*, “Review of Metaphysics,” 29 (1976), pp. 670-690 ; F. WILHELMSSEN, *Existence and Esse*, “The New Scholasticism,” 50 (1976), pp. 20-45 ; M. PAOLINI PAOLETTI, *Esse ut actus e giudizio d'esistenza: sulla riflessione metafisica di É. Gilson*, “Euntes Docete,” 63.1 (2010), pp. 191-215 ; M. PAOLINI PAOLETTI, *Conoscere l'essere: Fabro, Gilson e la conoscenza dell'actus essendi*, in *Crisi e destino della filosofia: Studi su Cornelio Fabro*, edited by A. Acerbi, EDUSC, Rome, 2012, pp. 157-172.

⁵ Studies on the intuition of being in Maritain: J. P. HITTINGER, *The Intuition of Being: Metaphysics or Poetry?*, in *Jacques Maritain: The Man and His Metaphysics*, edited by J. F. X. Knasas, American Maritain Association (AMA), Notre Dame, IN, 1988, pp. 71-81 ; J. F. X. KNASAS, *How Thomistic is the Intuition of Being?* in *Jacques Maritain: The Man and His Metaphysics*, edited by J. F. X. Knasas, American Maritain Association (AMA), Notre Dame, IN, 1988, pp. 83-91 ; E. MORAWIEC, *Intellectual Intuition in the General Metaphysics of Jacques Maritain*, Peter Lang, Frankfurt am Main, 2013.

⁶ Cf. J. MARITAIN, *Sept leçons sur l'être*, Paris, 1934, p. 52, 56, 66.

⁷ Cf. J. F. WIPPEL, *The Metaphysical Thought of Thomas Aquinas: From Finite Being to Uncreated Being*, CUA Press, Washington, D.C., 2000, p. 27.

⁸ See *Being and Some Philosophers*, pp. 200-201 as well as the citation and discussion of this text by Régis as reproduced by Gilson in the same source, pp. 218-220.

predicated in its own right as if it were the principal predicate, but only as joined to the principal predicate in order to connect it with the subject of a proposition. So it is when we say: 'Sortes *is* white.' In this case the speaker does not intend to assert that Sortes actually exists, but rather to attribute whiteness to him. As Gilson explains, such judgments may be described as judgments of attribution.⁹

"...Because truth arises in the intellect from the fact that the intellect is conformed to reality, it follows that in its second operation (judgment) the intellect cannot truthfully abstract what is united in reality. For the intellect to abstract (that is, to distinguish or divide) in this operation is for it to assert that there is a corresponding separation with respect to the thing's very *esse*. For instance, if I am speaking of someone who is actually white and separate human being from whiteness by saying 'this human being is not white,' my judgment is false.¹⁰

"In other words, Thomas is reminding us that truth in the strict sense arises at the level of judgment. Any composition or division effected by the intellect through judgment must correspond to a composition or division which obtains in reality if that judgment is to be true. While this point appears to be evident enough in itself, it is important to keep it in mind in the present discussion. If, as we are suggesting, Thomas holds that the intellect's second operation (judgment) is ordered to the *esse* of things and if this means their actual existence, one might conclude that such is the case only in judgments of existence. Thomas's text indicates that he same holds for judgments of attribution such as 'Sortes is white.' Even in such judgments there must be some reference to reality, or, as Thomas has put it, to the very *esse* of the thing in question. In fact, as Gilson has phrased it, in judgments of attribution 'is' has correctly been chosen to serve as a copula 'because all judgments of attribution are meant to say *how* a certain thing actually *is*.'¹¹

"...While the first operation (of the intellect) grasps the quiddity of a thing, the second (operation of the intellect) has to do with its *esse*. Because truth as such is grounded in *esse* rather than in quiddity, truth and falsity properly speaking are found in this second intellectual operation and in the sign of this same operation, that is, in the proposition.

"...It is through judgment that one grasps *esse* just as it is through judgment that truth, properly speaking, is realized. Throughout this discussion, therefore, Thomas has contrasted *esse* with nature or quiddity. And throughout this discussion, *esse* is said to be grasped by the intellectual operation we know as judgment. Since *esse* is contrasted with quiddity in this discussion, it seems clear that when it is so used it must signify actual existence. It is this which is grasped through judgment rather than through the intellect's first operation."¹²

Cornelio Fabro maintains, instead, that we only attain to existence (*existentia*) as result, existence as *fact* of being, in the second operation of the mind which is judgment, whereas the metaphysical principle of act of being (*esse* as *actus essendi*), the act of all acts and perfection of

⁹ For Gilson on judgments of attribution see *Being and Some Philosophers*, pp. 200, 190-191.

¹⁰ Cf. *In V Metaphy.*, lect. 9, p. 239, nn. 895-896.

¹¹ É. GILSON, *Being and Some Philosophers*, Pontifical Institute of Mediaeval Studies, Toronto, 1952, p. 200.

¹² J. F. WIPPEL, *op. cit.*, pp. 25-28.

all perfections, is obtained by way of an “intensive reflection”¹³ of a metaphysical *resolutio-reductio*.¹⁴

For Fabro, “the authentic notion of Thomistic participation calls for distinguishing *esse* as act not only from essence which is its potency, but also from existence which is the *fact* of being and hence a ‘result’ rather than a metaphysical principle.”¹⁵ Fabro explains that “‘existence’” must be distinguished from the Aquinate’s “*esse* as act not only from essence which is its potency, but also from existence which is the *fact* of being and hence a ‘result’ rather than a metaphysical principle.”¹⁶

Fabro writes: “*Knowledge of esse*. Some modern authors hold that the Thomistic concept of *esse*, as an act of being in the strict sense, is seized by the mind in the act of judgment or in the synthesis of subject and predicate (F. Sladeckzek, K. Rahner, M. D. Roland-Gosselin, J. B. Lotz). They do this because they do not distinguish between *existentia* as an empirical datum (*essentia in actu*) and *esse* as a most intimate and profound constitutive principle: the first is accessible to experience and expresses itself in the judgment, whereas the second reveals itself only to the most advanced metaphysical reflection. *Existentia*, therefore, is affirmed either through a judgment of perception that attains the present singulars or through demonstration by means of a principle of causality or of similarity (*per signum*). Essence is known by abstracting the universal from particulars, based on an induction that is a function of the cognitive power influenced by the intellect and above all by the principle of contradiction; thus it expresses itself through definition and through judgment in the formal order of ‘nature considered in itself.’ The activity that unveils *esse* in Thomistic metaphysics has a unique character and could be called a *resolutio* that is proper to metaphysics. When St. Thomas attributes to simple apprehension the knowledge of material essences through abstraction and assigns the *ipsum esse rei* to the second act of the mind (*In Boeth. De Trin.* q. 5, a. 5), he is speaking of an *esse* that pertains to the ontological, logical, and phenomenological orders, and not strictly of the *esse* that in God is His essence and in creatures is a substantial act distinct from essence and the effect of God Himself.

“...Just as the apprehension of *ens* underlies the perception of reality, the apprehension of *esse* as metaphysical act presupposes existential perception as much as intuition and abstraction, and is located at the apex of their convergences. It is obtained, for St. Thomas, by recourse to argumentation; this, however, is purely revelatory, bringing to light the originality of *esse* or demonstrating the real distinction between *esse* and essence in creatures and their identity in God. It is a ‘dialectical’ kind of knowledge to the extent that *esse* as such is act and not content; thus the apprehension of *esse* occurs ‘by emergence,’ whereby the concept of act is approached as a first principle and foundation, and so reveals the ultimate stage of agreement between intellect and reality.”¹⁷

¹³ Cf. C. FABRO, *Nozione metafisica di partecipazione*, “Avvertenza,” 3rd edition, S.E.I. Turin, 1963, p. viii.

¹⁴ Cf. C. FABRO, *Dall’essere all’esistente*, Morcelliana, Brescia, 1965, p. 66.

¹⁵ C. FABRO, *The Intensive Hermeneutics of Thomistic Philosophy: The Notion of Participation*, “The Review of Metaphysics,” 27 (1974), pp. 470-471.

¹⁶ C. FABRO, *op. cit.*, p. 470.

¹⁷ C. FABRO, *Existence*, 1967, p. 724.

Echoing Fabro's gnoseology of our knowledge of the act of being (*esse*), Llano writes the following concerning knowledge of *esse*: "*Esse* does not appear to us in its pure state, but rather as the act of a being, and we perceive it according to the mode in which the concrete being is perceived, in dependence upon sense experience.

"In the beginning, the act of being of things is known only in a superficial and confused way. Somehow, it is grasped in this initial starting point; if it were not given to us in some way, we could never get to know it explicitly. After a process of reduction – in which we go from what is founded to its foundation – we get to know the *esse ipsum* as the radical act of a being.

"The reduction of the diversity of the real to the (analogical) unity of being (*esse*), is achieved by a dynamic reference to its foundation, which goes beyond logical unity based on mere conceptual abstraction. This is not a process of intuition, nor of deduction, but an analytic process of *foundation*. From the most superficial and variable acts we transcend to the most profound and permanent acts. And thus, we reason from act to act (accidents, to substantial form, to act of being), until we achieve being-as-act, the ultimate foundation of everything."¹⁸

Fabro explains that "the metaphysical determination of *esse* as *actus essendi* in the sense of act of all acts, is proper to Aquinas and constitutes the transcendental foundation of the metaphysics of participation. This has been discovered by the strictly metaphysical method of resolution or reduction (*per resolutionem* or *per reductionem*), as Aquinas often calls it, of accidental predicamental acts to substantial form and of both accidental and substantial acts to the more profound substantial act which is *esse*. It has also been discovered by the method of the absolute reduction of the act of being by participation to the *esse per essentiam*."¹⁹

Jason Mitchell describes Fabro's method and structure of metaphysical reflection – the *resolutio* – an inductive analysis towards knowledge of the intensive notion of *esse*, as follows: "In general, Fabro uses the term '*resolutio*' to refer to the movement of reason in metaphysics from *ens* to *esse*, from the initial notion of *ens-esse* to the 'intensive notion' of *esse*. Fabro argues that the intensive notion of *esse* is not obtained by abstraction or apprehended in an intuition. Metaphysical *resolutio* does not consist in judgment, but rather in argumentation and dialectical reflection. It involves demonstration, but is not limited to demonstration...

"*Initial notion of being*. Metaphysical reflection presupposes an initial notion of *ens* common to all. Fabro certainly has the merit of emphasizing the non-abstractive character of our first notion and of arguing that this *primum cognitum* is best characterized as being obtained through an apprehension. *Ens* is apprehended as a synthetic notion which implicitly 'includes' both essence and *esse*.

"...*Phenomenological reflection*. Phenomenological reflection on reality, substance and causality provides the basis for subsequent philosophical distinctions. This reflection affirms the unity of substance as both subject and essence; that the notion proper to causality is that of

¹⁸ A. LLANO, *Gnoseology*, Sinag-Tala, Manila, 2001, pp. 115-116.

¹⁹ C. FABRO, *The Intensive Hermeneutics of Thomistic Philosophy: The Notion of Participation*, "The Review of Metaphysics," 27 (1974), p. 486.

dependence, and that essence (obtained by abstraction) is irreducible to existence (affirmed in judgment).

“Philosophical reflection. Philosophical admiration urges us to address the problem of movement, change and multiplicity. Accidental change and accidental multiplicity are explained by means of the distinction between substance and accidents and between potency and act. Substantial change is explained by the distinction between prime matter and substantial form. The notion of univocal-predicamental, formal-notional participation is used to explain the participation of an individual in a species and the species in a genus.

“The beginning of metaphysical reflection. Metaphysical reflection proper begins when the philosopher comes to an initial, *metaphysical notion* of *ens-esse*. According to Fabro, this notion is obtained by surpassing the problem of movement and reflecting on the varying degrees of perfection in the beings that surround us. In this way, the philosopher passes from the problem of physical contrareity to that of metaphysical contrareity. In this way, Fabro’s proposal on the constitution of the *genus subiectum* of metaphysics is very similar to J. Aertsen’s: the *genus subiectum* of metaphysics is not constituted through a negative judgment on the separability or materiality of being, but rather by means of a continual analysis of mobile being (Aertsen) or of the principles of movement *sub ratione entis* (Fabro).

“Metaphysics and the methodological notion of being. In the intermediate stage of metaphysical reflection, which concerns the ‘methodological-structural notion of *ens-esse*,’ two important problems are affronted: the first concerns the argument for the real composition of essence and *esse* in the created substance. In the solution to the first, the created substance is seen to ‘participate’ in *actus essendi*, which, in turn, is limited and determined by the form or essence as potency-principle. In the solution to the second problem, the principles ‘*forma dat esse*’ and ‘*forma est causa essendi*’ are interpreted to mean that the form exercises a ‘formal causality’ (determination, specification and limitation), and not an efficient causality (production of act; reduction of potency to act) on *actus essendi*. Both problems – that of the real composition and that of form’s causal influence on *esse* – lead to that of transcendental causality.

“The twofold passage to the intensive notion of being. Fabro’s twofold resolution is based on the distinction he makes between formal resolution-reduction and real resolution-reduction: the former concerns the creature’s essence and the participation of pure perfections (*vivere et intelligere*) in *esse*; the latter concerns the real, constitutive principles of created *ens* and the foundation of the creature’s participated *actus essendi* on *Ipsum Esse Subsistens*. Fabro bases the distinction on St. Thomas’s commentary on Book Five of Dionysius’s *De Divinis Nominibus*, lect. 1, n. 635. The first resolution culminates in a dialectical reflection on the relationship between *esse*, *vivere*, and *intelligere*: ‘Whatever participates in *vivere* first participates in *esse*’ (*esse* appears as foundation); ‘Something participates in *intelligere* to the degree that it participates in *esse*’ (‘intensive’ notion of *esse*). In contrasting ‘formal resolution’ with ‘real resolution,’ Fabro is not contrasting the ‘irreal’ with the ‘real,’ but rather isolating the participations proper to the species, the genus and to the perfections ‘*vivere*,’ and ‘*intelligere*’ from the participations proper to accidents, substance, matter, substantial form, essence and *esse*. The former resolution ends in the formal, intensive notion of *esse ipsum* as formal plexus of all perfections; the latter ends in the understanding of created, participated *esse* in its causal

relationship to *Ipsum Esse Subsistens*. Thus, it is in the final stage of metaphysical reflection that the ultimate, analogical, intensive notion of *esse* is obtained.”²⁰

²⁰ J. MITCHELL, *Being and Participation: The Method and Structure of Metaphysical Reflection According to Cornelio Fabro (summary article)*, Pontifical Athenaeum Regina Apostolorum, Rome, 2010, pp. 6-8.

Philosophical Concepts in Consciousness: Transcendental in Dynamics

ABSTRACT: In this paper the autopoietic model of consciousness is employed to analyze dynamic being of philosophic concepts. It will be demonstrated that this being consists in permanent transformation within human mind. The autopoietic model of consciousness presupposes that consciousness builds itself anew in each moment of its duration, *durée*. It doesn't rest in immobility, but persists in becoming, and so maintains permanent assimilation and production of new meanings. Autopoiesis is viewed as a process of simultaneous loss and acquiring by creative consciousness of its identity. To keep identity for consciousness means to change without cease, i.e. to lose it to some extent. A living human – empirical subject – that is subject possessing unique attributes: corporality, biographic situation, psychological and physiological features, individualized, different from others by his opportunities and abilities, belongs in a peculiar way to transcendental in E. Husserl's sense of "pure flow of consciousness as such". The concept of transcendental imagination is introduced to analyze phenomenon of imagination in respect of its contribution into being of philosophical concepts apart from numerous psychological characteristics of imagination.

KEYWORDS: autopoiesis, system, consciousness, creativity, philosophic concept, transcendental imagination

1. Autopoietic consciousness conception

Every consciousness is autopoietic. It means that in each moment of its duration – its *durée* – it builds itself up anew. It doesn't rest in immobility, but persists in becoming. Autopoiesis (Greek *αυτος* – self + *ποιησις* – production, creation) is a biological concept, elaborated for living systems in 1973 by H. Maturana and F. Varela. Autopoiesis is a self-creation of a system, including reproduction of its borders and therefore its unity. Varela himself applies the model of autopoiesis to consciousness so constructing a processual dynamic model of consciousness.

In philosophical context autopoiesis is viewed as a process of simultaneous loss and maintenance of its identity by creative consciousness for it must

Philosophical Comprehension of Culture and Human Essence*

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Abstract—The authors of the article consider the duality of a human being and his relationship with culture. Based on the historical and philosophical material, the authors come to the conclusion that man is a biological being by nature and a socio-spiritual, i.e. cultural, being by essence. At the same time, the emphasis is made on the importance of social interactions that beget an individual as homo sapiens. Culture, man, society are being formed in the process of spiritual comprehension, a transcendence of existence (M. Heidegger, M. Mamardashvili), resting on religious symbols, metaphysical concepts, and creativity in art. In this regard, the definition of man as a biosocial being seems to be insufficient, for he is a socio-cultural, spiritual entity. There is no one outside culture and society in the foundation of which is the symbol-making activity of consciousness (Ernst Cassirer and M. Mamardashvili).

Keywords—spiritual cognition; culture; human nature; transcendence; social interactions; the origin of man; symbol-making activity

Human culture is not something given and taken for granted,

but it is a miracle that needs interpretation [1].

Ernst Cassirer

I. INTRODUCTION

Man, as a socio-spiritual being is a product of culture: he is creating it and he is being formed by it. In this context, society is defined as a part of the world, isolated from nature but still closely related to it. Only by distinguishing self from the other, from nature, man and society may embrace their specificity as it was profoundly expressed by N. Berdyaev: "Spirit is freedom, not nature" [2]. If biology, archeology, anthropology, paleontology and other sciences study the origin of man as a biological species, then philosophy seeks to comprehend his socio-spiritual origin. Metaphysics, philosophical anthropology, cultural studies, and other philosophical disciplines do exactly that.

The concept of culture can be considered in a variety of

scopes and possible implementations. But first, let's touch on etymology which will help to reveal the concept's meaning. As you may know, "culture" comes from Latin "cultivation" and was primarily used in the economic sphere, hence "cultivation" — bringing soil to a state where it could produce the best possible crops. Later the term was applied to culture — "cultivation of spirituality". The Russian philosopher Pavel Florensky provides one more view: he tried to derive the word's "culture" etymology from "cult", considering the latter as a matrix of culture from which all its species grow. Although the known etymology doesn't confirm this hypothesis, it is pretty much close to the truth since a primitive man's Weltanschauung was entirely religious.

Man is different from nature exactly by culture, by the production of material and immaterial goods. Culture is what nature isn't. In this regard, spiritual culture may be described as a certain sphere of activity that arose for the creation and distribution of spiritual values as a result of the social division of labor. The varying set of values, symbols, ideas, and meanings determines each culture. The function of values is to protect and preserve the integrity of a social group. Let's consider the relationships among culture, sociality, and human nature.

II. THE IMPORTANCE OF CULTURE AND SOCIAL RELATIONS

The three following Hominidae traits are used to biologically distinguish a human being: bipedal locomotion, more complex brains, and developed hands. According to Aristotle, "the hand is a tool of tools" [3], although similar takes had been made by the preceding philosophers, most probably, by Democritus. Later Hegel, before Charles Darwin and F. Engels, stressed the erect posture "serving as an expression of man" with hand being "the absolute tool". Hegel's thoughts on this subject are peculiar and profound:

"Man does not hold himself erect naturally but stands upright by the energy of his will... A hand is something peculiar to man alone; no animal has such a tool directed outward. The hand is a tool of tools and it can serve as an expression of an infinite manifestation of will" [4].

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However, many animals can also move on two limbs (a rooster, e.g., can even stand on one leg but it doesn't evolve into a human being). It is possible to find apes with a larger brain volume and with highly developed extremities. Therefore, it may be concluded that the biological prerequisites are important for the formation of culture and humans but they alone are insufficient. Moreover, all biological preconditions may be available with the lack of social interactions that creates man. So, the essence of social interaction is not what connects a person with the animal kingdom but what distinguishes. Let's highlight the essential cultural and social traits that form social interactions:

- Professional life, labor, use of tools, especially those artificially created;
- The use of language as a conscious way of communication and the development of writing;
- Thinking and reason;
- Consciousness and self-consciousness, Weltanschauung, and hence, purposeful activity.

So, a full set of the abovementioned qualities is at the heart of culture and social interactions. These qualities are not present in an individual from the moment of birth but are rather being acquired, i.e. are possible only on condition of interaction, communication. Social interactions represent a special integrity, formed as a result of joint life of people, their labor, usage of tools, especially artificial ones, presence of language, thinking, reason and consciousness; social interactions are the air we breathe but don't see, thanks to which we lead human and not animal life. The development of biological basis is their prerequisite, necessary but insufficient, and the essential features of social interactions being formed only as a result of the historical development of a community. Exactly within the framework of social interactions culture is being formed and man is being allocated. Hegel took into account natural biological factors and put spiritual ones forward. Spirit is realized to the greatest extent in man, society, state, and global history: "Man is made by thought... that he is the spirit" [5].

III. NATURE AND HUMAN ESSENCE

Immanuel Kant, one of the predecessors of modern cultural studies and philosophical anthropology, believed that man belongs to two worlds at once: to the speculative (noumenal) world by his spiritual and moral existence, and to the empirical (phenomenal) world by his physical existence [6]. Indeed, everyone can discover that a person, while remaining an integral being, is internally differentiated, consisting of soul (consciousness) and body. Let's not argue about their nature but let's note that due to the presence of what we have called "soul" an individual cannot be completely reduced to a biological species. Despite the fact that a person doesn't exist without a body, it doesn't represent human essence. It is a mere substrate, with human essence confined in the soul, or, to put it in a contemporary way, in consciousness and self-consciousness.

In this regard the origin of man is also dual: it is possible to consider both the origin of the body and the origin of the soul. Although these processes are closely interrelated, they are not identical because they are not equal. It's necessary to suggest the following description of this relation: man is a biological being by nature, and socio-spiritual, i.e. cultural, in essence. Exactly cultural factors define a human being. Biology is important just as the formation of a person's material basis. But no matter how well that basis is developed, it is unable to produce an individual in the full meaning of the word. Our point is confirmed by a simple fact that if a child at the very early age is excluded from the social environment, it will never become a full-fledged person, learn how to articulate speech and numeracy, despite the impressive brains volume and developed hands. A human being is characterized by a values-based attitude to reality, while an animal does not separate itself from nature. People transform reality in accordance with their constantly developing needs, create the desired material and spiritual benefits and values, and create a kind of "second nature" — culture.

Thus, the definition of a human as just a biosocial being seems insufficient. If people are talking about a person in the proper sense, i.e. they strive to stress his distinctive features, his essence, then it would be more correct to define a human as a socio-spiritual or socio-cultural being.

Cultures, spiritual sphere in society and soul make human, distinguish him from the animal world, and society from the herd. If spirituality and morality don't develop, the solely technological progress can only lead mankind to downfall since it won't be able to reasonably, wisely, and morally use its potential, destroying itself in a thermonuclear war or in a global ecological catastrophe.

Aristotle defined man as a political, i.e. social, being, and K. Marx saw the human essence in social interactions, based and depending on economics. In the 20th century, there emerge a number of peculiar directions of philosophy considering the issue of the human essence. Ernst Cassirer argued that a human being is a "symbol-making animal". According to the philosopher, language, myth, religion, art, history and even science are the "symbolic forms", invented by man, explaining him the world and creating culture. Therefore, the human essence is spiritual but that spirit isn't coming from some external forces but is rather the result of the consciousness' symbol-making activities. The whole culture is a system of symbols; man generates spiritual phenomena — symbols, and they generate man.

The philosophy of existentialism denies the human essence as something static and predetermined (A. Camus, J-P. Sartre). The essence opposes existence, as a result of which a person can create himself, he doesn't exist as a given, as an object. Man is a project, a desire to be an individual, and if there's no such, then there's nobody. In other words, man creates himself in his own image and after his own likeness. The 20th-century psychoanalyst Erich Fromm called a man an eccentric creature. According to Karl Jaspers, "Man cannot be deduced from anything else" for he "cannot

be understood as someone "evolved" from animals". Man "is presented to himself by transcendence" [7].

In the 20th century, philosophical anthropology emerged, scrutinizing an individual as an incomplete creature constantly creating itself through the world of culture (Max Scheler, Arnold Gehlen, etc.). Also, a new science of cultural anthropology came into living, studying the cultural basis of human nature. In recent decades, a general theory of culture (culture studies) was formed, which includes theoretical aspects of cultural anthropology. Philosophy, being the apex of culture, seeks to reveal the essence of culture.

IV. SPIRITUAL CULTURE AND HUMAN ESSENCE

Going deeper into the concept of culture, it's needed to note that its broad interpretation says little about the spiritual activity of an individual. Therefore, there's a more narrow and specific meaning of culture, coinciding with the modern use of the term. In this case, culture is considered just as a spiritual culture, i.e. the sphere of creation of ideas, ideals, symbols, meanings, and values — all that refers to nonbiological and non-economic forms of human activity's management.

Let us put into the spotlight this concept of culture and point out its constituent elements. They are philosophy, religion, art, morality, and science. However, the place of these types of spiritual activity in culture is not equally weighted. On the periphery of culture there is scientific knowledge, for it doesn't realize the actual spiritual needs of a person but his material needs: "...the reliance only on the scientific knowledge will never make a person more humane as humanity is born from the eternal search for the meaning of life, unfathomable by a purely scientific thinking. Spirituality and morals do not depend on the degree of mastering the results of scientific research and studies" [8]. But science is still a part of the spiritual culture as scientific activity can be dominated by the cognitive interest which is entirely the phenomenon of spirit. Growing to the degree of knowledge for the sake of knowledge, science morphs into philosophy. As it turns out, knowledge for the sake of knowledge, just as art for the sake of art, may bring a person the greatest spiritual benefit, meaning, and satisfaction.

Morality, following the science, is also on the periphery of spiritual activity, for it is its product. Morality is something that "precipitates out" as a result of spiritual knowledge, carried out in the spiritual forms of self-cognition — religion, philosophy, and art. Thus, we have encountered an even more specific meaning of a person's spiritual activity, forming the culture itself. Meanwhile, philosophy, religion, and art are not equal. But we may set the difference among them not on the basis of their values, as they're invaluable for culture, but from the standpoint on the difference in the methods of spiritual activity. Thus, e.g., only philosophy and religion may be attributed to systematic forms of spiritual cognition, because they are built upon theoretical provisions expressed in a conceptual form, while art is not theoretical in its nature and is divided into separate types with specific means of creativity.

However, spiritual knowledge cannot be identified with the following spheres of its implementation — philosophy, religion, and art. The spiritual phenomenon in them may also be alienated and externalized. The actual spiritual activity in philosophy is philosophizing, faith in religion, creation of artifacts and the expression of spiritual ideas in art.

In culture, spiritual knowledge is defined by special "symbolic constructions", e.g., a symbol of self-denying love or pure faith, etc. Mamardashvili emphasizes that "faith is impossible as a real psychological state of any human being. Just as unselfish love is impossible. And yet we live in a dimension, permeated with these symbols, producing in us human traits". Philosophy, like religion, refers to such "symbolic constructions", special "forms" [9].

Examples of cultural activity are imprinted in the mankind's spiritual history, yet everyone, in order to become cultural and spiritual, must discover them inside and for himself by introducing self, first of all, to philosophy, spiritual tradition, and art. An individual is called to enrich himself with a variety of spiritual knowledge, and only then it is possible to avoid both religious fanaticism and militant atheism, which are equally hostile to culture and spirituality as they use violence.

The paramount life problem for a person is himself. Cognition of nature, society, other people — all these are tools of self-cognition and self-realization of an individual who is incomparably richer than his time, the era in which he lives — he can carry the wealth of the entire world culture. A person himself may be ignorant of the endless wealth and bliss inside.

V. CONCLUSION

Man is a part of nature and at the same time is a product of culture, inextricably linked with society. The biological and social origins are fused together. As a biological being, a person belongs to the higher mammals, which is evidenced by anatomy, physiology, and instincts; yielding to animals in the development of individual organs, humans surpass them in potential. Human biological properties are not rigidly determined which makes it possible to adapt to different living conditions. Biology in human doesn't exist in a pure form, it is culturally and socially determined. The social influence is noticeable even in genetics, e.g., in acceleration.

Human position in the world is such that he finds himself in the act of self-consciousness as a being that contains contradictions within and moves in them. Their essence lies in the fact that a person is crucified in a way between two worlds; empirical and ideal, sensual and speculative, he is both spiritual and material being. This human position reflects religion in its fundamental dogmas and philosophy in its concepts mainly through the symbol of the fall from grace and through the category of being and essence.

Philosophy as metaphysics appears in the form of "creativity laboratory of a human being" [10]. Because of it, a person is able to "fall" out into a different, meaningful, moral regime of existence. Mamardashvili defines this

process, which people can exercise only in own effort, as "actual genesis". He tends to expose this process through moral categories highlighting conscience which is elusive and indeterminate but is a condition for the existence of morality. According to him, "nature doesn't give birth to people", they are artificial creatures. Therefore, for a person to occur as a cultural entity, it's necessary to have a crucible (constituting device) in which he could be smelt. In this sense, an individual is "an artificial being, which gives birth to him by the process known as history and culture". Condensed, the process is carried out and comprehended by metaphysics, religious or philosophical, using for this purpose certain symbols and ideas about "higher objects" [11] and "other worlds" (F. Dostoyevsky).

M. Mamardashvili wrote, "Nothing human may exist by itself; it must be constantly renewed. Human effort cannot exist without a metaphysical element in a human being. In this sense, a metaphysical element, or metaphysics, is physical, that is, constitutive in relation to man and culture. He is one or another depending on metaphysics" [12]. According to Heidegger, a human is a metaphysical being. However, the contemporary Western culture has lost faith in the transcendent, as stated Hegel, Nietzsche, and Heidegger.

Philosophy, anthropology and cultural studies, stemming from it, study the spiritual, social human "origin". Biology and other sciences cannot ask the correct questions as human essence, just as a culture, are ultimately the product of the transcendence of existence (M. Mamardashvili, M. Heidegger). It is impossible to derive morality from naturalistic ideas because the former is the product of the spirit's work and not the result of the struggle of the species and natural evolution.

[12] Ibid., P. 19.

REFERENCES

- [1] E. Cassirer, "The Logic of the Cultural Sciences" in *Selected Works. The Experience of a Person*. M.: Gardarika, 1998, P. 9.
- [2] N.A. Berdyaev, "The Realm of Spirit and the Realm of Caesar". M.: Respublica, 1995. P. 215.
- [3] Aristotle, "On the Soul" in *Works: in 4 Vols. Vol.1*. M.: Mysl, 1976. P. 440.
- [4] G.W.F. Hegel, "The Encyclopedia of the Philosophical Sciences in Outline": in 3 Vols. M.: Mysl, 1977. Vol. 3. PP. 212-213.
- [5] G.W.F. Hegel, "Lectures on the Philosophy of Religion". In 2 Vols. M., 1975. Vol.1, P. 205.
- [6] I. Kant, "The Conflict of the Faculties". Kaliningrad: Iz-vo KGU, 2002, P. 174.
- [7] K. Jaspers, "Philosophical Faith," in *The Origin and Goal of History*. Moscow: Republic, 1994, PP. - P. 448-451.
- [8] O.V. Chistyakova, "On the possibility of a synthesis of secular and religious values in the context of modern humanitarian knowledge" in *Proceedings of the 4th International Conference on Education, Language, Art and Inter-Cultural Communication (ICELAIC 2017)*. *Advances in Social Science, Education and Humanities Research, Volume 142*. Paris: Atlantis Press, 2017. P. 750.
- [9] M.K. Mamardashvili, "Phenomenology: An Attendant Element of Any Philosophy" in *The Way I Understand Philosophy*. Moscow, 1990, P. 100.
- [10] M.K. Mamardashvili, "Experience of Physical Metaphysics". Moscow: Progress-Tradition Publisher, 2008, P. 31.
- [11] Ibid., PP. 16-17.

SCOTUS ON MIND AND BEING: TRANSCENDENTAL AND DEVELOPMENTAL PSYCHOLOGY

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SUMMARY: 1. *Thomas Aquinas*. 1.1. *Critique of Deus ut primum cognitum*. 1.2. *Proper Object and First Object(s) of the Intellect*. 2. *Henry of Ghent*. 2.1. *Proper Object*. 2.2. *God as First Known and the First Object(s) of the Intellect*. 3. *Duns Scotus*. 3.1. *The Three First Objects and Primary Object as Adequate Object*. 3.2. *Primary Object in the Order of Generation*. 3.3. *Scotus's Transcendental and Developmental Psychology*.

[...] Thomas faciens illud argumentum deceptus fuit per hoc quod non distinxit inter cognoscere aliquid confuse et distincte et distinctum. Verum enim est quod cognoscere aliquid confuse, scilicet minus universale, est medium inter ignorantiam puram et cognitionem eius distinctam, et sic cognitio alicuius confusa prior est cognitione eius distincta. Sed propter hoc non sequitur quod cognitio confusi, id est magis universalis, sit prior cognitione distincti, id est minus universalis, nisi loquendo de cognitione distincta [...] ¹

[...] sic dicunt quod Deus est primum cognitum, quia cognitio nostra naturaliter procedit ab indeterminato ad determinatum, ex I *Physicorum*. Quanto igitur aliquid est indeterminatius, tanto prius a nobis naturaliter cognitum; sed illud quod est 'indeterminatum negative', est magis indeterminatum quam illud quod est 'indeterminatum privative'; cum ergo Deus sit indeterminatus negative – et similiter quidquid attribuitur Deo, est indeterminatum negative – sequitur quod est Deus primum cognitum a nobis cognitione naturali. ²

As we can see from these brief citations, Duns Scotus approaches issues related to mind and being in a context provided by two of the major figures in thirteenth century philosophy, Henry of Ghent and Thomas Aquinas. If we

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¹ B. IOANNIS DUNS SCOTI, *Quaestiones super secundum et tertium De anima*, ed. T. Noone et al., in *Opera Philosophica*, q. 16, n. 27 (St. Bonaventure, N.Y./Washington, D.C.: Franciscan Institute/ CUA Press 2006), p. 154. Hereafter the edition of the *Opera Philosophica* will be cited simply as "OPh" followed by volume and page number.

² IOANNIS DUNS SCOTI, *Lectura*, I, d. 3 pars prima q. 2, n. 14, in *Opera omnia* (Civitas Vaticana: Typis Polyglottis Vaticanis 1960), XVI, pp. 228-229. Hereafter the Vatican edition will be cited simply as "ed. Vat." followed by volume and page number.

reflect in turn upon how these two figures summed up much of the thinking found in contemporaries and predecessors – in the case of Henry we find traces of William of Auvergne, Guibert of Tournai, and St. Bonaventure, while in the case of Thomas Aquinas, we find elements in common with Parisian arts masters and Albert the Great –, we may readily gauge the extent to which Scotus is framing his discussion of the proper object of the human mind against the received tradition on the relationship between mind and being. What interests us here is how Scotus's own theory may be understood against this immediate background, which provides the target for his criticisms as well as many of the positive elements or structures that he appropriates. But viewing Scotus's thinking only in reference to Thomas and Henry would not do full justice to his views: much of what he has to say becomes only fully intelligible when we realize how he is the beneficiary of an on-going discussion within the thirteenth century regarding how our intellectual knowledge progresses, a discussion that plays itself out in arts masters' commentaries on the first book of Aristotle's *Physics* and *De anima* as well as in disputed and quodlibetal questions by theologians. Unfortunately, limitations of space will not permit a broad survey of this rich material.

Nonetheless, even within the limits set us, the right place to begin for us is with the earlier views on the *primum cognitum* found in Guibert of Tournai and its critique by Thomas Aquinas; systematically considered, the views we shall first examine are only part of medieval developmental psychology, but an extremely important part since these efforts are bound up with the more familiar themes of abstraction and illumination in the area of medieval epistemology. What exactly do I mean by the term 'medieval developmental psychology'? I mean the efforts on the part of medieval philosophers to trace out how our intellectual knowledge of the world progresses. Obviously, part of the explanation advanced by any given medieval thinker will assume his own account of the interrelation between our various cognitive faculties, i.e., the contribution of the senses, internal and external, the imagination, the role played by the agent intellect and the role if any assigned to intelligible species. But what is of more interest to us is how the temporally first objects of our intellectual awareness relate to the knowledge of the world that we eventually achieve and the process that leads to our success in knowing the world.

Given that the target of our study is Duns Scotus and his manner of explaining the development of our intellectual knowledge, we shall be much concerned, as Scotus himself is, with the theories of Henry of Ghent. Fortunately, we are the beneficiaries of two outstanding studies treating Henry of Ghent that make Henry's role in our tale relatively easy to tell.³ Much of

³ M. PICKAVÉ, *Heinrich von Gent über Metaphysik als erste Wissenschaft: Studien zu einem Metaphysikentwurf aus dem letzten Viertel des 13. Jahrhunderts*, «Studien und Texte zur Geistes-

what I shall say here regarding Henry and the figures influencing Henry is simply a summary of the findings of Prof. Martin Pickavé and Prof. Wouter Goris. But regarding the background to Guibert of Tournai in Grosseteste's thought, I have added some points of interest and differentiation. Regarding the interpretation of Henry's doctrine of being as *primum distincte cognitum*, I think I have indicated how his thought relates to but advances beyond that of Thomas and how his ideas either reflect or are reflected by ideas found in certain masters of arts. Finally, regarding Scotus himself, though several excellent studies have been devoted to his theory of intelligible species and to his epistemology, no study has identified correctly the precise background to his concept of habitual knowledge of being, a notion that proves essential to understanding his claims about how our intellectual knowledge actually develops.

The thesis of the present paper grows out of this historical study of the background for Scotus's use of habitual knowledge and it may be stated quite briefly. The notion that our actual intellectual knowledge begins with the concept of being, however that notion may be related to the proper object of a given thinker, is found in both Thomas and Henry with the further claim that all of our knowledge of the world, whether of the other transcendentals or of categorical items, is mediated by this first intellectual apprehension of being. Conversely, some of the arts masters on the *Physics* as well as other thinkers had suggested that the actual starting point of our intellectual knowledge is physical substances and their specific natures and that our knowledge proceeds from these items to the transcendental notions or being as such, which are the objects of metaphysical science.⁴ Scotus, in what is likely his first treat-

geschichte des Mittelalters», bd. 91 (Leiden/Boston: Brill 2007), esp. 170-179 and W. GORIS, *Absolute Beginners: Der mittelalterliche Beitrag zu einem Ausgang vom Unbedingten*, (Leiden/Boston: Brill 2007).

⁴ Richard Clive (teaching arts around 1275-80; subsequently, a theologian at Oxford ca. 1285-90) would be an example. Clive distinguishes between the properly universal, which he identifies as understood, signified, and understood by the intellect, and the improperly universal, which he identifies as the confusum which is the general that exists apart from any act of mind. See Then he writes: «His suppositis, respondendum est quaestioni. Nota etiam quarto quod singulare dicitur duobus modis: proprie et improprie. Proprie nominat quid signatum, improprie speciem specialissimam, I Physicorum. Accipiendo universale proprie et singulare proprie, prius est singular cognitioni nostrae absolute. [...] Cognitionem absolute voco quae est communis cognitioni sensitivae et intellectivae; sic loquitur Aristoteles de universali libro De anima - a singulari enim fit abstractio universalis. Si universale et particulare improprie accipiantur (accipitur [universale] improprie pro eo quod est quid rei), sic non habent comparisonem respectu nostrae cognitionis, quia sic universale non sentitur nec intelligitur, quia circumscribit operationem intellectus - et hoc loquendo de universali de genere substantiae. In genere tamen accidentium habent comparisonem ad intellectivam, ad sensitivam vero non, quia sic singulare sumptum improprie est proprie

ment of these issues in the *QDA*, initially distinguishes between two orders of knowledge, confused and distinct, arguing that in the order of confused knowledge we know first the *species specialissima* of the item that most strongly moves the sense, but in the order of distinct knowledge we know being first and it is through the knowledge of being that we come to distinct knowledge of anything we do know distinctly. But, crucially, this leaves him with a difficulty regarding how it is possible for our mind to pass from the temporally prior state of confused knowledge to the temporally later but naturally prior state of distinct knowledge, given that he does not permit the concept of being to be known in such a way that it could be revised or known confusedly. The thesis argued for here is that the device of habitual, rather than actual, knowledge of being allows for a presence of being as actually intelligible in the intellect from the outset of our knowledge; it is to this habitual, though distinct, knowledge of being that our intellect turns to begin the process of distinct cognition of the items previously confusedly known. Problems remain for Scotus's theory, of course, but the problems occur in regard to other features of his overall view of our knowledge of transcendental concepts and how they function in the way that they do in our progressive intellectual understanding of the world.

1. THOMAS AQUINAS

1. 1. *Critique of Deus ut primum cognitum*

When we approach Thomas Aquinas's commentary and questions upon Boethius's *De Trinitate*, we find questions related to our theme at the beginning of the text. Aquinas divides the first question, concerned with human knowledge of divine things, into four articles: 1) whether in knowing truth the human mind needs some new illumination (*nova illustratione*); 2) whether we can come to know God; 3) whether God is first known (*primum cognitum*); and 4) whether the human mind can come to know the Trinity.⁵ In the first article, Thomas contrasts what he deems to be the correct position with that of Avicenna who allowed only a passive power to the human intellect; consequently,

universale. Sic comparando universale et singulare improprie dicta ad intellectum, sic prius intelligit singulare. Prius enim intelligit hominem quam hoc animal, quia hoc animal non intelligit nisi per reflexionem» (R. CLIVE, *Quaestiones super Physicam*, I, q. 19 a 'Utrum magis universale sit prius minus universali', [Worcester, Worcester Cathedral Library, Q. 13, f. 82 va]). I would like to thank Dr. Silvia Donati, of the Albertus Magnus Institute, Bonn and the Thomas Institute, Koeln for making available to me her transcriptions of Richard Clive and numerous other arts masters' writings on the first books of the *Physics*.

⁵ SANCTI THOMAE DE AQUINO, *Super Boetium De Trinitate*, in *Opera omnia*, t. 50, cura et studio fratrum Praedicatorum (Roma/Paris: Commissio Leonina/Les Éditions du Cerf 1992), q. 1, ed. cit., 80 a.

the Islamic philosopher had to posit an external source for the actuation of the human intellect in a separate substance that Thomas here names *intellectus agens*, though elsewhere more correctly *intelligentia agens*.⁶ According to Thomas's own construal, the more Aristotelian and more Scriptural view is to grant the human mind an active as well as a passive power and thereby to render the natural cognitive powers of the human soul, both sensitive and intellectual, sufficient for knowing the entire range of natural truths.⁷ While Thomas allows so much independence for the human mind, he also insists, perhaps in response to the criticisms of St. Bonaventure's *De scientia Christi* q. 4, that God's activity remains necessary for the human intellect to realize its own activity of knowledge.⁸ After this denial of the need for any new light regarding our knowledge of natural knowable truths, Aquinas turns in the following article to our knowing God, though this in part means, too, determining what humans are capable of knowing in principle. The human intellect, at least according to its functions in the present life, is delimited to knowing sensibles and the forms taken from sensibles; hence it cannot know the divine

⁶ THOMAS AQUINAS, *Super Boetium*, q. 1, art. 1 (ed. Leonina, 50: 81b – 82a). Cfr. AVICENNA, *Liber de anima seu sextus de naturalibus*, ed. S. Van Riet (Louvain/Leiden: Éditions Orientalistes/E.J. Brill 1968), pp. 126-127: «Dicemus quod anima humana prius est intelligens in potentia, deinde fit intelligens in effectu. Omne autem quod exit de potentia ad effectum, non exit nisi per causam quae habet illud in effectu et extrahit ad illum. Ergo est hic causa per quam animae nostrae in rebus intelligibilibus exeunt de potentia ad effectum. Sed causa dandi formam intelligibilem non est nisi intelligentia in effectu, penes quam sunt principia formarum intelligibilium abstractarum. Cuius comparatio ad nostras animas est sicut comparatio solis ad visus nostros, quia sicut sol videtur per se in effectu, et videtur luce ipsius in effectu quod non videbatur in effectu, sic est dispositio huius intelligentiae quantum ad nostras animas. Virtus enim rationalis cum considerat singula quae sunt in imaginatione et illuminatur luce intelligentiae agentis in nos quam praediximus, fiunt nuda a materia et ab eius appendiciis et imprimuntur in anima rationali, non quasi ipsa mutantur de imaginatione ad intellectum nostrum, nec quia intentio pendens e g multis (cum ipsa in se sit nuda considerata per se), faciat similem sibi, sed quia ex consideratione eorum aptatur anima ut emanet in eam ab intelligentia agente abstractio».

⁷ «Unde sicut aliae potentiae activae naturales suis passivis coniunctae sufficiunt ad naturales operationes, ita etiam anima habens in se potentiam activam et passivam sufficit ad perceptionem veritatis... Sic ergo sunt quaedam intelligibiles veritates ad quas se extendit efficacia intellectus agentis, sicut principia quae naturaliter homo cognoscit, et ea quae ab his deducuntur; et ad haec cognoscenda non requiritur nova lux intelligibilis, sed sufficit lumen naturaliter inditum» (THOMAS AQUINAS, *Super Boetium*, q. 1, art. 1 [ed. Leonina, 82^o]).

⁸ «[...] Deus nos interius docet in naturalibus cognitis, quod lumen naturale in nobis causat et ipsum dirigit in veritatem; in aliis vero etiam novum lumen infundendo» (THOMAS, *Super Boetium*, q. 1, art. 1, ad 2, 82 b). «In hoc ergo continue Deus operatur in mente, quod in ipsa lumen naturale causat ut ipsum dirigat, et sic mens non sine operatione primae causae in operationem suam procedat» (*ibidem*, 83 a: pp. 230-234). See below for the reference to Bonaventure's texts.

essence. Instead, we are confined to knowing God by his effects. But such knowledge, too, needs to be qualified; some effects are proportioned to their causes and yield isomorphic results regarding the essences of their causes, but others are disproportionate to their causes and yield little beyond telling us about the existence of the cause. The sensible things are of the latter type, yielding only knowledge that God exists and no knowledge of the divine essence. Knowledge, however, of the existence of something can be greater and less, so Aquinas outlines a hierarchy of knowledge of a cause through effect: a) knowledge of how the effect proceeds from the cause ; b) knowledge of likeness of the cause in the effect; and c) knowledge of how the effect falls short of the cause. The highest knowledge we can achieve in the present life is the last, that is the knowledge of God that comes through knowing how much creatures fall short of Him. The proportion of God to our intellect is by way of the proportionality of the creature to God as effect to cause.⁹

The third article turns to the possibility that God would be the first thing known by our intellect. The opening arguments set up the problem clearly: God should be the first thing known if, for example, the first thing known is the item in which all other things are known or if, following Avicenna's dictum, we hold the more simple and prior are first known; the alternative, however, seems to be evident from the origin of our knowledge in the senses and the fact that our thinking must begin with what is posterior rather than what is prior by nature. At the outset of his reply to the article, Thomas mentions the views of certain thinkers who think that God is the first thing known even in the present life. As Goris has argued,¹⁰ the view being called into question is, in all probability, that of Guibert de Tournai. This becomes evident when one compares the way Aquinas describes the function of God as being the first truth and that through which all other things are known (*qui est veritas prima, et per hoc omnia alia cognoscuntur*) to the claims of Guibert that in the creature God is first known and all things through Him (*Quod in creatura Deus primo ab intelligentia advertitur et sic in eo quodammodo cetera cognoscuntur*). Aquinas' reply is to critique the view theologically by arguing that the opin-

⁹ THOMAS AQUINAS, *Super Boetium*, q. 1, art. 2 (84 b-85 b).

¹⁰ W. GORIS, *Die Anfänge der Auseinandersetzung um das Ersterkannte im 13. Jahrhundert; Guibert von Tournai, Bonaventura und Thomas von Aquin*, «Documenti et studi», 10 (1999), pp. 363-364. The original text of Guibert is found in C. BERUBÉ et S. GIEBEN, *Guibert de Tournai et Robert Grosseteste: Sources inconnues de la doctrine de l'illumination suivi de l'édition critique de trois chapitres du Rudimentum doctrinae de Guibert de Tournai*, in *S. Bonaventura: 1274-1974* (Grottaferrata (Roma): Collegio S. Bonaventura 1973), pp. 627-654. The pointer in the direction of Guibert was first given in F. RUELLO, *La doctrine de illumination dans le traité Super librum Boethii De Trinitate de Thomas d'Aquin*, «Recherches de science religieuse», 64 (1976), pp. 341-357. Ruello prefers to see Guibert in the second opinion listed by Aquinas and in the first opinion cited by Thomas the view of Grosseteste.

ion has difficulty distinguishing between our current knowledge of God and the beatific vision. A second opinion is listed by Aquinas as related to the first but this opinion holds that the divine influence is what is first known and, in this mitigated sense, God is first known. Goris has argued that certain of Guibert's texts may underlie the view that Thomas describes here,¹¹ but this is not clear; the wording of Aquinas may be deliberately vague and meant perhaps to include figures such as Bonaventure, as Goris also notes. Bonaventure, however, would strenuously object to having his claim that we reach the divine light in our certain knowledge reduced to meaning our knowledge is rooted only in a divine influence. In any event, Thomas interprets the claim to mean that we know the light of our minds prior to knowing any particular thing and that in this sense all things are known through God and his divine influence. Thomas's rejection of this second position is based on the standard Aristotelian position that self-knowledge must ultimately be grounded on the knowledge of something else as naturally (and perhaps temporally) prior to knowing the knowing self.¹²

Thomas's rejection of the *Deus ut primum cognitum* hypothesis is accompanied by his own reflections upon what the actual *primum cognitum* is. Thomas himself proposes a distinction between one sense of *primo cognitum* as relating to the different powers of the senses and the intellect, and another sense of *primo cognitum* as bearing upon the objects of a single power, such as intellect. Regarding the first sense of what is first known, the sensible singular is the *primo cognitum* since our intellects are sense-dependent and the activities of the senses are prior to the activity of the intellect. In regard to the second sense of first known, specifying the first object known in reference to the intellect as a distinctive power, we must say that the prior objects are those abstracted by the agent intellect from the phantasm and the first of these are the ones that first occur to the intellect in its abstraction:

¹¹ W. GORIS, O. C., pp. 365-366. *Ibidem*, p. 361, n. 23, cites BONAVENTURA, *De scientia Christi*, q. 6 (ed. Quaracchi, V, 34 b): «[...] ad cognitionem cuiuscumque creaturae perfectam et certitudinalem concurrit non tantum lucis aeternae praesentia, sed etiam lucis aeternae influentia[...]». But the point Bonaventure is making there is that the finite human mind contributes something to certain knowledge and that is what is included under 'lucis aeternae influentia', as the continuation of the quotation shows: «[...] non tantum Verbum increatum, verum etiam verbum intus conceptum; non tantum sapientia aeterna, verum etiam notitia animae impressa; non tantum veritas causans, verum etiam veritas informans». In a word, the divine influence is on the creaturely side of these analogies, though perhaps Goris means that this text provided an occasion for Thomas's supposed misreading. In any event, Bonaventure is quite clear that he does not mean that we attain only a divine influence in our certain intellectual knowledge: *De scientia Christi*, q. 4 (ed. Quaracchi, V, 23 a-b) listing just such a position as one of the two incorrect extremes against which he proposes his own view as a middle way.

¹² THOMAS AQUINAS, *Super Boetium*, q. 1, art. 3 (87 a-b).

The agent intellect, moreover, does not render forms separated from matter intelligible, which are rather intelligible in their own right, but instead it renders intelligible forms that it abstracts from phantasms, and, accordingly, things of this sort are those that our intellect first understands. And among these, those are prior that first befall the intellect in its abstraction; these, moreover, are the ones that encompass many other items, either as a universal whole or as an integral whole. That is why the more universal are the first things known to the intellect and items that are composed prior to their component parts, and the item defined prior to the parts of its definition. And in this regard, there is a certain imitation of the intellect by the sense, which also in a way receives items separated from matter, so that even in sense cognition the more common items within the singular are known first; for example, 'this body' is known prior to 'this animal'.¹³

A natural consequence of this is that God cannot be the first item known, but rather He must be an item that we are acquainted with through knowing other things. In the same vein, Thomas denies that there is a strict parallel between knowledge and being such that God is the first object of our mind; God may be the first in the order of intelligibles absolutely speaking, but He is not the first in the order of intelligibles for us («[...] *Deus sit in ordine intelligibilium primum simpliciter, non tamen est primum in ordine intelligibilium nobis*»).¹⁴ What is even more telling from our point of view is that Thomas argues in his reply to the third objection that, along the lines Avicenna suggests, the first items arising from the abstraction of the phantasms are the first items known, such as being and unity.¹⁵ Though Thomas has emphasized here the need for our intellectual knowledge to begin with the senses and the phantasm, there is no formal treatment here of the proper object of the intellect, but rather of the order of origin or ideogenesis. If we turn to the *Summa theologiae*, we find the topics of proper object and order of origin treated in close proximity and it is to this text, a proof text used often by Scotus, that we now address ourselves.

¹³ «[...] intellectus autem agens non facit intelligibilia formas separatas, quae sunt ex ipsis intelligibiles, sed formas quas abstrahit a phantasmatis; et ideo huiusmodi sunt quae primo intellectus noster intelligit. Et inter haec illa sunt priora, quae primo intellectui abstrahenti occurrunt; haec autem sunt quae plura comprehendunt: vel per modum totius universalis, vel per modum integralis; et ideo magis universalia sunt primo nota intellectui, et composita componentibus, ut definitum partibus definitionis. Et secundum quod quaedam imitatio intellectus est in sensu, qui etiam quodammodo abstracta a materia recipit, etiam apud sensum singularia magis communia sunt primo nota, ut hoc corpus quam hoc animal» (THOMAS, *Super Boetium*, q. 1, art. 3, 87 b). Cfr. AVICENNA, *Liber primus naturalium: tractatus primus de causis et principiis naturalium*, ed. S. Van Riet (Louvain-la-Neuve/Leiden: E. Peeters/E.J. Brill 1992), I c. 1, ed. Van Riet, p. 11).

¹⁴ THOMAS AQUINAS, *Super Boetium*, q. 1, art. 3, ad 2 (88 a).

¹⁵ *Ibidem*, q. 1, art. 3, ad 3 (88 a).

1. 2. *Proper Object and First Object(s) of the Intellect*

Though Thomas treats the object of the intellect in several places, the 'classic' place for the early reception of his teaching was the *Summa theologiae* I q. 84 and q. 85. In some ways this is an unfortunate circumstance, inasmuch as, even within the prima pars of the *Summa theologiae*, Thomas sometimes hints that being or being as given in material things is the object of the intellect.¹⁶ If we turn to *Summa contra gentiles* and the *Sententia de anima*, we find texts claiming that 'quod quid est' is the object of the intellect,¹⁷ and this, too, would seem to be a different position than the one usually ascribed to Thomas by Scotus.¹⁸

The texts taken as normative and guiding for the interpretation of Thomas's views on intellect are understood as follows. Thomas's discussion of the human cognition as placed in an intermediary position within the extremes of angelic cognition, on the one hand, and sense cognition, on the other, is taken as giving a reason why the object of the human intellect is intermediate and thus material quiddity prescinding from individuating matter, as opposed to subsistent form and form as existing in corporeal matter.¹⁹ This is viewed as the metaphysical or cosmological principle behind the explicit statement of *Summa theologiae* I q. 85 art. 5:

¹⁶ «Primo autem in conceptione intellectus cadit ens, quia secundum hoc unumquodque cognoscibile est, in quantum est actu, ut dicitur in IX Metaphy. Unde ens est proprium obiectum intellectus et sic est primum intelligibile, sicut sonus est primum audibile» (IDEM, *Summa theologiae*, I, q. 5, art. 3 corp [ed. Leonina IV 58a]): «Ad primum ergo dicendum quod obiectum intellectus est commune quoddam, scilicet, ens et verum, sub quo comprehenduntur etiam ipse actus intelligendi. Unde intellectus potest suum actum intelligere. Sed non primo; quia nec primum obiectum intellectus nostri, secundum praesentem statum, est quodlibet ens et verum, sed ens et verum consideratum in rebus materialibus [...], ex quibus in cognitionem omnium aliorum devenit» (*ibidem*, q. 87, art. 3, ad 1 [ed. Leonina, V, 361 b]).

¹⁷ «Item, proprium obiectum intellectus est quod quid est: unde circa hoc non decipitur intellectus nisi per accidens, circa compositionem autem et divisionem decipitur; sicut et sensus qui est proprius semper est verus, in aliis autem fallitur» (THOMAS AQUINAS, *Summa contra Gentiles*, lib. 1, cap. 58, n. 5 [ed. Leonina, XIII 165 b]). «Et huius rationem assignat quia quod quid est est proprium obiectum intellectus, unde, sicut visus nunquam decipitur in proprio obiecto, ita nec intellectus nunquam decipitur in cognoscendo quod quid est [...]» (IDEM, *Sententia libri De anima III*, c. 5 [ed. Leonina XLV.1 227 b]).

¹⁸ For an excellent summary, emphasizing the complexity of Thomas's position, see M. PICKAVÉ, *Heinrich von Ghent*, cit., pp. 135-139 and J.A. AERTSEN, *Aquinas and the Human Desire for Knowledge*, «ACPQ», 79/3 (2005), pp. 428-429.

¹⁹ THOMAS AQUINAS, *Summa theologiae*, I, q. 85, art. 1 corp (ed. Leonina, V, 330 b – 331 a). The same interpretation as Scotus advances may be seen in R. MARSTON, *QQ. disp. de anima*, q. 2 (BFS, VII, 231-232).

But since the human intellect proceeds from potency to act, it bears a likeness with generable things that don't have their perfection all at once, but acquire it over time. And so, too, the human intellect does not get a perfect awareness of a thing at first, but first it grasps something about it, namely the quiddity of a thing, which is the primary and proper object of the intellect and thereafter understand properties, accidents, and the attendant features of a thing.²⁰

If we return to the theme of what is first known, we find many similarities to what we have already noticed in Thomas's *Commentary on the De Trinitate* of Boethius. In *Summa theologiae* I q. 85 art. 3 where the question is 'whether our intellect naturally knows what is more universal first', Thomas refers to both the universal whole and the integral whole and distinguishes between what is first in the order of the sense and what is first in the order of the intellect. Several new features are introduced. The key text of Aristotle's *Physics* that prompts extensive discussion of this issue in *Physics* commentaries is referred to twice in the body of the question. Furthermore, after pointing out that, given the dependence of our intellects upon our sense powers, the singular is the first known, Thomas emphasizes the progressive nature of our knowledge:

Secondly we must consider that our intellect proceeds from potency to act. But everything that passes from potency to act first reaches the state of incomplete act, which is between potency and act, before reaching complete act. The complete act, however, that the intellect reaches is complete scientific knowledge, through which things are distinctly and determinately known. Incomplete act, in this case, is imperfect knowledge through which things are known indistinctly under a certain confusion. Whatever is known in this fashion is known qualifiedly in act and in a way in potency. That is why, the Philosopher tells us in I *Physics* that certain manifest and confused things are known to us at first, but later we know by distinguishing clearly their principles and elementa.²¹

²⁰ THOMAS AQUINAS, *Summa theologiae*, I, q. 85, art. 5 [ed. Leonina, V, 341 a]: «Cum enim intellectus humanus exeat de potentia in actum, similitudinem quandam habet cum rebus generabilibus, quae non statim perfectionem suam habent, sed eam successive acquirunt. Et similiter intellectus humanus non statim in prima apprehensione capit perfectam rei cognitionem; sed primo apprehendit aliquid de ipsa, puta quidditatem ipsius rei, quae est primum et proprium obiectum intellectus; et deinde intelligit proprietates et accidentia et habitudines circumstantes rei essentiam» (THOMAS AQUINAS, *Summa theologiae*, I q. 85 art. 5 [ed. Leonina, V 341a]). But the text that is being used to control this one, it seems to me, is IDEM, *Summa theologiae*, I, q. 88, art. 3 corp. (ed. Leonina, V, 368 b): «Primum autem quod intelligitur a nobis secundum statum praesentis vitae, est quidditas rei materialis, quae est nostri intellectus obiectum, ut multoties supra dictum est».

²¹ «Respondeo dicendum quod in cognitione nostri intellectus duo oportet considerare. Primo quidem, quod cognitio intellectiva aliquo modo a sensitiva primordium sumit. Et quia sensus est singularium, intellectus autem universalium, necesse est quod cognitio

The use of 'elements and principles' in reference to Aristotle's text shows that Aquinas still has in mind the view of it that is commonly found in earlier commentators on the *Physics*, such as Albert the Great,²² who, inspired by Averroes's commentary, interpret Aristotle as speaking of sensible wholes as items of our first acquaintance and the things known later as the elements and principles that are revealed by the investigations of natural science.

Here, however, Aquinas means to make a point parallel with certain other commentators on the *Physics* who wonder about the connection between this Aristotelian passage and the *universaliora* of our knowledge that are supposed to be known first according to the dictum of Avicenna at the beginning of his *Metaphysics*.²³ Thomas, too, as we saw in the *De Trinitate* commentary associates the *totum universale* at least with the notions of being and unity. He makes his point in general terms within this text, deliberately arguing that the *confusum* is to be understood as referring to either a universal whole or an integral whole and in both cases the whole in question is known initially confusedly:

It is clear, moreover, that knowing something containing many items without having a proper knowledge of each of them is knowing something under a certain confusion. But it is in just such a fashion that both a universal whole, in which parts are contained potentially, and an integral whole can be known; for each whole can be known in a certain confusion without their parts being distinctly known. To know what is contained in a universal whole distinctly involves having knowledge of the less universal item, as, for example, knowing animal indistinctly is knowing animal as animal, but knowing animal distinctly involves knowing animal as rational or irrational and this is to know human and lion. Accordingly, it first befalls our intellect

singularium, quoad nos, prior sit quam universalium cognitio. Secundo oportet considerare quod intellectus noster de potentia in actum procedit. Omne autem quod procedit de potentia in actum, prius pervenit ad actum incompletum, qui est medius inter potentiam et actum, quam ad actum perfectum. Actus autem perfectus ad quem pervenit intellectus est scientia completa, per quam distincte et determinate res cognoscuntur. Actus autem incompletus est scientia imperfecta, per quam sciuntur res indistincte sub quadam confusione. Quod enim sic cognoscitur, secundum quid cognoscitur in actu, et quodammodo in potentia. Unde Philosophus dicit, in i physic., quod sunt primo nobis manifesta et certa confusa magis; posterius autem cognoscimus distinguendo distincte principia et elementa» (THOMAS AQUINAS, *Summa theologiae*, I, q. 85, art. 3 [ed. Leonina, V, 336 a]).

²² ALBERT, *Phys. lib. I*, tr. 1 c. 6 (ed. Coloniensis, 12 b: 56-60).

²³ For an example of an arts master concerned about the same issues arising from Avicenna, see PSEUDO-SIGER OF BRABANT (Petrus de Auvergne?), *Quaestiones super libros Physicorum*, I, q. 6 (ed. Philippe Delahaye, *Les Philosophes Belges*, t. 15, pp. 26-27). Cfr. AVICENNA, *De prima philosophia*, I, c. 5 (ed. AviL, pp. 31-32): «Dicemus igitur quod res et ens et necesse talia sunt quod statim imprimuntur in anima prima impressione, quae non acquiritur ex aliis notioribus se».

to know animal than human, and the same pattern holds if we compare any more universal notion to a less universal notion.²⁴

The epistemological point at the heart of this passage is that all of our knowledge (sense and intellectual as Thomas points out later) begins with confused knowledge of wholes and works towards articulate and distinct knowledge of each of these wholes. No exception is made regarding any difference between generic notions such as animal and transcendental notions such as being and unity; they are both put on the level of being universal wholes that are initially confusedly known and then known distinctly through knowing their parts or defining elements. As we shall see, Scotus's main criticism will consist precisely in what he deems to be an essential difference between the cases of generic/specific notions, on the one hand, and transcendental notions, on the other.

Schematically presented, Thomas's view amounts to the following claims as it is presented here in key texts of I ST q. 84-88:

- 1) The proper object of our intellect is the quiddity of material things, which function as the primary and proper objects of our understanding.
- 2) The first thing known about the quiddity of any thing known are the transcendental notions of being and unity and it is through these that other features of the quiddity of the thing come to be known.
- 3) These 'first knowns' are themselves not distinctly known, but known in a confused manner.

Several questions of clarification might be appropriately asked about Aquinas's claims. First, should claim 1) be taken to mean that the target of our awareness initially is a given thing's quiddity, not its essential features taken in their specificity? That would be the most plausible interpretation, but then the claim that the quiddity is first known needs to be qualified. Second, in claim 2) exactly how do the transcendental notions function in helping to bring us to knowledge of the quiddities of species and genera? Third, are these first notions themselves known as objects of awareness and then the other things

²⁴ «Manifestum est autem quod cognoscere aliquid in quo plura continentur, sine hoc quod habeatur propria notitia uniuscuiusque eorum quae continentur in illo, est cognoscere aliquid sub confusione quadam. Sic autem potest cognosci tam totum universale, in quo partes continentur in potentia, quam etiam totum integrale: utrumque enim totum potest cognosci in quadam confusione, sine hoc quod partes distincte cognoscantur. Cognoscere autem distincte id quod continetur in toto universali, est habere cognitionem de re minus communi – sicut cognoscere animal indistincte est cognoscere animal in quantum est animal, cognoscere autem animal distincte est cognoscere animal in quantum est animal rationale vel irrationale, quod est cognoscere hominem vel leonem. Prius igitur occurrit intellectui nostro cognoscere animal quam cognoscere hominem, et eadem ratio est si comparemus quodcumque magis universale ad minus universale» (THOMAS AQUINAS, *Summa theologiae*, I, q. 85, art. 3 corp. [ed. Leonina, V, 336 a-b]).

through them, or do they function after the manner of intelligible species as pure media of awareness, not themselves known? Fourth, regarding claim 3) how is being confusedly known? There does not seem to be a wider notion in reference to which we could know being vaguely and then better. Nor does it seem obvious that Thomas would want to argue that our notion of being improves through our knowing what falls in its purview. These problems will be noticed by Scotus, but the proximate object of Scotus's criticism will be Henry's theory.

2. HENRY OF GHENT

2. 1. *Proper Object*

The teaching of Henry of Ghent on the proper object of the human mind is found in its briefest and perhaps clearest presentation in his *Summa* art. 34 q. 3 in a question devoted to resolving the issue of whether truth is in God absolutely in reference to His essence or relative to His intellect. Henry takes the occasion of posing this question to treat the nature of truth as related to intellect in general, including human intellect. Following Aquinas's observation²⁵ that there exists an analogy between our knowledge of complexes or propositions, which are traceable back to the first principles, and our awareness of simples that relate to being, Henry argues our awareness of simples or concepts may be traced back to being. It may seem, accordingly, that being is the object of the intellect, but, for Henry, this is not quite true; being does not, of itself, determine or specify the aspect of the intelligible, something that the transcendental 'verum' does. Hence, to be precise, we must say that truth or the true is the feature under which the intellect apprehends things:

For the reasoning power of the intellect may only discern what can fall under its apprehension, but the notion of being does not determine any feature of apprehensibility or non-apprehensibility by the intellect in terms of its own content, just as it does not determine sensible or non-sensible, [...] accordingly, the feature of apprehensibility must be added to the notion of being so that it may be determined to the intelligible, whereby being has a relation to the intellect as capable of moving the intellect and in such a fashion that the feature of being apprehensible by the intellect would not exist were being incapable of taking on such a determinate feature [...]. This feature, moreover, is that from which the name 'true' or 'truth' is imposed and it

²⁵ «Dicendum quod sicut in demonstrabilibus oportet fieri reductionem in aliqua principia per se intellectui nota, ita investigando quid est unumquodque, alias utrobique in infinitum iretur, et sic periret omnino scientia et cognitio rerum; illud autem quod primo intellectus concipit quasi notissimum et in quod conceptiones omnes resolvit est ens, ut Avicenna dicit in principio suae Metaphysicae; unde oportet quod omnes aliae conceptiones intellectus accipiantur ex additione ad ens» (THOMAS AQUINAS, *Quaestiones disputatae de veritate*, q. 1, art. 1 corp. [Ed. Leonina, 22.1.2, 4 b – 5 a]).

adds to being in such a way that true is nothing other than being as capable of assimilating or adequating or declaring itself to the intellect, either actually or habitually [...]. And so the notion of being does not include from its very meaning the notion of the true, the intelligible, or the feature of rendering itself manifest to the intellect, but rather the reverse is the case: the notion of the true includes the notion of being. For, although the first concept of the intellect, as an object, is the notion of being, even being is only conceived under the notion of the true; and even though the notion of the true is the first means of conceiving, it is not, however, the first item conceived. For, in terms of an object, that which is being as being is the first concept and thereafter the true as, however, containing being in itself. But in terms of disposing the power and as the formula according to which something is conceived as an object, the true is the first means of conceiving and it alone, as was said above, encompasses all being, both itself and all the other properties of being, for being, true, good, beautiful, and all the remaining features of being are only conceived under the notion of the true.²⁶

Henry is clear here in this part of the *Summa* that what true adds to being is a relational feature since it makes being bear upon the intellect. We might well characterize the position as holding that being of itself is indeterminate, but true adds the determination that makes being available to intellect, while good adds the determination that makes being desirable by will.²⁷

²⁶ «[...] Nihil autem est nata ratio intellectus distinguere, nisi in quantum cadit vel natum est cadere, sub eius apprehensione, ratio autem entis non determinat in re aliquam rationem apprehensibilis ab intellectu vel non apprehensibilis, sicut neque sensibilis aut non sensibilis, [...] oportet igitur quod super rationem entis, ut determinetur ad rationem intelligibilis, sit ratio apprehensibilis, qua ens respectum habet ad intellectum ut motivum intellectus, ita quod ratio entis apprehensibilis ab intellectu non esset, nisi huiusmodi rationis in se esset susceptibilis [...]. Haec autem ratio est illa a qua imponitur hoc nomen 'verum' sive 'veritas', et addit eam super ens, ut verum nihil aliud sit quam ens assimilativum vel aequativum vel declarativum eius quod est apud intellectum, et hoc vel actu vel habitu, secundum quod habet perfectiorem vel minus perfectam rationem veri, ut amplius patebit in sequenti quaestione. Et sic ratio entis non includit ex suo nomine rationem veri intelligibilis vel declarativi sui apud animam, sed e converso ratio veri includit rationem entis, quia, licet primus conceptus intellectus obiective sit ratio entis, non tamen concipitur nisi sub ratione veri, et licet ratio veri sit prima ratio concipiendi, non tamen est ratio quae primo concipitur. Obiective enim et ut concipitur, id quod est ens, in quantum est ens, primus conceptus est, et deinde verum, ut tamen ens in se includit. Dispositive autem et ut ratio secundum quam concipitur id quod obiective concipitur, verum est prima ratio concipiendi, et sola, ut dictum est supra, ita quod circuit totum ens, et se ipsum et omnes rationes entis, quia nihil concipitur nisi sub ratione veri, neque ens, neque verum, neque bonum, neque pulchrum, neque aliquod ceterorum» (HENRICUS GAND, *Summa*, a. 34, q. 3 in corp. [AMPh, s.2, xxvii, pp. 191-192]).

²⁷ HENRY OF GHENT, *Quodlibeta*, III, q. 14 (f. 68 rZ-70 rC).

2. 2. *God as First Known and the First Object(s) of the Intellect*

Henry's position on the proper object of the intellect may have had some influence, but his views on God as first known were widely discussed and often received favorably.²⁸ The most important text in this regard is to be found in Henry's *Summa* in art. 24 q. 7 and, given its discussion by Richard of Mediavilla in the first book of his *Sentences* and its criticism on the part of the Dominican Bernard of Trillia during the middle of the 1280s,²⁹ we may safely say that the position was well known among contemporaries by the end of the 1280s at the latest.

The issue that Henry is treating in the section of the *Summa* of concern to us is the knowability of God. Wishing to argue, contrary to the claims of Thomas, for the possibility of a quidditative understanding of God, Henry elaborates a quite impressive account of how, in different respects, we know what God is prior to rational investigation of the question of whether God exists and have even more positive knowledge of God at the term of our argumentation. The question that concerns our inquiry, however, is what the primary object is in the order of time or, if you wish, in the process of our knowledge. To this question, Henry has two distinct answers. In the order of indeterminate knowledge and at the basis of all our knowledge of any sort, God is the first thing known, as we can see from the following text:

Therefore since our mind naturally conceives first what is indeterminate prior to the determinate [...] our mind in understanding any good thing at all understands in it naturally first the good undetermined by negation; this is the good that is God. And just as this is the case with the good, so with all the other properties understood about God from creatures. We should say then, absolutely speaking, that within the scope of the most general manner of understanding what God is in reference to its first two degrees, what God is is the first object that has to be understood on the part of the human intellect from creatures. This happens in such a manner that nothing can be known in or from creatures (that is the true, the good, the beautiful, the just, being, unity or something determinate of this sort existing through matter or a supposit) can be understood unless something is understood already, though sometimes temporally simultaneously, naturally prior, that is simply and indeterminately true, good, beautiful, being, unity, and so on. The result is that in God Himself there is

²⁸ T. KOBUSCH, *Gott und die Transzendenten: Von der Erkenntnis des Inklusiven, Impliziten, Konfusen, und Unbewußten*, in M. PICKAVÉ (herausgegeben von), *Die Logik der Transzendenten: Festschrift für Jan A. Aertsen zum 65. Geburtstag*, (Berlin/New York: Walter de Gruyter 2003), pp. 421-432.

²⁹ For an illuminating study of Bernard's doctrine and its place in the development of the history of the theme of God as first known, see W. GORIS, *Die Kritik des Bernhard von Trillia an der Lehre von Gott als Erstekanntem: Einleitung und Textausgabe*, «RTPM», 65/2 (1998), pp. 248-319.

found both the beginning and end of our cognition; the beginning in reference to our most general knowledge of Him, the end as far as the direct and particular vision of Him. Hence God is the beginning and the end of all things in their being known, just as He is their beginning and end in their being of nature. And just as nothing can be perfectly known unless He is previously perfectly known, so too nothing else can be known however imperfectly unless He is known in the most general manner; for example, man or white or something else cannot be known unless that is the case. For nothing of such things in a creature is even understood as such, unless first we know, understand, and are aware of it under the notion of being and unity and all of the other first intentions; so the fact that something is a being or one, which are necessarily conceived about something by means of a first impression (at least by a priority of nature), [is so conceived] about it prior to anything else, such as the fact that it is white or human. Whenever we conceive being, however, what is necessarily conceived is first and simply being, as was claimed above; for just as in conceiving this good goodness simply is grasped, so too in it is grasped the good which is proper to God.³⁰

Henry's argument here is rooted in his analysis of the stages of our conceiving God in the first two degrees of the most general way we are aware of Him; these correspond to understanding a transcendental such as being in reference to a concrete subject and then the same transcendental taken just in itself. Though in a sense we grasp being at the outset of our knowledge, what we are indistinctly aware of us is actually God or Being Itself.

³⁰ «Ergo, cum semper intellectus noster naturaliter prius concipit indeterminatum quam determinatum, sive distinctum a determinato, sive indistinctum ab eodem, intellectus noster intelligendo bonum quodcumque in ipso naturaliter, prius cointelligit bonum negatione indeterminatum, et hoc est bonum quod Deus est. Et sicut de bono, ita et de omnibus aliis de Deo intellectis ex creaturis. Absolute ergo dicendum quod in generalissimo modo intelligendi quid est Deus, quoad primum et secundum eius gradum, quid est Deus est primum obiectum quod ab humano intellectu ex creaturis habet intelligi, ut nihil possit cognosci in creaturis et ex creaturis, quia verum, bonum, pulchrum, iustum, ens, unum, aut aliquid huiusmodi determinatum existens per materiam, aut per suppositum, nisi naturaliter prius, licet quandoque simul duratione, cognito eo quod est simpliciter et indeterminatum verum, bonum, pulchrum, ens, unum, et huiusmodi, ut, scilicet, in ipso Deo sit principium et finis nostrae cognitionis: principium quoad eius cognitionem generalissimam, finis quoad eius nudam visionem particularem, ut sic sit principium et finis omnium rerum in esse cognitivo, sicut est principium et finis earum in esse naturae. Et sicut nihil aliud potest perfecte cognosci nisi ipso prius perfecte cognito, sic nec aliquid potest cognosci quantumcumque imperfecte, nisi ipso prius saltem in generalissimo gradu cognito, ut homo aut album aut quodcumque aliud. Nihil enim talium cognoscitur in creatura aut intelligitur ut tale, nisi prius cognoscendo et intelligendo ipsum sub intentione entis et unius, et caeterarum primarum intentionum, ut quod sit ens aut unum, quae necessario prima impressione, saltem prioritate naturae, concipiuntur de quolibet, antequam concipiatur aliquid eorum quia album aut quia homo. Concipiendo autem ens, necessario concipitur primum et simpliciter ens, ut dictum est. Sicut nam concipiendo hoc bonum necessario concipitur bonum simpliciter, et in illo bonum quod Dei est» (HENRY OF GHENT, *SOQ*, art. 24, q. 7 [ed. Badius 144 r-v H]).

Furthermore it is important to emphasize that the awareness of God that is primitive is not a determinate awareness of God, but a confused and unconscious one as Henry tells us in the same question:

In all general intentions of things whenever you understand one of them simply – for example, being, true, good, you first understand God, but you do not notice it; and so long as you abide in that simple understanding, you continue to understand God. But if you start to add qualifications to what was simply conceived, you fall back to the level of understanding the creature.³¹

But we might rightly object that Henry's account would seem not to be consistent with his general point that being is the foundation for our knowledge of other concepts, while his claim that awareness of God occurs at the outset of our knowledge would seem to wreak havoc with his view that being as being is the subject of metaphysics and that the metaphysician advances a properly metaphysical proof of God a priori.³²

As Prof. Pickavé has convincingly argued, Henry readily handles such an objection.³³ Henry distinguishes between the indistinct awareness of God that is the indeterminate starting point for all of our knowledge and the distinct awareness of being, which is the intelligible content through which we form all other simple notions and through them complex propositions and science.³⁴

How then does our knowledge progress according to Henry? If we turn back to quite an early portion of Henry's *Summa*, we find an extremely helpful text. Here at SOQ art. 1 q. 12 the issue is whether a human being can acquire knowledge equally of all objects without discursive reasoning. Henry's reply emphasizes the distinctiveness of human knowing and, as result, argues that discursive reasoning is needed. What is especially relevant for our pur-

³¹ «In omnibus ergo generalibus intentionibus rerum cum aliquam illarum intelligis simpliciter, ut ens, verum, bonum, primo Deum intelligis, etsi non advertis, et quantum steteris in illo simplici intellectu, tantum stas in intellectu Dei. Si autem modo aliquo quod simpliciter conceptum est determines, statim in intellectu creaturae cadis» (HENRY OF GHENT, SOQ, art. 24, q. 7, ad. 2 [ed. Badius], 144 vK).

³² For type of proof that Henry thinks primary, see A.C. PEGIS, *A New Way to God: Henry of Ghent (II)*, «Mediaeval Studies», 31 (1969), pp. 95-105; on Henry's position on the subject of metaphysics, see, in addition to Pickavé, A. ZIMMERMANN, *Ontologie oder Metaphysik Die Diskussion über den Gegenstand der Metaphysik im 13. und 14. Jahrhundert* (Leiden-Köln: E.J. Brill 1965), pp. 194-196.

³³ M. PICKAVÉ, *Heinrich von Gent*, cit., p. 151.

³⁴ «Et quia isto modo considerandi Deum ut scilicet consideratur in scientiis philosophicis non est Deus id quod primo mens in rebus concipit (dico conceptione discretiva, discernendo ipsum ab aliis – conceptione enim absoluta est id quod etiam in naturali notitia mens primo concipit, ut infra ostendetur); immo primus conceptus discretivus naturalis cognitionis ex creaturis est ratio entis simpliciter» (HENRY OF GHENT, SOQ, art. 7, q. 6, ad 2 [ed. Badius, 56 r R]).

poses is his use of the proof text of the Aristotle's *Physics* I c. 1 to organize his views on the progress of human intellectual knowledge:

'For the way of knowing is naturally within us from the better known to us, which are the more confused, proceeding to the items better known by nature, which are the distinct rather and the determinate' [*Physics*, I c. 1] along the following lines. At first, indeed, a human being gains knowledge regarding terms and the quiddities of things in general, knowing them and considering them in terms of what is said through their names. Once the terms are composed and divided, a human being next conceives the first complex principles under their confused being. And the better disposed a human is through the light of natural intelligence and the subtlety of his mind, the more perfectly he grasps both the simple and complex principles right at the start. Nonetheless everyone generally conceives them at the start under their confused being, although some people have more distinct and others less distinct awareness. But everyone sooner or later comes to determine the meaning of these notions more and more [...]. And this confused awareness of the principles is obtained as such through sense, memory, and experience; these consists in knowledge of singulars, but science and art are not founded upon such items [...]. That starting point is standing outside the bounds of art, before the intellect abstracts the universal from the singulars; once, however, the universal exists in the soul ... it stands within the bounds of art [...] and then especially when the intellect knows the nature and the cause of a thing within that universal and so sees its truth. For it is then that the intellect has determinate knowledge for the first time. But, nonetheless, prior to such determinate knowledge, starting from such confused knowledge, both in reference to simples and propositions, the discourse of reason begins, first to know the truth of the quiddity of the terms in simple principles; determinate knowledge of these is gained by inquiring by way of definition, starting from the confused awareness of the thing defined expressed by the name [...]. And it is once the terms are so understood in their definitive meaning, that we have the truth and quiddity of things, from which we have determinate understanding of the first complex principles, just as before we had indeterminate understanding of them from the terms known in a confused signification.³⁵

³⁵ «[...] Quia «innata est nobis via sciendi ex nobis notioribus», quae sunt confusa magis, procedendo «in notiora naturae» quae sunt distincta et determinata magis, et hoc per hunc modum. Homo enim sibi acquirit notitiam primo de terminis et quidditatibus rerum in generali primo cognoscendo et considerando quid dicitur per nomen. Ex quibus terminis componendo et dividendo secundo concipit prima principia complexa sub esse confuso, et secundum quod homo magis est dispositus in lumine naturalis intellectus et ingenii subtilitate, tanto perfectius prima principia, tam incomplexa quam complexa, ab initio concipit. Omnes tamen generaliter ab initio ea sub esse confuso concipiunt, licet unus magis distincte et minus confuse quam alter. Sed postmodum paulatim determinant ea omnes semper magis et magis. [...] Et haec confusa notitia principiorum in quantum huiusmodi habetur primo via sensus, memoriae et experientiae, quae consistit in singularibus, in quorum notitia non consistit ars aut scientia [...]. Principium dico extra terminos artis consistens, antequam intellectus ex ipsis universale abstrahat, quod existens in anima intra terminos

Henry's short commentary upon the key passage of Aristotle's *Physics* makes the following points. First, we proceed [stage I] from the *confusa* to the *distincta* by first gaining a knowledge of the simple terms and the quiddities, i.e., the universaliora and the specific quiddities, knowing them at first only nominally (*quid dicitur per nomen*). Second, we gain a confused knowledge of propositions or complexes [stage II] by way of composition and division, still having this only in confused cognition. Third, while Henry notes that those with greater intellectual capacities more perfectly grasp the first principles, both simple and complex, everyone generally speaking gets them vaguely (*sub esse confuso*), subject only to minor variation of degree. Fourth, gradually we acquire more and more determinate knowledge of the 'firsts', whether simples or complexes, and so arrive at [stage III] definite knowledge, allowing for art and science.

So much for the process so far. But Henry makes a distinction between the confused knowledge of the principles, given by way of sense, memory, and experience and determinate knowledge of principles: the former stands outside the arts and sciences and is present prior to abstracting the universal. When the intellect comes to know the nature and causes of something in the universal, it gains determinate knowledge of the principle. The passage from the second to the third stage of the process described, from confused to distinct knowledge, involves discursive reasoning, first in order to arrive at the truth of the quiddities of the terms in simples. Henry describes this in detail: the determinate knowledge is gained by inquiry in a definite manner beginning from the confused awareness of the thing being defined in reference to what its name signifies and this results in a definitive (and hence distinctive) knowledge of what it is. Then, once the terms of propositions are known in this same manner and the truth and quiddities of things are known, there results definitive knowledge of the principles as well.

What Henry clearly means to appeal to ultimately for our knowledge of the principles, whether simples or complexes, is our notion of being. Being is

artis consistens [...] et tunc maxime quando intellectus in illo universali abstracto naturam et causam rei cognoscit et veritatem videt. Tunc enim primo determinatam notitiam principii habet. Sed tamen ante ipsam ab eius notitia confusa, tam in complexis quam in incomplexis, incipit rationis discursus, primo ad cognoscendum veritatem quidditatis terminorum in principiis incomplexis, quorum notitia determinata acquiritur inquirendo via definitiva ex confusa cognitione definiti in significato nominis, eliciendo cognitionem eius determinatam in definitiva ratione [...]. Et tunc primo, quando termini sic cognoscuntur in definitiva ratione, intelligitur veritas et quidditas rerum, ex ipsis concipitur intellectus determinatus primorum principiorum complexorum, sicut prius eorum intellectus indeterminatus concipiebatur ex ipsis terminis cognitis in confusa nominis significatione» (HENRY OF GHENT, SOQ, art. 1, q. 12, [ed. Wilson], pp. 187-189).

what allows us to know whatever it is that we do know and it is clear from the way that he describes it that Henry means to claim that being is what yields definitive knowledge of the items that are confusedly known at the outset:

As in the case of incomplex principles, the first principle and first concept is the concept of being insofar as it is being. It is under this concept that all the other simple concepts are found and it is from that concept and following upon that concept that those other items are conceived. For it is from the concept of being by way of deduction that all the other simple concepts that follow thereafter are elicited in terms of their definitive meaning. This is why Avicenna tells us in his first book of the *Metaphysics*: "Thing and being are what are impressed upon the soul at its first impression".³⁶

Combining these claims, with Henry's insistence that only distinctly understood principles, whether simple or complexes, may function as the principles of art and science,³⁷ we can see that the concept of being is the starting point for Henry, as it will be later for Scotus, to any distinct understanding of the world.

If we place all of our findings regarding Henry's account of our intellectual knowledge into a schema, the following emerges:

- 1) the proper object of the human mind is truth, though this is not the first thing conceived but the formula under which things are conceived.
- 2) The first indeterminate object of the human mind is God, known in the first two stages of our most general knowledge of God; this is a confused and unconscious awareness that is lost almost as soon as we attend to the object of our awareness.
- 3) The first determinate object of our minds is being and it is through being that we come to know the other transcendentals and the categorical concepts.
- 4) The process of knowledge involves three stages: a) a stage at which our knowledge is of quiddities and is a confused or nominal awareness; b) a stage at which our knowledge of propositions is of the same confused and nominal sort; and c) a stage at which our awareness of both simple and complexes is rendered distinct through our concept of being that furnishes the starting point for the discursive process that yields our definitive knowledge.

³⁶ «Ut in incomplexis principiis primum principium et primus conceptus est conceptus entis, in quantum est ens, sub quo sunt omnes alii conceptus incomplexi, et ex ipso et post ipsum concipiuntur. Ex conceptu enim entis via deductionis ratione definitiva eliciuntur omnes alii conceptus incomplexi sequentes. Unde dicit Avicenna in I *Metaphysicae* suae: «Res et ens talia sunt quae statim imprimuntur in anima prima impressione, quae non acquiritur ex aliis notioribus se, et alia acquiruntur ab eis» (HENRY OF GHENT, *SOQ*, art. 1, q. 12, ed. Wilson, p. 189).

³⁷ «Et sunt principia ista definitive intellecta, tam complexa quam incomplexa, principia artis et scientiae infra terminos intellectualis cognitionis» (*ibidem*, art. 1, q. 12, ed. Wilson, p. 189).

3. DUNS SCOTUS

3. 1. *The Three First Objects and Primary Object as Adequate Object*

The distinctive feature of Scotus's presentation of the discussion of the object of the intellect is precisely his distinction among three different ways in which the term 'first object' (*primum obiectum*) may be taken. We may understand this term to refer to a primacy in the order of generation, a primacy in the order of perfection, or a primacy in the order of adequacy.³⁸ What authors before Duns Scotus meant by 'proper object' corresponds to Scotus's notion of adequate object. An adequate object is one that precisely aligns with a cognitive power for the reason that it is what moves the cognitive power to know as opposed to any other features of the thing known.³⁹ The usual example given is that of sight and color. According to the standard analysis, color moves sight to its act and the power of sight becomes aware of the color of the object known. In asking what the adequate object is, Scotus is pursuing the inquiry of what it is that moves the intellect after the fashion that color moves sight.

Scotus's treatment of the adequate object is bound up with his insistence on one of his own major teachings, namely, the univocity of the concept of being. We need not enter into all the details of univocity, however, in order to appreciate his basic stance. The adequate object must match and be the plausible moving cause in all things that the human intellect can know. None of the alternative candidates for the adequate object fits this description. The quiddity of the material thing, the alternative proposed by Aquinas, does not seem to be the right object for several reasons, philosophical and theological. But the philosophical considerations are based on a methodological version of the adequacy criterion: no cognitive power should exceed its putative proper object by knowing something more common than the feature identified as its proper object. But the human intellect, even in its present condition, exceeds the range of the material quiddity by knowing being as being. Indeed, were this not the case, then a science of being as such would not be possible. Furthermore, even pagan philosophers such as Aristotle spoke of a knowledge of immaterial substances available to our natural powers; such knowledge would not be possible in principle, were the human mind confined to knowing material quiddities.⁴⁰

³⁸ SCOTUS, QDA, q. 16, n. 8 (*Oph*, V, 147); IDEM, QDA, q. 21, n. 6 (*Oph*, pp. 208-209); IDEM, *Ordinatio*, I, d. 3, p. 1, q. 1-2, n. 70, ed. Vat. III, pp. 48-49.

³⁹ IDEM, *Lectura*, I, d. 3 pars prima q. 1-2, n. 90, ed. Vat. XVI, p. 259; IDEM, *Ordinatio*, I, d. 3, p. 1, q. 3, n. 183, ed. Vat. III, p. 111.

⁴⁰ IDEM, *Lectura*, I, d. 3, pars prima q. 1-2, n. 93-94, ed. Vat. XVI, pp. 259-260; IDEM, *Ordinatio*, I, d. 3, p. 1, q. 3, n. 117-118, ed. Vat. III, pp. 72-73. H. KLUG, *Das Objekt unseres Verstandes und die okkulte Erkenntniskraft unserer Seele nach dem seligen Johannes Duns Skotus*, «Franziskanische Studien», 14 (1927), pp. 69-71.

Henry of Ghent's alternative view, that truth functions as the primary, in the sense of the adequate object, is also rejected. The arguments that Scotus marshals against this view are several, but the main ones are that, if the true is the object of the intellect, then 'true' should be essentially predicable of everything that actually functions as an object of the intellect. But 'true' cannot be so predicated essentially; it can only be predicated denominatively. Furthermore if the true were the object of the intellect, then the scientific habit of metaphysics, dealing with being as being, would exceed the scope of the power of which it is the habit, something that Scotus thinks is patently unacceptable.⁴¹

A theory related to Henry's and taken from his writings is one that holds God is the first or proper object. Though this theory is more extensively treated under the next topic of the primary object in the order of generation, Scotus also sometimes considers it as a candidate for the adequate object. Henry's consideration in advancing God as the first object known, as we saw above, was precisely that God, though Himself only confusedly apprehended, was that through which all other things come to be known, including the notion of being that is properly predicated of creatures. Scotus's criticism, however, centers around other considerations that the proper object must meet: the proper object must be capable of moving the power to act and it must be predicable of all the items that the power knows. Unfortunately, God fails to meet these criteria. In the present life at least, God is not naturally the mover of our intellect, but rather the agent intellect and the phantasms. Furthermore, the notion of God is not predicable of the items that move our intellect. Hence Scotus concludes God is not the primary, in the sense of the adequate, object of the intellect.⁴²

So what are we left with? To show the extent to which Scotus's treatment of the adequate object is connected with his own doctrine of univocity, let us see how he puts the matter in the *Ordinatio* at the outset of presenting his own theory:

To the question, accordingly, I say briefly that no object can be posited as the natural object of our intellect on account of virtual adequacy [...]. Hence either will be no primary object posited at all, or we must seek to find a first adequate object because of its community. But if being is posited as equivocal to created and Uncreated being, substance and accident, since all of these are essentially intelligible to us, it seems that no primary object of our mind can be found, neither by virtuality nor by community. But, positing the view

⁴¹ SCOTUS, *Lectura*, I, d. 3, pars prima q. 1-2, n. 137-139, ed. Vat. XVI, pp. 278-279; IDEM, *Ordinatio*, I, d. 3, p. 1, q. 3, n. 171-174, ed. Vat. III, pp. 105-107.

⁴² IDEM, *Lectura*, I, d. 3, pars prima q. 1-2, n. 89-91, ed. Vat. XVI, pp. 258-259; IDEM, *Ordinatio*, I, d. 3, p. 1, q. 3, n. 126-128, ed. Vat. III, pp. 79-80.

taken in the first question of this distinction regarding the univocity of being, the claim that there is a primary object of our intellect can be salvaged.⁴³

Scotus then goes on to argue that being can fit all the requirements implied in the concept of a primary object understood as adequate: being is predicable of all the items that function as objects of the intellect, it can move the intellect to understanding, whether with or without dependency upon phantasms, and, if it is understood to be univocally commonly predicable, it allows for predication of God and creature.

3. 2. Primary Object in the Order of Generation

Several texts in the corpus of Scotus treat the matter of the first in the order of the generation of our knowledge: *Quaestiones super libros Metaphysicorum* I q. 10, *Quaestiones super secundum et tertium De anima* q. 16, and the *Lectura* and *Ordinatio* treatments in book I distinction 3. In addition, there are helpful passages for illuminating our theme to be drawn from book I distinction 27 of the *Ordinatio*. I have listed these texts in what is likely their chronological order and, to a certain extent, the study of these texts will reveal a systematic problem in the earlier ones that is addressed in the later ones. Space, however, does not allow for a detailed examination of each of these texts, so I shall focus our attention upon the texts from Scotus's *De anima* and the parallel treatment in the *Lectura*, drawing upon the balance of the material only to provide clarifications of what we find in the principal texts treated.

The title of the question in q. 16 of the *De anima*, «*Utrum magis universale prius intelligatur a nobis quam minus universale*», is rather unusual for a set of questions or commentary on the *De anima*. The normal place for such a question is either at the outset of a *Physics* commentary or in one of the first two books of a *Metaphysics* commentary.⁴⁴ Indeed, when we examine the struc-

⁴³ «Ad quaestionem ergo dico breviter quod nullum potest poni obiectum intellectus nostri naturale propter adaequationem talem virtutalem, propter rationem tactam contra primitatem obiecti virtualis in Deo vel in substantia. Vel ergo nullum ponetur primum, vel oportet quaerere 'primum adaequatum' propter communitatem in ipso. Quod si ens ponatur aequivocum creato et increato, substantiae et accidenti, cum omnia ista sint per se intelligibilia a nobis, nullum videtur posse poni primum obiectum intellectus nostri, nec propter virtualitatem nec propter communitatem. Sed ponendo illam positionem quam posui in prima quaestione huius distinctionis, de univocatione entis, potest aliquo modo salvari aliquod esse primum obiectum intellectus nostri» (SCOTUS, *Ordinatio*, I, d. 3, p. 1, q. 3, n. 129, ed. Vat. III, pp. 80-81).

⁴⁴ For the tradition of the commentaries on the *Physics* in the thirteenth century, see the list of authors in their proper chronological order in S. DONATI, *La discussione sull'unità del concetto di ente nella tradizione di commento della 'Fisica': commenti parigini degli anni 1270-1315 ca.*, in M. PICKAVÉ (herausgegeben von), *Die Logik der Transzendentalen: Festschrift für Jan A. Aertsen zum 65. Geburtstag*, bd. 30 in *Miscellanea mediaevalia*, (Berlin/New York: Walter de Gruyter 2003), pp. 61-64; for an analysis of the texts in the English tradition bearing upon

ture and content of the question, we find references to the *Physics* on both sides of the question and this tendency to refer to *Physics* I is a hallmark of Scotus's approach to the issue of the first in the order of generation. Scotus distinguishes between the three senses of first object before embarking upon his own solution, but also, quite importantly, makes a remark about the meaning of 'confusum' in the Aristotelian text underlying much of the discussion: «Unde quidem necesse est modum hunc producere ex incertioribus naturae, nobis autem certioribus in certiora naturae et notiora. Sunt autem nobis primum manifesta et certa quae confusa magis, posterius autem ex his fiunt nota elementa et principia dividendibus haec».⁴⁵ *Confusum* designates either a universal whole, such as a genus, that can be distinguished into parts, such as animal in reference to human, or an integral whole. We can be aware of human as animal; then we have confused awareness (*confuse*) of human through animal and this knowledge is characterized as having a nominal or vague notion of the item known as opposed to distinct knowledge that comes through knowing the thing known through its proper defining elements.⁴⁶

Scotus's solution to this question is divided into three articles: the first argues that the less universal is first known by way of confused cognition; the second claims that being is first known in the order of distinct cognition; and the last that the first thing known in terms of absolute perfection is God, but relative to our cognitive powers it is the species specialissima of the singular that moves our sense powers most forcibly.⁴⁷ Regarding the first article, Scotus introduces a number of proofs. One is that natural causes must produce their most perfect effect, but the most perfect effect that the causes of cognition can bring about is awareness of the most particular species. Connected to this claim is a psychological observation: if it were really the case that we had to pass through all the intermediate genera to come to awareness of a specifically distinct item, we would require much time to come to this awareness; this is simply false by experience. Other arguments adduced include arguments about the ease of abstraction for the specific items within a species as opposed to genera, the commonplace that geometers often are unaware of the metaphysical properties of their object of study, yet know their science, and the authority of both Avicenna, who argues that metaphysics is last in the order of learning, and Aristotle who speaks of our knowing the item defined

our theme, see EADEM, *Physica* I,1; *L'interpretazione dei commentatori inglesi della translatio vetus e la loro recezione del commento di Averroè*, «Medioevo», 21 (1995), pp. 154-167. For lists of questions on the *Metaphysics*, see A. ZIMMERMANN, *Verzeichnis ungedruckter Kommentare zur Metaphysik und Physik des Aristoteles; aus der Zeit von etwa 1250-1350*, (Leiden-Köln, E.J. Brill 1971).

⁴⁵ ARISTOTELES, *Physica*, I c. 1, 184 a 19-23 (AL, VII, 1, 7).

⁴⁶ SCOTUS, QDA, q. 16 n. 9 (OPh, v, 147-148).

⁴⁷ *Ibidem*, q. 16 n. 10.18.20 (OPh, v, 148, 150, 152).

prior to our knowing the defining elements.⁴⁸ The conclusion reached is that our first awareness is confused cognition of the most particular species moving our sense faculties.

Distinct cognition, on the other hand, is claimed to begin with the concept of being. Here the proofs are only two in number. Being enters into the notion of all other concepts, but being can only be distinctly known, so being is the source of all our distinct knowledge. The proof that being can only be distinctly known is an application of the description of confused knowledge: if something is indistinctly or confusedly conceived it is so conceived in reference to a wider notion through which the item in question can be conceived. But this condition simply fails in the case of being. Another proof of being as the source of our distinct cognition comes from one of Scotus's favorite sources, Avicenna. Avicenna argues that even the lower sciences need the establishment or certification of their principles through the science of metaphysics, a theme emphasized by Albert and Thomas, too. But if this is so, all other sciences are ultimately definitive in their knowledge through metaphysics and its object, which is being.⁴⁹

The final article is not so germane to our study except in regard to Scotus's proof that, relative to our cognitive powers, the species specialissima is the thing that most corresponds, in terms of perfection, to our powers. What is more pertinent is Scotus's criticism of Thomas cited above at the outset of the present paper: Aquinas, Scotus tells us, failed to make the requisite distinction between 'confusum' and 'confuse' and thought that because the 'confusa' were at the outset of our knowledge in the order of distinct knowledge, they were at the outset of our knowledge without qualification. Furthermore, Thomas's treatment suggests that when we know the 'confusa', we know them 'confuse', but this is not even possible for Scotus, as we have seen.⁵⁰

A critical review of Scotus's discussion of our knowledge of being in the QDA shows how far he has advanced towards outlining the process of human knowledge:

1) First in the order of confused cognition is the species specialissima of the item that most strongly moves the sense, say, whiteness.⁵¹

⁴⁸ *Ibidem*, q. 16 n. 11-17 (*OPh*, v, 148-150).

⁴⁹ *Ibidem*, q. 16, n. 18-19 (*OPh*, v, 150-152).

⁵⁰ *Ibidem*, q. 16, n. 27 (*OPh*, v, 154-155).

⁵¹ I am using the example of a properly sensible accidental feature, quite deliberately, for a connected thesis that Scotus holds is that substance is only knowable by inference and not directly because of the presence of an intelligible species of substance in the soul. For a study of the background to Scotus's discussion of substance, see T. B. NOONE, *The Problem of the Knowability of Substance: The Discussion from Eustachius of Arras to Vital du Four*, in Aa. Vv., *Essays in Honor of Prof. Stephen F. Brown's 75th Birthday* (forthcoming).

2) First in the order of distinct cognition is being, and being, though maximally *confusum*, can only be distinctly known inasmuch as knowing something confusedly requires there be some wider notion in reference to which the item(s) in question could be taken, a condition that fails in the case of being and all the other transcendentals.

3) What is most perfectly known proportionate to our cognitive powers is what most strongly moves the sense.

4) Our knowledge gets to be distinct by the division of genera, ultimately relying on the concept of being.

5) The way in which Scotus speaks of the notion of being and the way in which we ascend to and descend from being indicates the role transcendental notions, especially being, play in the refinement/adjustment of our confused concepts.⁵²

But this leaves us with following puzzles: a) How do we pass from the temporally prior state of confused cognition to the state of distinct knowledge?; b) What intellectual access do we have to being during the time (perhaps years) that we pass through life in the state of confused intellectual cognition? We seem to need some cognitive device that will allow us to have an awareness of being without reducing our awareness of being to a residue left over after we have cognized all else, but this awareness would also need to be in a non-actual state until we begin to know things distinctly. This is just what we find in Scotus's presentation of our theme in the *Lectura*.

The text from the *Lectura* that will concern us is embedded in the section of Scotus's treatment of the theme of the knowability of God and his critique of Henry's claim that God is the first item known. This change of context means that Scotus's treatment of our theme is textually connected to his critique of Henry's theory of analogy and Scotus's own presentation of his counter-thesis that being is univocal. But we shall not be wrong in setting aside the bulk of Scotus's surrounding discussion and focusing on how he develops the elements we have already studied if we wish to extract precisely what Scotus's own teaching is about the *primum cognitum* and how he tries to resolve the puzzles note above.

The question posed in this section of the text is the second of the question in the first part of the distinction 3 of the first book and reads 'Utrum Deus sit primum cognitum a nobis naturaliter'. But, although Scotus makes

⁵² «Sic in proposito: species prius cognoscitur indistincte – scilicet in cognoscendo quid dicitur per nomen vel in suo universali; sed cognito universali distincte, tunc per eius divisionem et contractionem – per additionem differentiae – fit reditus ad cognoscendum speciem distinte» (SCOTUS, QDA, q. 16, n. 19). «Dicendum quod Philosophus I Physicorum intendit dare modum deveniendi in cognitionem distinctam; et hoc est per divisionem magis universalis et magis confusi, quod tamen est prius notum nobis cognitione distincta» (*ibidem*, q. 16, n. 25).

criticisms of Henry's theory of the *primum cognitum* seen in our discussion above, of SOQ art. 24.7, he actually treats the question as if it read 'Quid sit *primum cognitum a nobis*'. Presenting his now familiar distinction of three kinds of 'first object' (first in the order of adequation, origin or generation, and perfection), Scotus addresses himself to the matter of first in the order of generation. What is immediately noticeable is the distinctive feature of the *Lectura/Ordinatio* treatment, namely, the distinction between actual or occurrent cognition and habitual/virtual cognition. In regard to occurrent or actual cognition, Scotus argues, in much the same fashion as he does in the QDA, that the first item in the order of confused actual cognition is the most particular species of the individual items that most forcibly moves the sense power, but that being is what is known first in the order of distinct actual cognition. Regarding the latter point, Scotus tells us:

Second of all I say that being is the first distinctly known in the order of origin or generation. Proof: being can only be distinctly known since it is not resolvable into several prior concepts, but, on the other hand, being must be known first in order for something to be known by distinct cognition since being is contained in every other concept. And we have to know the more universal concepts first before the less universal concepts can be distinctly known in which the prior concepts are included. Hence when a definition, which causes distinct knowledge of the item defined, is obtained by way of division, the defining elements are known first and these are the more common features.⁵³

Notice that being must be cognized prior to distinct cognition occurring regarding lower level notions (*sed ad hoc quod aliquid distincte cognoscatur cognitione distincta, oportet quod ens praecognoscatur, quia in omni conceptu est ens*). That the concept of being operates not only at the level of the transcendentals, but also in general categorical concepts becomes clear at the end of the passage, in the section wherein Scotus refers not simply to the more universal items being distinctly known for the less general items to be distinctly known, but also to definition.

Likewise, Scotus tells us that being and the most particular species are compared as what is distinctly known first to what is confusedly known first. The

⁵³ «Secundo dico quod ens est primum, ordine originis et generationis, quod cognoscitur cognitione distincta. Probatio: ens non potest cognosci nisi distincte, quia non est resolvable in plures conceptus priores; sed ad hoc quod aliquid distincte cognoscatur cognitione distincta, oportet quod ens praecognoscatur, quia in omni conceptu est ens; et oportet quod conceptus universales praecognoscantur antequam conceptus minus universales distincte cognoscantur, in quibus includuntur superiores. Unde quando per viam divisionis acquiritur definitio, quae facit distinctam notitiam definiti, prius cognoscuntur definientia quae sunt magis communia» (SCOTUS, *Lectura*, I, d. 3, pars 1, q. 2, n. 75, ed. xvi, pp. 252-253). The italics are here inserted by me for the sake of illuminating Scotus's description of 'inquisitio' as proceeding by way of division below.

latter is emphasized as what is absolutely first in the history of our intellectual lives. Indeed, commenting upon the *confusa* of the Aristotelian text, Scotus tells us that the common view (*ratio communis*) is correct insofar as it interprets the *confusa* as referring to confused cognition which is halfway between pure ignorance and distinct knowledge, but that it is incorrect to the extent that it would suggest that the *confusa* are all of them known through confused cognition, a parallel point to what we have seen in the QDA. Here, however, in the *Lectura* our puzzles have, if anything, been only heightened since Scotus explicitly states here that the entire order of confused cognition comes before the entire order of distinct cognition in the order of origin, that is to say, in the order of time.⁵⁴

It is precisely at this point that Scotus introduces the new type of cognition habitual/virtual cognition:

Now we should see what is first known in habitual or virtual cognition. Here we should first note that I call cognition 'habitual' when the object is present in such a manner that an act of understanding can sufficiently terminate at it, but call cognition 'virtual' when something is contained in something else and thereby can be known when the other item is known. Things are more perfectly known when they are known virtually than when they are known habitually. I say, then, that in habitual and virtual cognition the 'confusum' is first known in order of origin, whether the object is known habitually or virtually in the fashion of parts in a whole. This point is proved by analogy. If form perfects matter and virtually includes other forms, it perfects forms in the very order that would obtain if the forms were really distinct [...]. Since these habitual forms, if they were distinct, would naturally perfect the intellect in a certain order in such a way that 'confusum' would be first, inasmuch as our intellect proceeds from the imperfect to the perfect, there holds the same sequence in the actual order: if many things are included in the same notion, the more universal will be known habitually first. For this point, we have the authority of Avicenna in book one of his *Metaphysics* chapter 5 "being and thing are impressed upon the soul at its first impression," and he speaks there of the habitual impression of the intellect. And the same holds true of the items that are proximate to the most 'confusa': they are known, as nearer to the most 'confusa', next and prior to the items that are further removed from these.⁵⁵

⁵⁴ IDEM, *Lectura*, v, d. 3, pars 1, q. 2, n. 77-79 (ed. xvi, pp. 254-255). At n. 79 (p. 255) Scotus writes: «Et secundum hoc tenet ratio communis, quae assignatur, quod confusa sint primo cognita, quia cognitio confusa media est inter cognitionem distinctam et potentialem; sed medium est in quod prius venit intellectus quam in ultimum; igitur prius acquiritur cognitio confusa quam determinata, praecipue cum intellectus noster procedat de imperfecto ad perfectum. Et hoc verum est. Sed tamen non sequitur quod confusum sit nobis primo cognitum cognitione confusa. Unde patet quod totus ordo cognitionis confusae praecedit totum ordinem cognitionis distinctae secundum prioritatem originis. Et haec dicta sunt de cognitione actuali».

⁵⁵ «Nunc videndum est quid sit primo cognitum cognitione habituali et virtuali. Ubi primo sciendum est quod voco cognitionem 'habitualement' quando obiectum est praesens

Notice several things. This whole section on habitual/virtual is the distinctive doctrinal element of the *Lectura/ Ordinatio* presentation; there is nothing like it in the QDA. Scotus makes a similar claim about priority, that is, about the more general being prior in the order of distinct occurrent cognition, but now he applies it to the *cognitum habitualiter* and in *both* of these orders, *being* is what is first known. There are thus levels of what is known habitually and some things are more universal, and hence more confused, in the habitual as well as the actual order. Yet an oft-repeated claim of the Subtle Doctor is that being (*contra Thomam*) can only be distinctly known – but being is known habitually; this seems to entail that there is such a thing as: distinct, habitual cognition.

But someone might object, arguing that such a mode of cognition is not recognized within the tradition of scholarship on this passage and there seems to be no textual warrant for it since habitual/virtual cognition is presented in a distinct section of text from that of occurrent cognition and it is to the latter that the distinction of confused and distinct are applied in our texts.⁵⁶ For my interpretation to be correct, Scotus would have to apply, at the very least, the predicate ‘confused’ to the order of habitual as well as to the order of actual or occurrent cognition.⁵⁷

ut sufficienter actus intelligendi possit terminari ad ipsum, cognitionem autem ‘virtualem’ voco quando aliquid includitur in alio, et ideo intelligi potest ad intellectionem illius; et perfectius cognoscuntur quae cognoscuntur virtualiter quam quae habitualiter. Dico igitur quod in cognitione habituali et virtuali confusum est prius cognitum prioritate originis, sive cognoscitur ut obiectum ‘habitualiter’, sive ut partes in toto ‘virtualiter’. Quod probatur per simile: si sit forma aliqua perficiens materiam, virtualiter includens alias formas, eodem ordine perficit materiam sicut si essent aliae formae distinctae, sicut dicunt ponentes tantum unam formam: primo perficit secundum rationem formae universalioris. Cum igitur istae formae habituales, si essent distinctae, natae essent perficere intellectum ordine quodam, ita quod confusum prius, quia intellectus noster procedit ab imperfecto ad perfectum, – igitur eodem modo nunc, si includuntur plura in eodem, universalius erit prius cognitum habitualiter. Ad hoc est auctoritas Avicennae I Metaphysicae cap. 5: “Ens et res sunt quae primo imprimuntur in anima prima impressione”, et loquitur ibi de impressione habituali. – Et eodem modo quae sunt propinquiora eis, sunt prius nota habitualiter quam quae sunt remotiora» (SCOTUS, *Lectura*, I, d. 3, pars 1, q. 2, n. 80-81, ed. xvi, p. 255).

⁵⁶ D. DEMANGE, *Jean Duns Scot: La théorie du savoir*, (Paris: J. Vrin 2007), pp. 165-172. He makes no mention, in his excellent study, of the difference between occurrent and habitual knowledge, while BARTH, *Being, Univocity, and Analogy according to Duns Scotus*, ed. J.K. RYAN (edited by), *John Duns Scotus: 1265-1965*, (Washington, D.C.: The Catholic University of America Press 1965), p. 221 writes that «Being is apprehended at a relatively early time by our intellect, although still in an indistinct or uninformed manner as an indefinite horizon of our cognition», and Honnefelder cites the meaning of ‘habitus’ as ‘delectabiliter, faciliter, expedite et prompte’ (related to the notion of ‘habitus’ in the *Nicomachean Ethics*) in his *Ens Inquantum Ens : Der Begriff Des Seienden Als Solchen Als Gegenstand Der Metaphysik Nach Der Lehre Des Johannes Duns Scotus* (Münster i. W.: Aschendorff 1979), p. 161.

⁵⁷ I owe this object in its entirety to Prof. Wouter Goris and his intervention at a recent

Let us turn to the history of the use of the terms ‘cognitio habitualis’ and the related sense of ‘habitus’ to see whether this history provides some insight into what Scotus means here by ‘cognitio habitualis’ and then let us look at other texts in Scotus’s corpus to see if these can help illuminate our key passage on habitual cognition of being. First the earlier tradition; then Scotus.

Our lead on where to begin is found within the texts of Scotus’s descriptions of ‘cognitio habitualis’. Here is the wording in the *Lectura* and the parallel passage in the *Ordinatio*:

Lect.: *obiectum est praesens ut sufficienter actus intelligendi possit terminari ad ipsum.*

Ord: ‘Habitualement’ voco quando *obiectum sic est praesens intellectui in ratione intelligibilis actu, ut intellectus possit statim habere actum elicited circa illud.*

Notice that the mode of cognition is a mode of *presence of an actually intelligible object within the intellect*: one that is ready to be, but is not actually cognized.

We find a quite similar notion in the writings of Thomas Aquinas, when Thomas is dealing with the presence of the human mind to itself prior to any actual self-cognition:

But as far as habitual cognition goes I say that the soul see itself through its essence, that is to say, from the very fact that its essence is present to itself, the soul is capable of engaging in an act of cognition of itself, just as someone, from the very fact that he has the habit of a science, can perceive, thanks to the presence of the habit within him, the items that are subject to the habit.⁵⁸

Notice Aquinas is comparing a fully developed habit’s presence in the soul to the cognitive presence of the essence of the soul to the intellect, but that precisely is the case at stake; for the soul’s knowledge of itself, no preceding act is presumed for this ‘habit’.

After Aquinas, I have found that the arts masters writing on the *De anima* use his distinction to explain how and why someone who has a habit, such as the habit of science, may not employ it. An important addition by these authors is an analogy with a natural ‘habit’ such as the heaviness of a rock.⁵⁹

conference on Scotus held at Leuven University. Though we disagreed then about how to understand Scotus’s position, I would like to register here my gratitude for his objection, which caused me to make my case more clearly and now, hopefully, persuasively.

⁵⁸ «Sed quantum ad habitualement cognitionem sic dico quod anima per essentiam suam se videt, id est, ex hoc ipso quod essentia sua est sibi praesens, est potens exire in actum cognitionis sui ipsius ; sicut aliquis ex hoc quod habet habitum alicuius scientiae, ex ipsa praesentia habitus est potens percipere illa quae subsunt illi habitui» (THOMAS AQUINAS, *Quaestiones disputatae de veritate*, q. 10, art. 8 “Utrum mens se ipsam per essentiam cognoscatur aut per aliquam speciem”, [ed. Leonina, XXII-2, 321 b : 234-322 a, p. 246]).

⁵⁹ M. GIELE, F. VAN STEENBERGHEN, B. BAZÁN, *Trois commentaires anonymes sur le traité*

The most valuable elements in the tradition before Scotus comes in the correct place geographically and at roughly the right time. In the disputed questions on the soul by the Dominican Hugo Sneyth, dated by their editor Fr. Zbigniew Pajda, OP to 1288-1289 in *Oxford*,⁶⁰ we find precisely the usage that Scotus will employ. Quaestio 149 of Sneyth is entitled *Utrum mens per essentiam suam se ipsam cognoscit* and what figures mightily in its sources are the QQ. *disp. de veritate* of St. Thomas. He lists three possible responses but only one is of concern to us. That one distinguishes *cognitio abditā* and *manifesta*, referring to Aug. *De Trin.* xiv 7.9., and then argues that the soul knows itself through its essence through 'abditā sive habituali notitia' (p. 84). The disproof of this first view is that (p. 84-85): «*sciens habitualiter est sciens actu primo et considerans in potentia accidentali, sicut actu grave extra suum ubi exiens, est in potentia accidentali respectu sui ubi*». The problem that the objector sees is that this would mean all you would need is a *solvens prohibens* and that could only be the will; hence we could know ourselves at will, which seems counterintuitive. After listing the other two possibilities, knowing ourselves through the 'species' that is the mental word and knowing ourselves by distinguishing between the habitual knowledge through the essence and the actual knowledge through acts, the author begins his solution. At p. 92, he asks whether we mean habitual or actual knowledge, when we speak of the human person being aware of his soul, writing as follows: «*Si de habituali, dico quod homo novit quodam modo habitualiter animam suam per essentiae praesentiam tamquam illud quod est principium operationis vitalis, cognitione dico et confusa, ut patebit. Sicut enim quis ex praesentia alicuius habitus scientiae potest exire in actualem cognitionem rerum*

de l'âme d'Aristote, (Louvain-Paris: Publications universitaires/Béatrice-Nauwelaerts 1971). M. Giele-Anonymus writes only on the first two books of Aristotle's *De anima*. Of interest is a pair of questions he poses on book II, q. 12 "Utrum aliquis possit habere habitum scientiae et non considerare tamen", and q. 13 "Utrum habens habitum, cum sit actu considerans, alteratur aliquo modo" (88: 20 – 89: 42): «Dico ad primum [i.e., the first question]. Contingit aliquem habere scientiam in habitu, non tamen considerare in actu, ut contingit aliquid habere formam / 89/ gravitatis ut habitum quemdam, non ut actum. Sic in proposito, et hanc comparationem in littera tangit Aristoteles. Unde contingit aliquem habere formam in prima perfectione, ita quod non in postrema. Et hoc contingit duabus ex causis quas tangit littera. Nam scientia in habitu, etsi sit principium actualis considerationis, non tamen est sufficiens, quia nisi habens habitum voluerit, ex scientia in habitu non exit in actum, scilicet in actualem considerationem: ut habens habitum aedificandi potest non aedificare, eo quod non habet voluntatem aedificandi. Ita quod voluntas est unum quod exigitur ad reducendum habitum scientiae ad actum. Item scientia in habitu est principium per quod innascitur actualis consideratio; sed in isto principio potest cadere impedimentum, sicut in forma gravis sursum, potest cadere impedimentum, nam potest detineri. Impedimentum autem in proposito est occupatio qua occupatur homo circa exteriora, ut circa victui necessaria vel circa delectabilia et consimilia».

⁶⁰ Z. PAJDA, *Hugo Sneyth et ses questions de l'âme*, (Paris: Librairie Philosophique, J. Vrin 1996), p. 47.

cognoscibilium per illum habitum, ita homo ex hoc ipso quod essentia animae est sibi praesens tamquam principium motus vitalis absque omni aliquo habitu potest exire in cognitionem eius: et hoc est proprium cognitionis habitualis».

But what about Scotus himself? Does he ever use *habitualis* with *confusa*? While the presentation in the *Lectura* and *Ordinatio* 1 d. 3 texts seems to confine the *distincta/confusa* terminology to occurrent knowledge, a passage taken from Scotus's discussion of the mental word, in this case in the *Ordinatio*, proves useful and terminologically instructive:⁶¹

Scotus, *Ordinatio* 1 d. 27 q. 1-3 n. 74-78 (Ed. Vat. VI 93-94):

n. 74 Secundum declaro sic, quia intellectus noster non statim habet notitiam perfectam obiecti, quia secundum Philosophum I Physicorum innata est nobis via procedendi a confuso ad distinctum; et ideo primo, ordine originis, imprimitur nobis notitia obiecti confusa, prius quam distincta, – et ideo est inquisitio necessaria ad hoc ut intellectus noster veniat ad distinctam notitiam: et ideo est necessaria inquisitio praevia verbo perfecto, quia non est verbum perfectum nisi sit notitia actualis perfecta. n. 75 Sic ergo intelligendum est quod cognito aliquo obiecto confuse, sequitur inquisitio – per viam divisionis – differentiarum convenientium illi; et inventis omnibus illis differentiis, cognitio definitiva illius obiecti est actualis notitia perfecta et perfecte declarativa illius habitualis notitiae quae primo erat in memoria: et ista definitiva notitia, perfecte declarativa, est perfectum verbum. n. 76 Hoc dicit Augustinus IX Trinitatis cap. 10 vel 24: ((Definitio quid sit intemperantia, et hoc est verbum eius)); et ibidem praemisit Augustinus, in eodem capitulo, quod iam superius positum est: ((quamdiu de memoria proferri et definiri potest)), – id est distincte et definitive actualiter cognosci, virtute eius quod est in memoria. n. 77 Non ergo est de ratione verbi gigni post inquisitionem, sed necessarium est intellectui imperfecto – qui non statim potest habere notitiam definitivam obiecti – habere notitiam talem post inquisitionem; et ideo verbum perfectum non est in nobis sine inquisitione. Et tamen quando verbum perfectum sequitur talem inquisitionem, illa inquisitio non est generatio ipsius verbi formaliter, sed quasi praevia ad hoc ut generetur verbum; quod bene innuit Augustinus in auctoritate praeallegata (libro XV cap. 39): ((Hac atque illac, volubili cogitatione)) etc., ((quando ad illud quod scimus pervenit atque inde formatur)), verbum est etc., – innuens quod ista iactatio (id est inquisitio) non est gignitio verbi formaliter, sed eam sequitur gignitio verbi de eo quod scimus, *id est de obiecto in memoria habitualiter cognito*.

n. 78 Et si obiciatur 'ad quid tunc est inquisitio necessaria?', – posset dici ad illud, quod motus necessarius est ad hoc ut inducatur forma perfecta (quae non posset statim in principio motus induci), vel inductio multarum formarum ordinarum ad inductionem ultimae formae, et absque illo ordine formarum non posset ultima forma induci statim. *Et secundum hoc ponitur iste ordo: primo est habitualis notitia confusa, secundo actualis intellectio confusa, tertio inquisitio (et in inquisitione multa verba*

⁶¹ On the significance of this text see also, G. Pizzo, *Intellectus und memoria nach der Lehre des Johannes Duns Scotus: Das menschliche Erkenntnisvermögen als Vollzug von Spontaneität und Rezeptivität*, (Kevelaer: Butzon und Bercker Verlag 1998), pp. 173-184.

de multis notitiis habitualibus virtualiter contentis in memoria), quam inquisitionem sequitur distincta et actualis notitia primi obiecti cuius cognitio inquiritur, – quae notitia ‘actualis distincta’ imprimit habitualement perfectam in memoriam, et tunc primo est perfecta memoria, et assimilatur memoriae in Patre; ultimo, ex memoria perfecta gignitur verbum perfectum, sine inquisitione mediante inter ipsam et verbum, – et ista gignitio assimilatur gignitioni verbi divini perfecti, ex memoria paterna perfecta. Nullum ergo verbum est perfectum, repraesentans verbum divinum (quod potissime investigat Augustinus), nisi istud quod gignitur de memoria perfecta sine inquisitione media inter talem memoriam et tale verbum, licet nec illa memoria possit haberi in nobis – propter imperfectionem intellectus nostri – nisi praecedat inquisitio». (Emphasis is mine).

Clearly Scotus uses here the term ‘notitia habitualis’ in a way directly parallel to the ‘cognitio habitualis’ seen in the main texts see earlier. Here, however, it is equally clear that ‘confusa’ is being employed in conjunction with habitual knowledge; so habitual confused cognition is part of the registry of Scotus’s terminology and this would seem to warrant at least the possibility of ‘cognitio habitualis distincta’. Furthermore, while parts of this description might be taken as meaning that Scotus has in mind a purely inductive or revisory process, careful attention to the key term of ‘inquisitio’ indicates that this is not the case. As he states in n. 75 cited above, the *inquisitio* that immediately precedes the expression of the actual distinct cognition involves the way of division, the precise way that Scotus describes coming down to a given categorical item, ultimately from the concept of being, in the progress of distinct cognition.⁶² Furthermore, this use of *inquisitio* is precisely parallel with Henry of Ghent’s use of *inquirere* in the passage from his *SOQ* art. 1 q. 12.

3. 3. Scotus’s Transcendental and Developmental Psychology

If the interpretation advanced is even approximately correct, Scotus is claiming that our abstractive intellectual awareness of reality is quite complex. On the one hand, our intellects receive intelligible species and these species inform our thinking about the world. But actually two things go on either eventually – a delay seems to envisaged in the *Ordinatio* text – or immediately (this seems more in keeping with the text of the *Lectura*): the intelligible species from the items that most strongly move the sense cause us to think confusedly of the most particular species of that item and a habitual cognition in the sense of the presence in the intellect of the distinct content of being occurs. After an unspecified period of actual confused cognition, actual distinct cognition begins by drawing upon the reserve, so to speak, of the distinct habitual cognition of being that has become present in the soul. It is through the pro-

⁶² Cfr. «unde quando per viam divisionis acquiritur definitio, quae facit distinctam notiam definiti, prius cognoscuntur definitientia quae sunt magis communia» (SCOTUS, *Lectura*, I, d. 3, pars 1, q. 2, n. 75, ed. xvi, p. 253).

cess of descent from the distinct notion of being – sometimes described as a ‘reditus’, an ‘inquisitio’, or a ‘divisio’ – that the confused cognitions we have get converted to distinct and, for categorical items, definitional awarenesses of the items of which we are initially confusedly aware.

Furthermore, if this interpretation is correct, there is a remarkable parallel between Scotus’s theory and Henry of Ghent’s theory. Henry has our unconscious and quasi-habitual awareness of being/Being as the reservoir from which our distinct awareness of the world eventually comes. In like fashion, Scotus has our unconscious, but distinct habitual cognition of being as the ultimate source of our distinct awareness of the world. Though Scotus would not allow that the awareness of being is an awareness of the divine being, he has a theory that bears remarkable structural similarities to the view that seems to be the chief target of his criticism.

ABSTRACT: *This article examines the sources for Scotus’s critique of Aquinas and Henry of Ghent regarding being as the first object known and its role in the development of our intellectual knowledge. Viewing Aquinas’s and Henry’s own treatments against the background of what might be called Scholastic developmental psychology and in particular the thesis that God is the first object known, the article sketches out Aquinas’s view that being and not God is the first object of the intellect, even though it is not in confused manner. Turning to Henry’s theory that God is the first confused object of awareness, but being the first concept distinctly known, the article then lays out Scotus’s critique of both of these alternative views. What emerges, apart from the details of the critique, is that Scotus’s theory has adapted elements from both Thomas and Henry in his own quite distinctive theory of the relationship between mind and being.*

KEYWORDS: *John Duns Scotus, Henry of Ghent, Thomas Aquinas, theory of knowledge, object of the intellect, ideogenesis, metaphysics, epistemology.*

ABSTRACT The paper discusses a possibility of integral combination of various approaches for the adequate understanding of human being. In this regard, I analyze the feeling of love in the context of rational cognition and also suggest a secular interpretation of religious images and symbols that allow us to understand well-known heuristic and moral notions in a new light.

The idea of an integral philosophy of human being presupposes an organic combination of various approaches and methods that study humans. Its most proximate basis is an integral nature of man that links together opposite qualities: spirit and body, feelings and reason, rational and irrational, mortal and immortal. Just mentioning these essential characteristics – homo sapiens, homo faber, homo ludens, homo creans and others – we may realize how ever many-sided human being is, however at the same time we cannot represent human creature as a mechanical combination of these various qualities. Rather, human being is an integral whole, an interpenetrative unity of various attributes and accidentia.

Being and Essence: A Survey of Perspectives

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INTRODUCTION

It behooves upon no other discipline but metaphysics to enquire into the ontology of things that “are”. It is its duty to investigate being, because being is the first principle which one comes to knowledge of and to also make reference to all that relates directly or indirectly to being. We philosophize on something that is or nothing. Since we cannot philosophize on nothing, then we must enquire into things that are. Metaphysics is called first philosophy because it enquires not into all things, but what makes all things ‘to be’-being. All that is has a being, and so in the study of “being” we invariable come to terms with the universe in all its diversity. Some key philosophical questions that pertain to this enquiry into being include existence, causality, immortality, ethics and morality, free will and determinism. In this essay, we shall be looking at being and essence as discussed by some notable philosophers from the Pre-Socratic era to the modern age. However the first segment shall cover the general notion of being and essence while the second part will try to expose the view of particular philosophers.

CONCEPT OF BEING.

The word being is a derivative of the verb “to be” and is used in various senses. In the logical order, “to be” is used as a verbal copula connecting two or more ideas in our minds. For example

when we say that “man is a species”, we do not mean to express the existence of man or a particular man, but to relate man to a group or class. The “to be” does not imply existence of the subject in reality. It rather serves to connect the ideas of “man” and “species”.¹ In another logical sense, “being” is used with respect to anything about which a proposition can be found, in which case it is either a negation or a privation. For instance “Tolu is blind” is a privation; “the stone is hungry” is a negation. It must be pointed out here that being in the logical order is not the same as “Nothing”, because nothing does not exist, and so cannot be in the intellect.

In the real order, “to be” applies to a mind independent existence. The attribute implicitly or covertly implies the existence of the subject of the proposition. For instance “Man is mortal”. For man to be mortal, he must first exist. Thus the verb “to be” does not merely act as a copula in this case, but as a describer of the real existence of the subject. Existence is predicated of it *ipso facto*.

In the real order, ‘being’ refers to reality in a two folds substantive ways. First, being may be used in a strict sense to refer to a subject that exercises the action indicated by the verb “to be”. In this way, the predicate must be something that really and truly exists. Secondly, it can be used in a loose sense to predicate things that are no longer in existence, never were in existence or never will be in existence.²

DEFINITION OF BEING

It is such a difficult task to attempt a strict definition of being. Definitions restrict things to a particular genus, but being is beyond a genus, as whatever will be named as a genus will fall under being and not the other way round. Being is both universal and particular. What we can

¹Thomas Aquinas, *Commentary on Metaphysics*, lect. 8, n. 433.

²Henry Koren. *An Introduction to the Science of Metaphysics*. (London: B. Herder Book Co. 1955), p.21

succeed in doing is to give a description of being which is not all encompassing. Being is that which is, where act is “to be”, or that which has a reference with “to be.” The referent to “to be” is called essence while “to be” itself is called existence.³

What the human intellect comes to knowledge of first is the primary object of metaphysics. Being is the first ontological concept because every other thing finds its root in being. Our foremost knowledge is that we “are”, that others are and that we are different from other things. Whether there is but one “Being”, or that being is numerous is an issue that is yet to be resolved by metaphysicians. This disparity has created different schools on the ontology of being. The monists hold that being in general exists as an entity outside the mind, yet there is but one being. All other beings are a modification or aspects of this one Being. The dualists posit that there are two kinds of being: the material being or body and immaterial or mind. The pluralists are of a different opinion. For the pluralists, as much as we have things that exist, so far do we have beings.

How we abstract universals

When we are presented with a sense data of a corporeal thing, the human intellect by virtue of its faculty dematerializes it, and extracts from it an immaterial idea. This idea is not the thing in itself, but an idea of its genus. For instance, when we come across Dada and Ifeoma, what we first abstract from them is not their sizes or weights or eye colour, but what they are and share in common -rational creatures. However much we choose to leave out their appearances, it is undeniable that the immaterial universal concept is a product of their appearance, yet quite different in ontology from it. In the abstraction of being, nothing is left behind, because the

³Henry Koren. *An Introduction to the Science of Metaphysics*. (London: B. Herder Book Co. 1955), p.23

appearances, characteristics and accidents are all modes of being. Each has a reference to being. Each is being in a sense.

Even though the substance and other categories of a being are different, yet they are retained in our abstraction of being. However, the retention is not something explicit, but implicit. By this we mean that each category retains its peculiarity, but still contributes in an imperfectly unified manner to “being”. The unity of these aspects of being is not perfect, else the identity of each category will be lost, that is why we can have the expression “a tall black lady” or “a wide double wooden door”. We know these expressions refer to a rational animal, and a concrete object, yet their categories are not collapsed.

Thus our concept of being abstracts from the differences of its inferiors (categories or accidents) only in so far as it abstains from determining the exact nature of the relationship among the inferiors and the “to be”. No wonder the critics of metaphysics believe that metaphysicians are deluded. For these critics, being is merely a concept to represent the relationship between inferiors of a thing, and never a thing that exists in itself. ⁴

Property of being

The simplicity of being removes it as a member of a genus or species. Generally speaking, the transcendental property of a thing is that which belongs properly to its being by necessity. But because being is a unity of its substance and inferiors, the transcendental property is that which belongs to its essence necessarily and immediately. It is a holistic conceptualization of being that identifies all the being represents. For instance “Man is a rational animal.”

⁴ Alfred, J. Ayer. *Language truth and logic*.(New York: Dover publications. Inc. 1952). p. 42

The transcendental property of the subject 'Man' is rational animal and this property is both necessary and immediate for and to man respectively. Transcendental properties include being, one, thing, true, good and others. Transcendental concepts of being describe being absolutely and relatively. By absolute we refer to the being as to itself. Absolute affirmation of a being is that it is something. Unlike the common usage of being which expresses that act of existence, absolute affirmation of being is the "whatness" or "quiddity" of a being. In the relative sense, being is relative to other beings. Being is "good" when it agrees with the appetite, "true" when it agrees with the intellect and "other" when it is asserted as being different from other things.

The categorical properties of being are thus properties derived from the categories of being which are not explicitly stated in the transcendental concept of being. This concept limits the expression of being to a special mode of being. Far from it that what is expressed by the categorical property is inconsistent with the transcendental property of that being, but it expresses the reality of that being in its own way. For instance being in itself describes the substance as redness describes the colour, Thickness describes the consistency, and rational describes the form.

In a nutshell, a being is something that exists, it is one and undivided, good in its own sense whether absolutely or relatively, true, and not something else. We have universal being and particular being as kinds of beings while also having modes of being.

ESSENCE

Can it be said that the concept of "to be" or being per se will suffice to describe what a thing is? Can being express the "thisness", "whatness" or "quiddity" of a thing? Most philosophers who have commented on the metaphysical question of being have made a clear cut, yet inseparable

distinction between the act of “to be” and the act of being itself⁵. While the former is called essence, the latter is termed existence. Essence is that by which a thing is “what it is”. It is the nature and quiddity of the thing. The potency to “being” is called essence, while the act of being is called existence. Therefore as potency is to act so is essence to existence. Nevertheless these two terms must be seen as two principles in a thing rather than two beings compacted in a thing. Thus they do not form a composite, but are united seamlessly and depend upon each other. In finite beings which are not subsistent, these principles remain distinct, but in God whose potency is His act, essence and existence are one and the same. In Him, none is anterior to the other.⁶

In finite beings, we have a multiplication of beings (kind of being in the particular sense) and with multiplication comes limitation. Anything limited is not fully actual and lacks perfection. So with this comes potency towards perfection as the being struggles to deal with its imperfections. The tending towards perfection is the “act”. So finite beings are composed of limited imperfect “to be” and a principle of limitation, which is in potency of actuality to perfection. It sheds light on the relationship between essence and existence. Essence as a principle perfects existence, and since potency precedes act, essence precedes existence.

Finite beings within a genus (here we mean being as in nature) possess the same specific essence yet there is a kind of differentiation or particularity among them. One member can be easily differentiated from others in the genus without it being pulled out of the genus. How is this distinction possible if they are said to share a specific genus? Is it that essence is multiple?

It is not possible for the individuals of a genus to possess essence in an unlimited manner, for with unlimitedness comes perfection. If they be unlimited, then they are rather in act than in

⁵Cf. Henry Koren. *An Introduction to the Science of Metaphysics*. (London: B. Herder Book Co. 1955), p. 130

⁶E. J. Lowe, “Being”, *The Oxford Companion of Philosophy*, Ed. by Ted Honderich. 1995. p. 82

potency and logically each individual will be a genus in itself. It is illogical for two unlimited acts to have the same specific species.⁷ In nature, there is a perfect essence such that each individual member of the genus shares of this essence in a limited way. By this, each member receives the specific perfection of the essence in a limited potency, making each individual peculiar yet well fitted into the genus.

Therefore in essence, there exists act and a limited potency. The act is the form while the limited potency is the matter making essence a composite. Just as essence and existence are distinct but inseparable, so is matter and form. They enter into a real composition yet are not held together by any third party. On this unity Aristotle says” *Form is united to matter without any intermediary. For it is by its very essence that it belongs to a form to be the act of such a body and not by means of anything else.*”⁸ Whatever perfection an essence comes to is derived from its form which is preceded by the matter underlying it. That which we refer to as matter in the natural sciences is not what metaphysicians are talking about here. Matter as defined in the natural sciences is called secondary matter in metaphysics and it takes root in the proximate or prime matter. Aristotle sums up this whole argument in these words:

*proximate matter and form are one and the same thing, the one potentially and the other actually. Therefore it is like asking what in general is the cause of unity and of a thing being one. For each thing is a unity and the potential and the actual are somehow one. Therefore there is no other cause here unless there is something which caused the movement from potency into actuality.*⁹

Matter is the principle of individuation. By individuation, we mean what sets a thing apart from all other things. The concept of individuation implies two things:

⁷Henry Koren. *An Introduction to the Science of Metaphysics*. (London: B. Herder Book Co. 1955), p. 144

⁸Thomas Aquinas, *Summa Contra Gentiles*. C. a.71

⁹Cf. Aristotle, *Metaphysics*, Bk VIII, 1045b ,19-24

1. Incompatibility by which a thing is undivided in itself but divided from every other thing.¹⁰ Matter renders form incommunicable as soon as it receives it. But in itself, it is purely potential, indistinct and indeterminate; hence matter cannot become the sole principle of individuation.
2. Distinction by which a thing is itself and not another thing. The principle that individuates or rightly gives a being its distinction is found in quantity otherwise called extension. Whatever has extension has position and is distinguished according to its position. Thus the principle of individuation is matter marked by quantity

Matter is the efficient cause which produces individuals. It is responsible for accounting for all the other properties of a being or its mode of existence, from its transcendental properties.

Categories

We divided the concepts of being into transcendental and predicament or categorical concepts. Categorical concepts are formed only in those beings that are related to their “to be” within a kind of determinate and invariable relationship.

Categories are predicates of beings found only in finite beings, and so are in relation with matter. They apply to all finite beings in a formally univocal manner, and cannot be reduced to any more general modes which apply to them univocally. Thus when we say a stone is smooth, the term smooth predicates the subject stone describing a special mode of life. The concerns about categories and how many there are in nature is equally a thing of great debate. Categories are divided into substance and accidents. Substance is beyond sense perception while accidents are within the realm of empirical observation. Although categories apply strictly to matter, we must

¹⁰Thomas Aquinas, *Summa Theologiae*, I, q.29, a.4.

be cautious about reducing them strictly to sensible things. Purely extrinsic denominations do not express any special mode of being and so do not add any reality to being.

We have highlighted the general notion of being and essence. While at this, we have deliberately introduced terms such as potency and act, causes, inferiors. These terms become relevant when we approach being from the point of change. We shall now take a tour of the views of various philosophers.

PARMENIDES

Born ca. 480 BC, Parmenides was a native of Elea, southern Italy and founded the Eleatic school of philosophy. He holds a monistic concept of being. Parmenides believes that true being is “The One” which is infinite and indivisible.¹¹ He stands in opposition to the Heraclitan and Milesian schools that teach the emergence of all things out of something else from a union of opposites, and that although there is only one basic stuff in the universe, this stuff is the source of a variety of things bringing them into being by the process of change.¹² Parmenides insists that there is only one perfect being, that lacks a union of opposites. Parmenides does not conceive the “One being” as the Christian God, on the contrary, he seems to think of it as material and extended. The One being permeates the whole of the universe because he speaks of it as a “sphere.” Change for Parmenides is absurd logically. It is mere illusion. If there is but one substance which is perfect, why then will it undergo a change? And if it does undergo a change it must become something else, thus introducing another being into the universe which contradicts his monistic position. We can never talk of something coming into being because “what is simply is”. What is can never have come to be, nor cease to be. Being is one continuous infinite substance that has

¹¹ Bertrand Russell. *The History of Western Philosophy*. Fourth Edition. (New York: Simon and Schuster. 1945). p. 55

¹² Samuel Stumpf. *Philosophy: History and Problems*. Fifth Edition. (New York: Ms. Graw-Hill, Inc. 1994), p. 16

no gaps but a coherent whole. It is not deficient hence is complete and bounded and cannot be changed or moved.¹³ Change, for him, is the confusion of appearance with reality and opinion with truth. All of Parmenides' argument hinges on the contrast between non-being and being; becoming cannot be 'being' so the former is placed in the category of non-being. Since we cannot think of something that "is not", then becoming or change is an illusion.

PLATO

Plato is commonly associated with his doctrine of "world of forms" and this pervades all of his philosophy. The world that we experience is defective and full of errors, as compared with the real world of ideas. The beings in the world of forms are eternal, perfect and in some sense pragmatic for the structure and character of the world we live in.

Plato tries to solve the Pre-Socratic argument of being with a decisive and truly powerful argument knit around the idea of "degrees of intensity or existence of being". The real world is where being really is and exists. There we have existence and essence as one and the same, such that all things there are act and are in a perfect state. Things in the concrete world are mere semblance of those in the real world, and so are not "being", but "becoming". In becoming, they move from potency to actuality and tend towards perfection.

Form is an immaterial thing that exists and by its existence, it is a being. Form thus has being and is the essence of a thing, the essential nature of the thing and by which it is possible for us to make judgment about it. Essence is Forms like goodness, beauty, truth, justice and love. He goes on to show how forms which are not in the "world of forms" are becoming even though they still retain their property of immateriality. Becoming is a function of change and change is directed to

¹³Frederick Copleton. *History of Philosophy*. Vol. 1: Greece and Rome. (London: Image Books, 1962).p. 47.

material things. Therefore, for Form to be “becoming” it must have a link with matter. Plato clearly states it that Forms are separate from concrete things, existing apart from the things we see. They exhibit an existence independent of matter and persists when matter corrupt. The relationship between matter and form is three fold¹⁴

1. As the cause of the essence of matter, matter owes its existence to form in some way.
2. With respect to participation, matter participates in some degree in the perfect model of class of which it is a member, thereby participating imperfectly in the perfect form.
3. Matter imitates or copies the form.

These distinctions solve the problem of contingency and necessity. For instance the idea of a house is in the mind of the architect. The idea of the house is its form while the concrete house is the matter. Whether the house is destroyed or not, the form of the house remains untainted, necessary and perfect. Thus, as the concrete house is contingent upon its form, so the form is necessary to the concrete house. Plato insists that form and matter lack a direct connection. They are separable realities and are related only by a kind of participation and imitation with only a pragmatic intention. If this is so, then form must be locatable somewhere in matter. This is a question Plato may not be able to answer.

As said easier, we come to the knowledge of form by abstracting from concretes. Every form we abstract from things such as goodness, justices etc. are reflections of the real perfect goodness, justice etc. He also creates a sharp distinction between sensible and insensible beings. In the realm of sensible beings we find the unchanging, ever-being, eternal forms. In the other realm is

¹⁴Samuel Stumpf. Philosophy: History and Problems. Fifth Edition. (New York: Ms. Graw-Hill, Inc. 1994), p. 60

matter, a non-sensible being of lesser stuff which is subdued and elevated by form. This results in a sharp dualism that relegates material to the background in favour of spiritual things.

ARISTOTLE

According to Bertrand Russell, Aristotle's metaphysics, roughly speaking, may be described as Plato diluted with common sense.¹⁵ Aristotle succeeds in expounding Plato's theory of forms by making sense out of his flaws.

He begins by first refuting Plato's concept of an ideal form "locked-up" somewhere, from which imperfect corporeal things derive their pseudo-existence. For Aristotle, being is the totality of things. In everything, there is essence and existence. Being can also be predicated of a category or the truth of proposition. Therefore being is everything that exists in nature both phenomena and noumena. Essence is attributed to the first, but not to the second because it lacks the unity of form and matter.¹⁶ Essence is the subject, the "thisness" of a thing which makes it that thing and not another. Substance is the essential nature of a thing, that which is not asserted of a subject, but of which everything is asserted.¹⁷ Aristotle identified three kinds of substance:¹⁸

1. Sensible eternal substances-God
2. Sensible perishable substances-creatures
3. Immovable substances- celestial bodies.

¹⁵Bertrand Russell. *The History of Western Philosophy*. Fourth Edition. (New York: Simon and Schuster. 1945). p. 87

¹⁶ Cf. Martha, C, Nussbaum. "Aristotle". *A Companion of Metaphysics*, Second Edition. Ed. by Jaegwon Ki et al., 2009. p. 120

¹⁷ Cf. Aristotle, *Categories*, 3b, 10-12

¹⁸ Cf. Aristotle, *Categories*, 2a, 11-17

In a substance, we have the primary and secondary substances. The primary substance is the core individual substance that is ontologically the subject of the accidents and logically the subject of the predicate. The secondary substance is that which although ontologically does not have a subject, logically has a subject in the logical circle of attributes.¹⁹

Again substance is composed of form and matter. Matter accounts for corporality, but he uses form in various ways: As the shape or boundary of a thing; as the soul in man; as the essence of a thing; and finally as its primary substance.²⁰ Matter has the primary substance which is the first category. The other categories take root in the secondary substance and are quantity, quality, relations, place, time, position, state, action and affect.²¹

Unlike Plato who treats form and matter as two distinct entities, Aristotle sees them as two principles with an inseparable unity. Form does not give life to matter because they are both a composite of essence which is different from existence.

Change is a phenomenon confined to occur in material things. He says “*nor has everything got matter but only those things which come to be and change into another. Those things which without ever being in course of changing are or are not have no matter.*”²² Things that are undergoing a change proceed from potency to act. Matter is in potency and form in act. As potency is to act so is essence is to existence. Thus God is pure act because in Him potency and act are one and the same.²³ But sensible perishable things undergo the move from potency to actuality as their essence is different from their existence.

¹⁹Cf. Aristotle, *Categories*, 23a, 8-40

²⁰Bertrand Russell. *The History of Western Philosophy*. Fourth Edition. (New York: Simon and Schuster. 1945).p. 92

²¹Aristotle, *Categories*, 1b, 25

²²Aristotle, *Metaphysics*, Bk VII, 1044b, 27-29

²³ Cf. Aristotle *Metaphysics*, Bk XII 1069a, 22-29

By the process of change, things take new forms, raising the question of cause apart from change. Aristotle then goes on to the causes that lead to a change. There are according to him four causes: formal, material, efficient and final causes.²⁴ By these causes, a thing continues to forms that set them apart, yet its essence is not unidentifiable because in change something is lost, something is gained and something remains. He does not fail to identify that there must be a first cause different from the unmoved movers because by virtue of the order in the world, there must be a cause.²⁵

THOMAS AQUINAS

St. Thomas Aquinas a leading school man built his metaphysics upon that of Aristotle. He says that everything has two principles that explain its being: Essence and Existence. Essence may be described as the "what" of a thing. It is the quiddity of the thing, that which is known about it by our forming of a concept. It is a formal principle since for material reality it is abstracted by the human intellect. It is also universal principle making many material individuals to be of the same kind (for angels, it makes each angel to be a species unto itself). But, it is obvious upon reflection that "what a thing is" and "that it is" are completely different statements.²⁶

Essence is divided into form and matter found in composite. It cannot be said however that either one of them alone is called the essence. Essence can be taken in three forms:

1. In its concrete form as individualized. Here involving matter and form.

²⁴ Cf. Aristotle, *Metaphysics*, Bk V, 1013 b, 24-34

²⁵ Cf. Aristotle, *Metaphysics*, Bk XII, 1076a, 38-48

²⁶ Keith Herman. *The Metaphysics of St. Thomas Aquinas*. (Milwaukee: The Bruce Publishing Company. 1958) p. 97

2. In itself as cut-off from individual existence and logical existence by which essence transcends what the senses can perceive and the intellect can abstract. This may be likened to the very essence of God which transcends the mind and senses of man.

3. As a logical universal existing as a being in the mind which can only be abstracted but not perceived. It is the essence of transcendental thing we come to be logically extrapolating not from experiencing their very essence, but inference from experiencing other things. It is essence by knowledge.

That a thing is or has existence is a principle really distinct from its quiddity. In no case (except for God who is *ipsum esse subsistens*) does the essence of a thing indicate anything about whether that thing really is. The essence of a horse that exists, and the essence of a horse that doesn't are absolutely the same, namely horse-ness; a horse's existing is totally different from what kind of a thing it is. Therefore, there must be something about really existing things that accounts for this very existing, and it is not their essence; it is their existence. Existence then is that which makes essences to be, to exercise the act of existing. St. Thomas indicated the activity of being, existence, with the Latin of "to be", *esse*.

By saying that existence is the act of being (*esse*) exercised by beings, Thomas understands it to be similar to form, in that it actualizes potency as form actualizes matter. Taking the notions of an act/potency relationship learned from cosmology as form and matter, he expands the notion of form by means of analogy. Just as the substantial form of a material being determines and makes actual some part of matter, so *esse* actualizes the potency of a thing's essence. This similarity is an analogous one because, the *esse* and essence of a thing are not separable in real beings, as the form is separable from matter in abstraction; the two are only distinguishable because of their

own very real distinction. *Esse* is logically prior to all other actuality because a thing cannot be in a certain way unless it simply is. So, because of this logical priority of existence, Thomas calls it "the most formal of all." "It is the actuality of all acts" since a thing is in virtue of *esse* and "acts are of supposits."

Being used in the sense of substance and accident is directed strictly to material things. He says

*being is divided into different genus according to the different modes of predicate that follows the different modes of being because there are as many modes of predicating being as there are kinds of existence to be signified. Therefore the primary division of being are called predicament because they are differentiated according to different modes of predication. For anything predicated, some signify a something that is substance others signify a quality, quantity and so on. To each mode of predicate that must be an existing something signifying the same thing.*²⁷

Existence is the perfect of all perfects, the sum of all intermediary perfections.²⁸ It is the aim of any change. "*Existence apart from essence is not intelligible, for the act of existence by itself is not reducible to concepts, a point that essence-less existentialists try to hammer home.*"²⁹

Existence completes the essence or nature of a being in the order of substance and makes it possible to be the subject of its predications. It sets the essence apart from other essence so that it cannot be predicated of them.

On the issue of cause, Aquinas agrees with Aristotle on the four causes, but associates the role of the first cause to God, who is also the unmoved mover. He comments that:

the whole universe is like one people and one kingdom, in which there must be a ruler who directs all who are in it. This is the conclusion of he (Aristotle) comes

²⁷Thomas Aquinas, *commentary on Metaphysics*, Lect. 5 n. 890

²⁸ St. Thomas, *De Potentia*. Q.1a. 2ad. 9

²⁹ KeithHerman. *The Metaphysics of St. Thomas Aquinas*. (Milwaukee: The Bruce Publishing Company. 1958) p.

*to. That there is one Lord of the whole universe namely the First Mover, the First Truth, and the First Good, whom we have called God. May He be blessed through all ages. Amen,*³⁰

JOHN LOCKE

John Locke's concept of being and essence stems from his theory of knowledge. In his book "*Essay concerning Human Understanding*", he treats primary and secondary qualities extensively. Locke posits that if we do not deny the fact that we perceive things then we cannot deny that they exist. These qualities then must subsist in some kind of a substance for they possibly cannot be floating around without something holding them together. Substance for Locke is "*being*" or *a thing or something we know not what, or of which we have no clear idea than that it is something which supports accidents or other simple ideas or modes and is not supported as a mode or an accident.*"³¹ His central theme of substance is that:

1. Each individual object has a substratum
2. The substratum is conceived of in the first instance as the support to the qualities and power of the individual substance
3. The qualities and power of the individual object inhere in the substratum and cannot exist on its own
4. The substratum subsists of itself and in nothing else
5. The inherent relationship is in some sense logical and non-causal.
6. The substratum is not divided and not directly available to sensory observation and so its principle remains obscure.

³⁰ Thomas Aquinas, Commentary on the metaphysics Lect. 12, n. 2663

³¹ Lex Newman, *Locke's Essay Concerning Human Understanding, A Cambridge Companion to Locke*, (Cambridge: Cambridge University Press, 2007) p. 161-162

He seems to follow preceding philosophers in his description of substance. Lock divides essence into real and nominal. Real essence is the make-up of its particulate parts in nature but is unknown to us. Nominal essence is an epistemological essence and nothing more. It is a criterion by which we mark off the members of a species, sorting them into categories.³² Thus essence cannot be reached in itself, but by virtue of appearances, we create an essence for things by which we identify them.

CONCLUSION

Being and essence are not two descriptive attributes about things that “are”. Rather being is the “thing” while essence is one of the principles that make up a thing. Essence and existence both stand as principles amalgamated in this one simple being. Being by virtue of its principles is considered existing and actualizes perfection by undergoing change, a movement from potency to actuality, a perfection of the existence by the essence. The challenge has however been to arrive at a clear cut and description of essence whose true nature is quite slippery in the explanation of various philosophers.

³²Anthony Kenny, *A New History of Modern philosophy*, Vol. 3. (Oxford: Clarendon Press, 2006) p. 50

BIBLIOGRAPHY

Aquinas, Thomas. Commentary on the Metaphysics of Aristotle.

Aquinas, Thomas. *De Ente et Essentia*. Tranl. By C. C. Riedl, 1937

Aquinas, Thomas. *De Potentia*. Trasl.by The Fathers of the English Dominican Province.

Benziger Bro. Edition, 1952.

Aquinas, Thomas. *Summa Contra Gentiles*.Tranl.By The Fathers of the English Dominican

Province.Benziger Bro. Edition, 1952.

Aquinas, Thomas. *Summa Theologiae*.Tranl.by The Fathers of the English Dominican Province.

Benziger Bro. Edition, 1947.

Aristotle, *Metaphysics*. Transl. by Arthur Platt. New York: Random House Press, 1941.

Alfred, J. Ayer. *Language Truth and Logic*.(New York: Dover publications. Inc. 1952). p. 42

Copleton, Frederick. *History of Philosophy*. Vol. 1: Greece and Rome, London: Image Books,

1962.

Keith, Herman. *The Metaphysics of St. Thomas Aquinas*. Milwaukee: The Bruce Publishing

Company. 1958.

Kenny, Anthony. *A New History of Modern Philosophy*, Vol. 3, Oxford: Clarendon Press, 2006

Koren, Henry. *An Introduction to the Science of Metaphysics*. London: B. Herder Book Co.

1955.

Loux, J. Micheal. *Metaphysics, a Contemporary Introduction*.Third Edition. New York:

Routledge Press. 2006

Lowe. E. J. "Being", *The Oxford Companion of Philosophy*, Ed. by Ted, Honderich. New York:

Oxford Press University. 1995.

Newman, Lex. *Locke's Essay Concerning Human Understanding*, A Cambridge Companion to Locke, Cambridge: Cambridge University Press, 2007

Nussbaum, C. Martha. "Aristotle". *A Companion of Metaphysics*, Second Edition. Ed. by Jaegwon Ki et al., New York: Wiley Blackwell. 2009.

Peter Van Inwagen. *Metaphysics*. Third Edition. Boulder: Westview Press. 2009.

Russell, Bertrand. *The History of Western Philosophy*. Fourth Edition. New York: Simon and Schuster. 1945

Stumpf, S. Samuel. *Philosophy: History and Problems*. Fifth Edition. New York: Ms. Graw-Hill, Inc. 1994.

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HUMAN FLOURISHING AND THE APPEAL TO HUMAN NATURE*

BY DOUGLAS B. RASMUSSEN

[Aristotle] certainly does think that the nature of man—the powers and needs all men have—determines the character that any satisfying human life must have. But since his account of the nature of man is in general terms the corresponding specification of the best life for man is also general. So while his assumption puts some limits on the possible answers to the question “how shall I live?” it leaves considerable scope for a discussion which takes account of my individual tastes, capacities, and circumstances.

—J. L. Ackrill, *Aristotle's Ethics*

I. INTRODUCTION

If “perfectionism” in ethics refers to those normative theories that treat the fulfillment or realization of human nature as central to an account of both goodness and moral obligation,¹ in what sense is “human flourishing” a perfectionist notion? How much of what we take “human flourishing” to signify is the result of our understanding of human nature? Is the content of this concept simply read off an examination of our nature? Is there no place for diversity and individuality? Is the belief that the content of such a normative concept can be determined by an appeal to human nature merely the result of epistemological naiveté? What is the exact character of the connection between human flourishing and human nature?

These questions are the ultimate concern of this essay, but to appreciate the answers that will be offered it is necessary to understand what is meant by “human flourishing.” “Human flourishing” is a relatively recent term in ethics. It seems to have developed in the last two decades

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¹ Contrary to everyday usage, “perfectionism” in ethics does not typically refer to attempts to become God-like, immune to degeneration, incapable of harm, or anything non-human. Rather, it refers to becoming human, specifically, to fulfilling those potentialities that make one human.

because the traditional translation of the Greek term *eudaimonia* as "happiness" failed to communicate clearly that *eudaimonia* was an objective good, not merely a subjective good.

The employment of "human flourishing" in the discussion of "happiness" has been successful for the most part in getting people to understand that *eudaimonia* is not merely subjectively determined. "Human flourishing," however, remains a technical notion, and its exact meaning varies with different theories of the human good. Further, "human flourishing" has developed a life of its own. It is now employed by neo-Aristotelian ethicists, myself included, as the central concept with which to develop an alternative to consequentialistic² and deontological³ conceptions of ethics. It is a complex notion whose many interrelated features generate an elaborate conception of the human good and obligation.

This essay is only part of a larger argument for this view of the human good. However, it is my aim to move this viewpoint forward by showing that this neo-Aristotelian conception of human flourishing is more plausible than is generally thought. Accordingly, Section II of this essay will outline the central features of a neo-Aristotelian conception of human flourishing. Section III will discuss the role of practical wisdom in this conception of human flourishing. Section IV will deal with questions and difficulties faced by this conception, and Section V will take up a discussion of some of the questions noted in this essay's first paragraph. Overall, the concern will be with determining what type of connection there is between this conception of human flourishing and human nature. By clarifying the character of this connection, I hope to advance the plausibility of this neo-Aristotelian conception of human flourishing.

One cautionary note should be sounded, however. What follows does not purport to be textual exegesis of Aristotle. "Neo-Aristotelian" is used here to stand for "modern theorizing which incorporates some central doctrines of Aristotle. . . . Such theorizing should critically assess his claims in light of modern philosophical theory, scientific research, and practical experience, revise or reject them where necessary, and consider their application to . . . contexts not envisioned by him."⁴ Though often found together, there is a difference between neo-Aristotelian theorizing and an exegesis of Aristotle's texts. It is in the foregoing sense that the following account of human flourishing is neo-Aristotelian.

² A consequentialistic theory is any theory in normative ethics that attempts to determine obligations *merely* by whether an action or rule produces the greatest, net expected "good" (or least "bad") consequences.

³ A deontological theory is any theory in normative ethics that holds "duty" and "right" to be basic and defines the morally good in terms of them. Such theories attempt to determine obligations apart from a consideration of what promotes or expresses the good. For Kantians, this is accomplished primarily by a universalizability test.

⁴ Fred D. Miller, Jr., *Nature, Justice, and Rights in Aristotle's "Politics"* (Oxford: Clarendon Press, 1995), p. 336, n. 1.

II. A NEO-ARISTOTELIAN CONCEPTION OF HUMAN FLOURISHING

This neo-Aristotelian conception of human flourishing offers a view of the human good that is (1) objective, (2) inclusive, (3) individualized, (4) agent-relative, (5) self-directed, and (6) social. I shall briefly and directly explain each of these interrelated features.

1. Human flourishing is an objective good. In terms similar to those used by Socrates in his question to Euthyphro,⁵ human flourishing is an object of desire and choice because it is desirable and choiceworthy, not simply because it is desired or chosen. In other words, it is desired because of what it *is*. Its constitution is what makes it good. Thus, human goodness is something ontological. It is a state of being, not a mere feeling or experience.⁶

Ontologically considered, human flourishing is an activity, an actuality, and an end (or function). Human flourishing is a way of living that consists in certain activities. *Omne ens perficitur in actu*: flourishing is to be found in action. It is not something static. These activities are those that both express and produce in a human being an actualization of potentialities that are specific to its natural kind.⁷ Finally, these activities also constitute the achievement of a human being's natural end or *telos*. Human flourishing is that-for-the-sake-of-which human conduct is done, and though flourishing is dependent on human agency for its achievement, it does not depend on such agency for its status as the ultimate end.

Obviously, the foregoing ontological considerations are complex and require further explanation. We will return to their discussion later when we explore the relationship between human flourishing and human nature. Before doing so, however, we need to grasp some of the other central features of this account of human flourishing, because they affect the character of that relationship.

2. Human flourishing is the ultimate end of human conduct, but it is not the only activity of inherent worth. It is not a "dominant" end that reduces the value of everything else to that of a mere means. Neither is it monistic and simple. Rather, it is "the *most* final end and is never sought for the sake of anything else, because it includes all final ends."⁸

⁵ The question that Socrates asks Euthyphro is, of course, whether something is pious because it is loved by the gods, or whether it is loved by the gods because it is pious. Plato, *Euthyphro*, 10.

⁶ This is not, however, to claim that having the proper feelings and experiences could not make up the good human life. Indeed, the good human life is traditionally understood as the satisfaction of *right* desire.

⁷ As will be discussed later, however, human flourishing is not some abstract universal; potentialities unique to the individual are also involved.

⁸ J. L. Ackrill, "Aristotle on Eudaimonia," in *Essays on Aristotle's Ethics*, ed. Amélie O. Rorty (Berkeley: University of California Press, 1980), p. 23.

Human flourishing is an "inclusive" end.⁹ It comprises basic¹⁰ or "generic"¹¹ goods and virtues—for example, such goods as knowledge, health, friendship, creative achievement, beauty, and pleasure; and such virtues as integrity, temperance, courage, and justice. These are valuable not as mere means to human flourishing but as partial realizations or expressions of it. As such, these goods and virtues are final¹² ends and valuable in their own right.

To understand this idea better, we should consider the difference between two relations of subordination to some end: the difference between (A) activities that are purely means or instruments to that end, and (B) activities that are ingredients in or constituents of that end. For example, consider the difference between the relationship of obtaining golf clubs to playing golf, and the relationship of putting to playing golf. While both activities are "for the sake of" playing golf, the former is only a necessary preliminary, while putting is one of the activities that makes golfing what it is. Furthermore, the actions taken to obtain golf clubs produce an outcome separate from that activity—namely, the possession of golf clubs that can be used—but putting has no end or result apart from itself. Its value is not that of a mere means. Its value lies in its being an expression or realization of the activity of which it is a constituent. As Ackrill states, "One does not putt *in order to* play golf. . . . Putting *is* playing golf (though not all that playing golf is)." ¹³

⁹ Irfan Khawaja has pointed out to me that the inclusive-dominant distinction is not logically exhaustive and that these terms contrast different issues. He suggests that the issues should be redefined as follows: the inclusive-exclusive distinction pertains to "What is included in human flourishing and what is not?" and the dominant-subordinate distinction pertains to "What is ordered to what and why?" This seems like a good way to discuss these matters. Nonetheless, the inclusive-versus-dominant terminology of W. F. R. Hardie and J. L. Ackrill is well-established and is sufficient for our limited purposes. For more on this issue, see Scott MacDonald, "Ultimate Ends in Practical Reasoning: Aquinas's Aristotelian Moral Psychology and Anscombe's Fallacy," *Philosophical Review*, vol. 100 (January 1991), pp. 31–66.

¹⁰ These could be regarded as somewhat similar to what John Rawls calls "primary goods," that is, "things that every rational man is presumed to want." See Rawls, *A Theory of Justice* (Cambridge, MA: Harvard University Press, 1971), p. 62.

¹¹ For convenience this term is used to stand for considerations that involve both the genus and the species to which a human being belongs.

¹² "A is more final than B if though B is sought for its own sake (and hence is indeed a final and not merely intermediate goal) it is also sought for the sake of A." Ackrill, "Aristotle on Eudaimonia," p. 21.

¹³ *Ibid.*, p. 19. As Ackrill implies, the relations of subordination are even more complicated than described here. See MacDonald, "Ultimate Ends in Practical Reasoning," for a discussion of these complications and a thorough defense of the idea that the human good is an inclusive end. MacDonald argues, however, that Ackrill's example of putting's relationship to golfing is not a good one for illustrating inclusivity, because it is logically possible to play a round of golf without putting. To illustrate inclusivity, MacDonald instead uses the example of running a ten-kilometer race as a constituent part of a triathlon. Yet it still seems that Ackrill's example of putting's relationship to golfing could be defended as a constitutive part if one noted that the end was doing well at golf or having the lowest score, not merely playing a round of golf.

Another point that is crucial to appreciating what it means for human flourishing to be an “inclusive” end is the idea that (C) some things can be done for their own sake and yet also done for the sake of something else. (C) is possible, since flourishing is not the result of the efforts of a lifetime; it is not something that one looks forward to enjoying in the future. Rather, it is a life that is worthwhile throughout. Thus, the constituents of such a life are more than merely means for bringing about what is to follow; they are also worthwhile in themselves. It is perfectly possible for something to be pursued for its own sake and still be a constituent of human flourishing.¹⁴ Indeed, as Aristotle states:

What is always chosen as an end in itself and never as a means to something else is called final in an unqualified sense. This description seems to apply to *eudaimonia* above all else; for we always choose *eudaimonia* as an end in itself and never for the sake of something else. Honor, pleasure, intelligence, and all virtue we choose partly for themselves—for we would choose each of them even if no further advantage would accrue from them—but we also choose them partly for the sake of *eudaimonia*. (*Nicomachean Ethics*, 1097bff.)

This view of human flourishing is open to the possibility that there may *not* be a preset weighting or evaluative pattern for the basic or generic goods and virtues that constitute it. Even if all the aforementioned goods and virtues are necessary to flourishing, an abstract analysis of human nature may not show us what their evaluative ranking should be. Such an analysis may not tell us how much time and effort should be spent in the pursuit of one necessary good or virtue as opposed to another. As we shall see, this possibility creates a basis for a conception of human flourishing that is different in many respects from that usually associated with perfectionist theories.

3. Human flourishing is individualized and diverse. It is dependent on *who* as well as *what* one is. Abstractly considered, we can speak of human flourishing and of basic or generic goods and virtues that help to define

¹⁴ Thus, the theory of obligation generated by this inclusivist view of human flourishing is one in which it is not necessary to calculate what the expected consequences of every proposed course of conduct might be in order to determine what is good and ought to be done. Nor is it necessary always to be open to the possibility of such calculation. Though calculation would be appropriate for dealing with matters that are entirely instrumental to human flourishing, this is not so when it comes to the components of human flourishing itself. The first principle of practical reason is, as Aquinas noted: Pursue good and avoid evil. Thus, the major concern is determining what in the particular and contingent is really good or virtuous. Once one discerns what is good or virtuous, one knows what ought to be done. It is in this respect that an ethics of human flourishing is not consequentialistic (as defined in note 2), because some virtues and goods are seen as activities that characterize our human flourishing itself, not merely as external means. This is not to say, however, that there might not be other senses (for example, a nonmaximizing sense) in which this view can be termed “consequentialistic.”

it. Yet this does not make human flourishing in reality either abstract or universal. Concretely speaking, no two cases of human flourishing are the same, and they are not interchangeable. Just as Mary's actualization of her potentialities is not the same as Bill's actualization of his, Mary's fulfillment is not the same as Bill's. There are individuating as well as generic potentialities, and this makes human fulfillment always something unique.

The generic goods and virtues of human flourishing are not like Recommended Daily Allowances for vitamins and minerals. Their weighting, balance, or proportion cannot be read off human nature like the back of a cereal box and applied equally across all individuals as if individuals were merely repositories for the generic goods and virtues.¹⁵ Rather, it is only when the individual's particular talents, potentialities, and circumstances are jointly engaged that these goods and virtues become real or achieve determinacy. Individuals thus do more than locate human flourishing in space. Human flourishing exists neither apart from the choices and actions of individual human beings nor independently of the particular mix of goods that individual human beings need to determine as being appropriate for their circumstances.

Just as our humanity is not some amorphous, undifferentiated universal, so human flourishing is not something abstract and universal. Rather, it is determinate and particular. Flourishing is not merely something achieved and enjoyed by individuals; it is itself individualized. Thus, this account of human flourishing is a version of moral pluralism. There are many *summa bona*. Yet this does not require that human flourishing be subjective either in the sense that it consists in merely having favorable feelings or in the sense that its value is conferred upon it simply by someone's preference or endorsement. Thus, this account of human flourishing offers diversity without subjectivism.¹⁶

4. Human flourishing is agent-relative. Abstractly stated, human flourishing, *G*, for a person, *P*, is agent-relative if and only if its distinctive presence in world W_1 is a basis for *P* ranking W_1 over W_2 , even though *G* may not be the basis for *any other* person's ranking W_1 over W_2 . There is no human flourishing *period*. Human flourishing is always and necessarily the good *for* some person or other.

It is not that flourishing merely happens or occurs within some person's life, as if a person were simply a placeholder for this ultimate value. Rather, the relationship between flourishing and a person's life is much more intimate. The status of human flourishing *as the ultimate value* arises within and obtains only *in relationship to* some person's life. That is to say, its value is found in and exhausted by those activities of a person that

¹⁵ Douglas J. Den Uyl, *The Virtue of Prudence* (New York: Peter Lang, 1991), pp. 37–38.

¹⁶ There is nothing incompatible about human flourishing's being objective and its being diverse or individualized. This is discussed in Section IV below.

constitute that person's flourishing. Further, human flourishing involves an essential reference to the person for whom it is good as part of its description. Human flourishing is thus neither a *tertium quid* nor a value-at-large.

Perhaps the best way to understand what agent-relativity means is to contrast it with its opposing view, the view that basic values and reasons are agent-neutral and that ethics is impersonal. The following two statements, the first by Henry Sidgwick and the second by John Stuart Mill, express this viewpoint well:

I obtain the self-evident principle that the good of any one individual is of no more importance, from the point of view (if I may say so) of the Universe, than the good of any other; unless, that is, there are special grounds for believing that more good is likely to be realized in the one case than in the other. And it is evident that as a rational being I am bound to aim at the good generally,—so far as it is attainable by my efforts—not merely at a particular part of it.¹⁷

The happiness which forms the utilitarian standard of what is right in conduct, is not the agent's own happiness, but that of all concerned. As between his own happiness and that of others, utilitarianism requires him to be as strictly impartial as a disinterested benevolent spectator.¹⁸

Accordingly, we are to take on the viewpoint of the universe and become impartial when determining our conduct. In effect, we are to adopt the perspective of a rational agent, considered apart from all individuating conditions—be they natural, social, or cultural—and eschew all values, rankings, and reasons that could not be held by such a rational agent.

In an impersonalist ethical theory, the fact that course of action C results in assistance to one's own personal projects, family, friends, or country, where non-C does not, provides no ethical reason for preferring C over non-C. These factors might explain how a person would feel about the situation, but when a person is acting from an impersonalist perspective, considerations of a personal nature are irrelevant and should not weigh more heavily. By adopting the perspective of such a rational agent, a person could never legitimately use some value crucial to *who* he or she is as a reason to give extra weight or importance to that value when determining the proper course of action. The individual *qua individual* is not important in an impersonal moral theory. The individual only represents a locus at which good is achieved or right conduct performed.

¹⁷ Henry Sidgwick, *The Methods of Ethics*, 7th ed. (Indianapolis, IN: Hackett Publishing Co., 1981), p. 382.

¹⁸ John Stuart Mill, *Utilitarianism*, ch. 2.

Thus, we may say that an ethical theory is impersonal when all ultimately morally salient values, reasons, and rankings are "agent-neutral"; and they are agent-neutral when they do *not* involve as part of their description an essential reference to the person for whom the value or reason exists or the ranking is correct. One person can be substituted for any other. The individual is merely a placeholder around which rules and abstract principles revolve. "For any value, reason or ranking V, if a person P1 is justified in holding V, then so are P2-Pn under appropriately similar conditions. . . . On an agent-neutral conception it is impossible to weight more heavily or at all, V, simply because it is one's own value."¹⁹ Accordingly, when it comes to describing a value, reason, or ranking, it does not ethically matter whose value, reason, or ranking it is.

According to the neo-Aristotelian view of human flourishing advanced here, an impersonal ethics and an agent-neutral conception of basic values and reasons are unsound. There is no great divide in the nature of things between the facts that can and cannot be ethically relevant. Particular and contingent facts can be ethically important. Of course, some may be more important than others in achieving human flourishing, but this cannot be determined from one's armchair alone. Certainly, there is, for this neo-Aristotelian view, no basis for holding that individual, social, and cultural differences among people are ethically irrelevant. They are, to the contrary, highly significant. Further, moral impersonalism's claim that values central to one's very conception of oneself may not be weighted more than less-central values is without foundation. The fact that a value is crucial to some person's deeply held personal project, but to no one else's, does not make it morally irrelevant. Indeed, the opposite is the case. Such value deserves consideration that is even more careful, precisely because of its relation to oneself. I will discuss these points further when I consider the role of practical wisdom in this conception of human flourishing.

There remain, however, three possible confusions about agent-relativity that must be considered at this time. The first has to do with the relationship between the objectivity of human flourishing and its agent-relativity. While aspects of this issue will be discussed in Section V of this essay, it should be noted that just because something is only valuable relative to some person does not necessarily make its value merely a matter of that person's attitude toward it or, indeed, merely something desired, wanted, or chosen. Nor is it merely a matter of a person's point of view. The old question "Relative to what?" is important here. Human flourishing is agent-relative in the sense that it is essentially related to some person or other, but this does not mean that it is essentially related to what a person merely desires, wants, or chooses. This neo-Aristotelian

¹⁹ Den Uyl, *The Virtue of Prudence*, p. 27. See also Eric Mack, "Moral Individualism: Agent Relativity and Deontic Restraints," *Social Philosophy and Policy*, vol. 7, no. 1 (Autumn 1989), pp. 81-111.

theory assumes that a human being is more than a bundle of passions and desires and that there are real potentialities, needs, and circumstances that characterize both what and who a person is. Thus, simply because one is interested in or has a desire for something does not necessarily mean that it is good *for* one. The agent-relative, as well as the individualized, character of human flourishing is not incompatible with its being something objective.

The second confusion is more subtle. It has to do with the issue of whether something can be valuable in its own right (that is, a final end, an end in itself) and nonetheless agent-relative. The problem seems to be that if something is an agent-relative value, then its value lies not in itself, but in something else. Thus, something cannot be valuable in its own right and agent-relative as well. This argument, however, confuses instrumental value with agent-relative value. Though all values may be related to some person or other, this does not mean or show that their value lies in their being mere means or instruments. As I noted in my earlier discussion of inclusivity, the constituent goods and virtues of human flourishing are, for example, valuable in their own right but nonetheless essentially related to the lives of individual human beings. Their value is not a matter of their being mere means to human flourishing; rather, it is a matter of their being expressions or realizations of it. There is no incompatibility, then, in something's being valuable in its own right and agent-relative.

What is even more to the point, however, is that there is no incompatibility in human flourishing's being the ultimate objective value²⁰ and agent-relative as well. As I have noted, there is no flourishing-at-large. There is no flourishing that is not essentially the flourishing-for-some-person. The human *telos* just is, then, the flourishing of each individual. Its value lies in the immanent activities that comprise the fulfillment of individual human beings. These activities are essentially a part of and thus are related to the lives of individual human beings. As such, human flourishing is not something that competes with the good of individual human beings, but is the very flourishing of their lives. Thus, it is perfectly consistent for the flourishing of individual human beings to be valuable in its own right *and* essentially related to individual persons. A commitment to the inherent value of human flourishing does not imply, then, that it is agent-neutral. Human flourishing is not something that can be exchanged or promoted regardless of whose flourishing it is. Agent-neutrality is not necessary for upholding either value-objectivity or choiceworthiness.²¹

²⁰ As Ackrill puts it, "the *most* final end . . . because it includes all final ends" ("Aristotle on Eudaimonia," p. 23).

²¹ The foregoing discussion of features (3) and (4) of human flourishing revises, develops, and expands upon material from chapter three of Douglas B. Rasmussen and Douglas J. Den Uyl, *Liberalism Defended: The Challenge of Post-Modernity* (Cheltenham, UK, and Northampton, MA: Edward Elgar, 1997).

Finally, agent-relativity should not be confused with egoism. To say that human flourishing is agent-relative does not mean or imply that human flourishing cannot involve concern for others or that acting for the welfare of another could not be a value or reason for one's conduct. Acting for the sake of another could be only good-for-you and not necessarily anyone else. Parents sacrificing for *their* children, or friends helping and nurturing one another, are among the many examples of how flourishing can be agent-relative and nonetheless involve authentic concern for others. Further, even in situations that are not regarded as instances of flourishing, we find agent-relativity compatible with concern for others, as in the case of soldiers risking their lives for *their* comrades during battle. Therefore, agent-relativity and egoism should be distinguished.

5. Human flourishing is a self-directed activity. This view seems to be endorsed by Aristotle, who makes the following observation about the difference between good fortune and *eudaimonia* when speaking about god:

[He] is *eudaimôn* and blessed, but not on account of any external goods but on account of himself and because he is by nature of a certain sort—which shows that being fortunate must be different from flourishing. For the goods external to the soul come of themselves by chance, but no one is just or temperate by or through chance. (*Politics*, 1323b24–29)

Human flourishing must be attained through a person's own efforts and cannot be the result of factors that are beyond one's control. Flourishing does not consist in the mere possession and use of needed goods.²² Rather, human flourishing consists in a person's taking charge of his own life so as to develop and maintain those virtues for which he alone is responsible and which in most cases will allow him to attain the goods his life requires.

Aristotle also notes that if our knowledge and actions are to enable us to *be* good, as opposed to us merely knowing and doing good, three conditions must be met. "(1) The agent must act in full consciousness of what he is doing. (2) He must 'will' the action, and will it for its own sake. (3) The act must proceed from a fixed and unchangeable disposition" (*Nicomachean Ethics*, 1105a31–32). Only by initiating and maintaining the effort to gain the requisite knowledge, to cultivate the proper habits of character, to exercise correct choices, and to perform the right actions

²² John Cooper notes that "for Aristotle, *eudaimonia* is necessarily the result of a person's own efforts; success, of whatever kind, could only count as *eudaimonia* if due to one's own efforts." John Cooper, *Reason and Human Good in Aristotle* (Cambridge, MA: Harvard University Press, 1975), p. 124.

can someone achieve moral excellence. Virtuous living is anything but passive.²³

These statements, together with others,²⁴ suggest that Aristotle sees human flourishing as fundamentally a self-directed activity. Whatever his ultimate position may be, however, human flourishing is, according to this neo-Aristotelian conception, essentially self-directed. The point here is not that self-direction is merely necessary for the existence of human flourishing, for surely there are numerous necessary conditions for human flourishing's existence. Self-direction is not simply one of those many conditions. The point is rather that self-direction is necessary to the very character of human flourishing.²⁵ Human flourishing would not be human flourishing if there were no self-direction involved. Moreover, self-direction is the central necessary constituent or ingredient of human flourishing—that feature of human flourishing without which no other feature could be a constituent. In other words, self-direction is both a necessary condition for, and an operating condition of, the pursuit and achievement of human flourishing. Regardless of the level of achievement or specificity, self-direction is a feature of all acts of human fulfillment.

To appreciate this insight fully we need to discuss the role of practical wisdom as the central integrating virtue of human flourishing. This will be done later, as already noted. For now, it will suffice to see that the functioning of one's reason or intelligence, regardless of one's level of learning or degree of ability, does not occur automatically. It is something the individual initiates and maintains. It requires effort or exertion. Effort is needed to discover the goods and virtues of human flourishing as well as to achieve and implement them. The act of using one's intellectual capacity is an exercise of self-direction, and the act of self-direction is an

²³ See Jennifer Whiting, "Aristotle's Function Argument: A Defense," *Ancient Philosophy*, vol. 8 (1988), p. 43:

A heart which, owing to some deficiency in its natural capacities, cannot beat on its own but is made to beat by means of a pacemaker is not a healthy heart. For *it*, the heart, is not strictly performing its function. Similarly, a man who, owing to some deficiency in his natural capacities, cannot manage his own life but is managed by means of another's deliberating and ordering him is not *eudaimôn*—not even if he possesses the same goods and engages in the same first order activities as does a *eudaimôn* man. For *he*, the man, is not strictly performing his function. . . . Aristotle's claim that *eudaimonia* is an activity of the soul in accordance with virtue shows that he thinks that *eudaimonia* consists in exercising rational agency.

²⁴ See Aristotle, *Nicomachean Ethics*, 1099b18–25 and 1168b34–1169a3. In *De Anima*, 417b18–26, Aristotle states that the exercise of reason, as contrasted to sense perception, is up to the agent, that is, dependent on the agent's effort, for its functioning. Fred D. Miller, Jr. first directed me to this passage.

²⁵ If human beings were attached to machines that satisfied their every need and thus made it unnecessary for them to do anything, that is, if everything were done for them so that they were essentially passive, their lives would not be worthwhile. There would be no self-direction, no reason, and no individualization. Fundamentally, their lives would not really be their own. There would be no such thing as human flourishing.

exercise of reason.²⁶ They are not separate acts of two isolated capacities, but distinct aspects of the same conscious act.²⁷

Though the conclusions of practical reasoning can be shared, the act of reasoning that is an exercise of self-direction cannot. It is something each person must do for him- or herself.²⁸ Thus, if we were to speak of "human flourishing" as the "perfection" of the human being, then it would be fundamentally a process of *self*-perfection—where the individual human being is both the agent and the object of the process.²⁹

6. Human beings are naturally social animals. We are social in the sense that our maturation requires a life with others. We do not achieve our maturity like mushrooms, suddenly, all at once, with no engagement with one another. We have potentialities that are other-oriented, and we cannot find fulfillment without their actualization. Human flourishing is thus not atomistic. It does *not* require gaining the goods of life exclusively for oneself and never acting for the sake of others.³⁰ Indeed, having other-concern is crucial to our maturation. As Aristotle makes clear, *philia* (friendship) is one of the constituents of human flourishing.³¹ Further, in terms

²⁶ See Den Uyl, *The Virtue of Prudence*, pp. 183–86.

²⁷ Aquinas states that "man is master of his actions through his reason and will; whence, too, the free-will is defined as 'the faculty and will of reason'" (*Summa Theologiae*, I-II.1.1). See Scott MacDonald, "Egoistic Rationalism: Aquinas's Basis for Christian Morality," in *Christian Theism and the Problem of Philosophy*, ed. Michael D. Beaty (Notre Dame and London: University of Notre Dame Press, 1990), pp. 327–54.

²⁸ Henry B. Veatch puts this point well in his *Human Rights: Fact or Fancy?* (Baton Rouge and London: Louisiana State University Press, 1985), p. 84:

For is it not evident that not only does a human being not attain his natural end by an automatic process of development and maturity after the manner of an animal? In addition, no human being ever attains his natural end or perfection save by his own personal effort and exertion. No one other than the human individual—no agency of society, of family, of friends, or of whatever can make or determine or program an individual to be a good man, or live the life that a human being ought to live. Instead attaining one's natural end as a human person is nothing if not a "do-it-yourself" job.

²⁹ See Douglas B. Rasmussen and Douglas J. Den Uyl, *Liberty and Nature* (La Salle, IL: Open Court, 1991), p. 40:

In an ontological sense, the person is a unity seeking further actualization of the self. But since further actualization depends on choice reflected through action, the degree to which action and choice are consistent affects the degree of success the individual will have. . . . The Aristotelian eudaimonic person is not characterized by an aggregation of intentions, desires, or actions. It is rather that one's intentions, desires, and actions come to be a manifestation of a single core self developing towards its further realization.

³⁰ See Kelly Rogers, "Aristotle on Loving Another for His Own Sake," *Phronesis*, vol. 39, no. 3 (1994), pp. 291–302. Scott MacDonald notes that "the claim that one seeks the good of others as a part of one's own good does not mean that one does not seek the good of others for its own sake but only for the sake of one's own good. One can seek the constituents of one's own good for their own sakes, and also for the sake of the good of which they are constituents" ("Egoistic Rationalism," p. 352, n. 35).

³¹ See John Cooper, "Aristotle on Friendship," in Rorty, ed., *Essays on Aristotle's Ethics*, pp. 301–40.

of origins, we are almost always born into a society or community, and it is in some social context or other that we grow and develop. Much of what is crucial to our self-conception and fundamental values is dependent on our upbringing and environment. Our lives are intertwined with others; we are not abstract individuals. It is thus a fundamental mistake to conceive of human beings achieving maturity apart from others and only later taking it upon themselves to join society or to have social concern. Human flourishing is achieved with and among others.

Contrary to what seems to have been the traditional Aristotelian view,³² however, human sociality need not be confined to a select group or pool of human beings. Though relationships with others are founded on common values that form the basis for a continuum of relations—from those with close friends and acquaintances, to those with fellow members of communities and cultures—human sociality is open-ended. It imposes no *a priori* limitation regarding with whom one may have a relationship. Our sociality, in principle, allows one to be open to relationships with *any* human. Thus, one need not accept the social status quo. It is an unjustified limitation of human sociality to hold that persons cannot form relationships with persons with whom they do not yet share any common values.

The open-ended character of human sociality is important. It reveals the need for a perspective that is broad enough to explain how the possible relationships among persons who as yet share no common values and are strangers to each other can, nonetheless, be ethically compossible. In other words, it requires that attention be given to how it might be possible for different individuals to flourish and to do so in different ways (in different communities and cultures) without creating moral conflict. Thus, the open-ended character of human sociality requires a neo-Aristotelian ethics, which sees human flourishing as always lived in some community and culture, to consider questions of frameworks and modern political issues. Specifically, it requires a neo-Aristotelian ethics to consider the question of finding a political framework that is both compatible with the moral propriety of pluralism and yet based on something that can be mutually worthwhile for everyone involved. Moreover, since our sociality is essential to our self-understanding and well-being, this concern for political frameworks is not ethically optional for the individual. As Aristotle notes, “Only a beast or a god would live outside the polis” (*Politics*, 1253a27–29).

According to this neo-Aristotelian conception of human flourishing, then, one person’s moral well-being cannot be exchanged with another’s. The good-for-me is not, and cannot be, the good-for-you, but this is not to

³² See Julia Annas, *The Morality of Happiness* (New York: Oxford University Press, 1993), pp. 250–52, for a discussion of this point.

say that any choice one makes is as good as the next. Rather, it is to say that the choice must be one's own and must involve considerations that are unique to oneself. The human good, then, is something objective, self-directed, socially achieved, and yet highly personal. It is not abstract, collectively determined, atomistic, or impersonal.

III. THE ROLE OF PRACTICAL WISDOM

Regardless of whether the foregoing outline of human flourishing turns out to be Aristotle's, it is clear that human flourishing is, for this contemporary view, something plural and complex, not monistic and simple. As already noted, this view of human flourishing amounts to a version of moral pluralism, because there are many goods that help to define human flourishing. Further, there is no single good or virtue that dominates all others and reduces them to mere instrumental values. Such goods as, for example, health, creative achievement, friendship, beauty, pleasure, and knowledge, and such virtues as, for example, integrity, courage, temperance, and justice, seem to be candidates for necessary ingredients or constituents of human flourishing. They are, as such, valuable in themselves, not as mere means.

Each is only one of the components, however. Each, like all the other necessary components of human flourishing, must be achieved, maintained, and enjoyed in a manner that allows it to be coherently integrated with everything else that makes up human flourishing. Further, since human flourishing is individualized, these goods and virtues must be achieved in light of a consideration of the set of circumstances, talents, endowments, interests, beliefs, and histories that descriptively characterize the individual—what I shall call his or her “nexus”—as well as the individual's community and culture. Thus, an examination of human nature may reveal basic or generic goods and virtues, but it does not reveal what the weighting or balancing of these goods and virtues should be for the individual.³³

In other words, what human flourishing amounts to in terms of concrete activities for any particular individual is not something that can be simply read off human nature in some recipe-like manner. It is fundamentally erroneous to assume that abstract ethical principles *alone* can determine the proper course of conduct for any particular individual. Such ethical rationalism fails to grasp that ethics is practical and concerned with particular and contingent facts—facts that abstract ethical principles cannot explicitly capture. Such facts are crucial to determining

³³ This paragraph is taken, with slight alterations, from my entry “Perfectionism,” in *Encyclopedia of Applied Ethics*, vol. 3 (San Diego: Academic Press, 1997), pp. 473–80. Further, the discussion of practical wisdom in this essay develops and expands upon ideas and themes presented there.

what ought to be done. Thus, contrary to much of modern and contemporary ethics, not all morally proper conduct need be something everybody should do.³⁴

It might seem, however, that this rejection of ethical rationalism³⁵ goes too far. If knowing in what human flourishing generically consists does not solve the question of how individuals should conduct their lives, this inclusivist view of human flourishing can be charged with underdetermination. On such a view, ethical theory seems not very useful.

In other words, critics claim that this view of human flourishing places limits on practical reason's ability to determine what ought to be done regarding substantial matters.³⁶ Further, they claim that a view of human flourishing that allows for a plurality of inherent goods creates irresolvable conflicts when one tries to achieve them.³⁷ As an attempt to avoid the difficulties of a dominant-end account of human flourishing and the dogmatism of ethical rationalism, their overall complaint is that this neo-Aristotelian view has abdicated on its responsibility to provide ethical guidance.

My reply to these charges can be summarized as follows: (1) Underdetermination is a flaw only if one assumes that the aim of moral theory is to dictate a set of specific rules of conduct equally suited to all persons regardless of their nexus. But this is not necessary given that the human good is neither abstract nor agent-neutral. Practical wisdom deals with the contingent and the particular and can provide guidance regarding substantial matters, if we do not confuse it with theoretical reason or its features. (2) The existence of a plurality of inherent goods does not necessarily make them incompatible, if we do not confuse concrete with abstract considerations and if we recognize that it is by using practical wisdom, not rules, that potential conflicts are reconciled.

I will develop each of these responses. I will also, in the process, explain the central role of practical wisdom for this conception of human flourishing.

1. If it is indeed the case that human flourishing is a highly individualized, agent-relative activity, then a large measure of individualism

³⁴ The principle of universalizability will be discussed in Section IV.

³⁵ Ethical rationalism is understood here to be the position which holds (1) that abstract ethical principles *alone* can determine the proper course of conduct for any particular individual, and (2) that particular and contingent facts are not *morally* relevant when it comes to determining the proper course of conduct for an individual.

³⁶ "To admit an irreducible plurality of ends is to admit a limit to practical reasoning, and to admit that some substantial decisions are not to be explained, and not to be justified by any rational calculation. This is a possibility that cannot be conceptually excluded, even if it makes satisfying theoretical reconstruction of different uses of 'good,' as a target-setting term, impossible." Stuart Hampshire, *Freedom of Mind* (Princeton: Princeton University Press, 1971), p. 79.

³⁷ Loren Lomasky, *Persons, Rights, and the Moral Community* (New York: Oxford University Press, 1987), p. 51.

must be factored into the process of determining what a person should do. Yet, if this is so, then there might be a way to turn the tables on those who charge this neo-Aristotelian account with underdetermination. What appears to be a flaw might not really be one. In fact, it might be one of the principal advantages of this account, because it represents a theoretical openness to diversity. This account does not assume that abstract ethical reasoning can alone provide moral guidance or that the contingent and particular must somehow be eliminated from moral deliberations. Further, it does not suppose, as the Kantian (and utilitarian)³⁸ viewpoints appear to do, that the *sine qua non* of ethical reasoning is providing impersonal prescriptions.

Fundamentally, such a supposition is wrongheaded. The attempt to provide a set of specific rules of conduct equally suited to all persons regardless of their nexus, which has characterized so much of twentieth-century ethics, confuses agent-neutrality with objectivity, confuses law with ethics, and forgets the open-endedness of ethics.³⁹ Furthermore, it tends to confuse armchair pronouncements with the difficult task of determining what is the proper course of conduct for an individual in a given situation. Most importantly, however, the search for impersonal prescriptions overlooks the moral significance of what the individual *qua* individual brings to moral considerations.

The search for impersonal prescriptions also ignores the central role of the virtue of *phronesis* or practical wisdom for an ethics of human flourishing. Practical wisdom is the excellent or virtuous use of practical reason, and practical reason is the intellectual faculty employed in guiding conduct. This faculty can be properly or improperly used; when it is properly or excellently used, we have the virtue of practical wisdom. Practical wisdom is *the* intellectual virtue for this neo-Aristotelian conception of ethics, for it is central to the exercise of moral virtue. As Aristotle states, "virtue or excellence is a state of character involving choice and consists in observing the mean relative to us, a mean defined by a rational principle, *such as a man of practical wisdom would use to determine it*" (*Nicomachean Ethics*, 1107a1-3, emphasis added). It is extremely difficult to overstate the importance of practical wisdom for this view.

Practical wisdom is not merely cleverness or means-end reasoning.⁴⁰ Instead, it is the ability of the individual at the time of action to discern

³⁸ Utilitarianism is a consequentialistic theory of obligation whose aim is neither altruistic nor egoistic, but universalistic. One's own good should be considered, but not more than any other's; hence, it is an agent-neutral theory.

³⁹ Law must be concerned with rules that are universal and necessary, because it is concerned with the question of establishing social conditions that must apply to everyone equally. Ethics, on the other hand, need not be so construed. Ethical principles need to be open to the particular and contingent circumstances of the lives of different individuals.

⁴⁰ See Norman O. Dahl, *Practical Reason, Aristotle, and Weakness of the Will* (Minneapolis: University of Minnesota Press, 1984), p. 111.

in particular and contingent circumstances what is morally required.⁴¹ Since there are for this view no *a priori* universal rules that dictate the proper weighting of the goods and virtues of human flourishing, a proper weighting is only achieved by individuals using practical wisdom at the time of action to discover the proper balance *for themselves*. The desirable and choiceworthy elements of flourishing need to be achieved, maintained, and enjoyed in a coherent manner, and this involves a consideration of generic, individuating, and circumstantial factors. This is no small task, and the ability to do it well characterizes the person who lives excellently. Such a person is practically wise. "Now it is thought to be the mark of a man of practical wisdom to be able to deliberate about what is good and expedient for himself, not in some particular respect, . . . but about what sorts of things conduce to the good life in general" (*Nicomachean Ethics*, 1140a25–28).

Moreover, the proper use of practical reasoning is not solely a process of maximization. The principal appeal of maximization is that given that something is desirable, it seems irrational not to choose a course of conduct that gives one more of it. However, if desirable goals are never pursued apart from other such goals, then practical reasoning has to encompass more than merely maximizing a good. It has to determine how to weight the pursuit of one necessary good or virtue relative to another so that the achievement of one does not eliminate the achievement of another. *Indeed, practical reason properly used, which is the virtue of practical wisdom, is the intelligent management of one's life so that all the necessary goods and virtues are coherently achieved, maintained, and enjoyed in a manner that is appropriate for the individual human being.*

Figure 1 illustrates the role of practical wisdom for this inclusivist, individualized, agent-relative conception of human flourishing.⁴² The lines that divide the pie diagrams represent acts of practical wisdom. HF1, HF2, and HF3 are three different forms of flourishing, but there can be as many different forms of flourishing as there are individuals. The proportion of the pie diagram allotted each good⁴³ reflects the valuation or weighting (which is ultimately expressed by an individual's time and effort) that is proper for that person. There is no single, agent-neutral model to which each person's pattern or weighting of these goods must conform. None of these forms of flourishing is inherently superior to the other. Each has the necessary generic goods, but their proportions or weightings vary. The proper proportion must be worked out by

⁴¹ Fred D. Miller, Jr., "Aristotle on Rationality and Action," *Review of Metaphysics*, vol. 38 (1984), pp. 499–520.

⁴² The diagrams in Figure 1 come from Den Uyl, *The Virtue of Prudence*, pp. 192–93.

⁴³ The list of goods that comprise each pie comes from Aristotle's *Rhetoric*, 1362b10–28. It should be noted that health includes here action and life, and that intellectual ability involves speech.

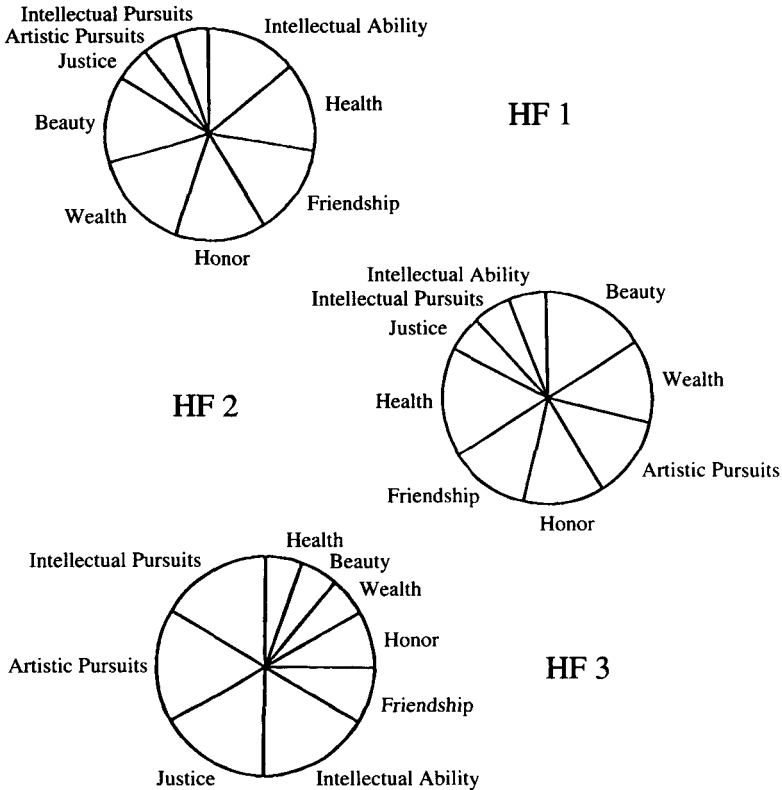


FIGURE 1. Three forms of human flourishing.

practical wisdom in light of each individual's nexus, community, and culture.⁴⁴

Practical wisdom is crucial to the process of determining the proper course of conduct, but it does not replace or render unnecessary speculative or theoretical insight into the character of human flourishing. In fact, it depends on there being such abstract knowledge. Yet practical wisdom guides conduct by dealing with the contingent and the particular

⁴⁴ If we identify HF1 as the life of a businessperson, HF2 as the life of an athlete, and HF3 as the life of a philosopher, we see that a philosophic life is but one of the possible legitimate forms of flourishing. HF3 is not an inherently superior form of flourishing. There are no inherently superior forms of flourishing. The pie diagrams illustrate well the inclusivist, agent-relative view of human flourishing and the central role of practical wisdom. They also reveal clearly how much this neo-Aristotelian view, which I have been elucidating, varies from the dominant-end, contemplative model of human flourishing.

and thus does not have the features of theoretical reasoning. It is not impersonal, atemporal, or universal.⁴⁵ It is different, and if what has been said about the character of human flourishing is true, this difference does not make ethical theory any less useful for guiding conduct. We need both abstract knowledge of generic goods and virtues and practical wisdom's insight into the contingent and particular.

In other words, ethical living cannot be a matter of having theoretical knowledge alone or practical knowledge alone. Both are required. We need to have theoretical insight into the general character of human flourishing. For example, we need such knowledge as I attempted to provide when delineating the six features of human flourishing in Section II; or we need such knowledge as ethicists provide when they develop an account of the generic goods and virtues of human flourishing. This is knowledge about human flourishing that applies to all human beings regardless of their time or place or who they are. However, we also need to have practical insight at the time of action. We need to see what these generic goods and virtues amount to in concrete situations. We need to see what is their proper proportion or balance for us. Ethical living requires both theoretical and practical wisdom, but we should not forget their differences.

The reason there is a difference between theoretical and practical wisdom is that morality is not self-justifying. It serves a function or end, which is human flourishing.⁴⁶ Of course, flourishing always involves considerations of the contingent and particular. They are ineliminable. Thus, instead of trying to launder ethical reasoning through such devices as "veils of ignorance," "impartial ideal observers," or agent-neutral conceptions of practical reason, practical wisdom remains concerned with the temporal and individual. It is the central intellectual virtue for ethics because human flourishing is both individualized and agent-relative.

2. The existence of a plurality of ends that compose human flourishing does not, abstractly considered, logically entail that these ends are incompatible. Concretely considered, keeping them from becoming incompatible by discovering the proper weighting or balancing of these ends is an individual's central task. Yet this is only an insuperable difficulty if we assume that the goods and virtues that compose human flourishing are equal among themselves and identical across individuals. The view of human flourishing presented here accepts unequal weighting of its goods

⁴⁵ This point is developed further in the third subsection of Section IV.

⁴⁶ Morality requires both explanation and justification. It is not *sui generis*. For an ethics of human flourishing, morality exists for the purpose of helping human beings obtain a better life. The ultimate answer it offers to the question "Why be moral?" is "Because it is good for you." This may seem an implausible answer to some, but the deontological answer "Because it is your duty" is a nonstarter. It simply begs the question and does not take up the explanatory challenge.

and virtues⁴⁷ as central to the very character of human flourishing. Thus, conflicts are not as likely because some goods and virtues need not, given a person's nexus and circumstances, be emphasized or weighted as highly as other goods and virtues.

To appreciate better this viewpoint, it is worthwhile to quote at length what Douglas Den Uyl has observed regarding the role of the generic characteristics of our nature. These characteristics are seen

as a package of capacities whose realization is required for self-perfection, but whose form is individuated by each person's own attributes, circumstances, and interests. These generic capacities, then, constitute the skeletal structure of one's life, but do not provide that life with specific content or direction. It is precisely the genericism of these capacities that often renders them impotent as specific guides of conduct or character development; for, although grounded in reality, they are nevertheless generalized abstractions of common needs and capacities and not independent realities in their own right. As such, unless the matter at hand concerns people in general, there is no reason to suppose identity of expression among individuals. Consequently, as components of a skeletal framework, these generic capacities serve to channel or corral individual expressions of self-actualization, but are not of themselves sufficient to identify the particular forms of that expression. And because of their generic quality, they are not in conflict, since they are not yet sufficiently substantive to identify a basis for conflict. Individuals or society may breathe content into these capacities in such a way that conflicts do develop.⁴⁸

It remains the task for the individual to use his or her practical wisdom to avoid conflict when generic goods and virtues take concrete form. Simply following rules, or even abstract principles, will not suffice. Practical wisdom is required, but practical wisdom is not automatic. It must be initiated and maintained—it must be self-directed.

This task is, however, more than merely conflict avoidance; for if these generic goods and virtues are to be determinate, they must be appropriately individualized. As noted earlier, the individual does more than merely instantiate "abstract" goods and virtues. One must incorporate them into one's nexus by an act of reason or insight, not by mere mechanical application of universal principles to concrete cases.

In fact, abstractly conceived constitutive goods and virtues of human flourishing are valueless apart from the virtue of practical wisdom. They

⁴⁷ See Den Uyl, *The Virtue of Prudence*, p. 213.

⁴⁸ *Ibid.*, pp. 167–68. For a similar view, see Kathleen V. Wilkes, "The Good Man and the Good for Man in Aristotle's Ethics," *Mind*, vol. 87 (October 1978), p. 570.

are not like manna from heaven that somehow fit with each individual's needs and circumstances. Rather, they become valuable—that is, their proper combination, pattern, or weighting is achieved—only in relation to and because of the efforts of individual human beings. They are not goods apart from individuals and their efforts.

Though there is no abstract incompatibility among the goods and virtues of flourishing, making them compatible is not necessarily guaranteed. There may indeed be times when, though the principles are clear, the situation precludes achieving all the necessary goods. Tragedies are possible. Yet human flourishing remains a realistic ideal. We should be careful not to make of it something utopian. Human beings are neither omniscient nor omnipotent. Thus, ethics must be understood as being concerned only with what is, in principle, within the realm of human agency. Moreover, ethical principles only deal with what is for the most part, not with the contingent and the particular. Human lives are not numbers that can be neatly fitted into a mathematical equation. There is no single path or set formula. Despite what theologians, politicians, philosophers, and even friends may offer—and sometimes this can be valuable—only individuals exercising their own practical wisdom can make themselves whole.

The observations in this section do not mean or imply that one can ignore with moral impunity any of the necessary goods or virtues of human flourishing. Nor do they show that one course of action in a concrete situation is as good as the next. Neither conventionalism nor subjectivism⁴⁹ is implied. There are moral truths. These observations simply show that if this neo-Aristotelian account of human flourishing is true, then ethical rationalism is false and there is at least a form of pluralism that is morally appropriate.

IV. QUESTIONS AND DIFFICULTIES

There are many questions and difficulties that confront this neo-Aristotelian conception of human flourishing.⁵⁰ I will consider five of the more significant ones.

1. Can we speak of human flourishing or the human good “as such” and still describe this good as agent-relative? Does not the ability to know what human flourishing universally is—that is, our ability to abstractly consider generic ingredients or constituents of human flourishing—

⁴⁹ If we let P refer to the statement “X-ing is right and ought to be done” (or “X-ing is wrong and ought not to be done”), then conventionalism can be defined as the position which holds that “P is true” is semantically equivalent to “We think or believe P is true”; and subjectivism can be defined as the position which holds that “P is true” is semantically equivalent to “I believe or think P is true.” In either case, the truth of a moral claim does not exist apart from its being thought or believed to be so.

⁵⁰ See Thomas Hurka, *Perfectionism* (New York: Oxford University Press, 1993), pp. 55–68.

conflict with the claim that it is agent-relative? Are we not, after all, required to adopt an agent-neutral conception of human flourishing?

This depends on what abstraction is. To think of the human good without regard to whose good it is is plainly possible, but does this entail thinking that the human good *is not* essentially the good for some person or other? Or does this only mean that one can think of the human good without thinking of whose good it is? If it is the latter, then it can still be the case that the good is always and necessarily the good for some person. There need not be conflict. The questions in the previous paragraph assume that the mode or manner of thinking something thus-and-so must determine the mode or manner of that something's being thus-and-so.⁵¹ Yet there is no reason to accept such a view of abstraction. As Anthony Kenny has noted:

To think a thing to *be* otherwise than it is is certainly to think falsely. But if all that is meant by "thinking a thing other than it is" is that the way it is with our thinking is different from the way it is with the thing we are thinking about, in its own existence, then there need be no falsehood involved. To think that Henry the VIII had no weight is to think a false thought; but there is no falsehood in thinking of Henry the VIII without thinking of his weight. Henry the VIII could never exist without having some weight or other, but a thought of Henry the VIII can certainly exist without any thought at all about his weight.⁵²

To think of human flourishing without specifying the person whose flourishing it is, or without considering the myriad features of a person's nexus that give it determination, is not to deny either its relationship to the person or the existence of individuating features.⁵³ Nor does such abstract consideration require human flourishing to be agent-neutral, universal, or abstract.

It might still seem, however, that if we speak of human flourishing as the ultimate end of human conduct, then we are committed to something that is universalizable and, hence, not agent-relative, but agent-neutral. Yet it is not true that universalizability requires an agent-neutral view, for it is possible to hold a moral theory which claims that a person's good is agent-relative and still universalize the maxims of actions based on it. Let us say that human flourishing, G_1 , for a person, P_1 , is agent-relative if and

⁵¹ As Aquinas observes: "Although it is necessary for the truth of cognition that the cognition answer to the thing known, still it is not necessary that the mode of the thing known be the same as the mode of its cognition" (*Summa Contra Gentiles*, II, 75).

⁵² Anthony Kenny, *The Metaphysics of Mind* (Oxford: Clarendon Press, 1989), p. 134.

⁵³ The principle behind an abstract formulation of human flourishing can be stated as follows: Human flourishing must be human flourishing *for* some person, but it can be flourishing *for* any.

only if its distinctive presence in world W_1 is a basis for P_1 's ranking W_1 over W_2 , even though G_1 may not be the basis for *any other* person's ranking W_1 over W_2 . Further, let us say the same holds true of goods G_2 through G_n for persons P_2 through P_n , respectively. Conduct based on such agent-relative goods can be universalized as follows: just as the production of P_1 's good is a reason for P_1 to act, so is the production of P_2 's good a reason for P_2 to act. P_1 cannot claim that G_1 provides him with a legitimate reason to act without acknowledging that G_2 provides P_2 with a legitimate reason to act. In other words, if one knows that attaining one's good provides one with a legitimate reason to act, because it is one's good, then one also knows that another person's attaining his or her good provides that person with a legitimate reason to act. The middle term is the knowledge that a person's attaining his or her good provides a person with a legitimate reason to act. This is what is universalized. But to know this does not show that human flourishing is not always essentially related to some person. Thus, agent-relative values can be universalized. Being agent-neutral is not necessary for universalization.⁵⁴

2. Maybe the real point of the previous questions has to do with universalizability and what it involves. Perhaps universalizability creates difficulties for this conception of human flourishing, regardless of whether it implies agent-neutrality. There are two arguments for this claim: (A) If the human good is universalizable, then the human good *is* something universal, not individualized. (B) If the human good is objective, then it must be universalizable and hence universal and thus not individualized. In other words, it is argued that there is conflict between the human good's being universalizable and its being individualized and between its being individualized and its being objective. Thus, there is lack of coherence in the conception of human flourishing that has been presented.

Both of these arguments suppose, however, that if a good is the basis for universalizable conduct, then that good *is* universal and not individualized. This assumes that what is necessary for the recognition of something as a good and an object of conduct is also necessary for its existence as a good and an object of conduct. This assumption is not true. To say, for example, that knowledge is good for and ought to be pursued by every human being does not show that knowledge actually exists as some universal, nonindividualized good. To think that knowledge is a good for everyone without thinking of the various individual ways it is a good does not show that knowledge does not exist as an individualized good for some human being. To claim that it does is but another instance of

⁵⁴ It should also be noted here that the ability of a value to be the basis for universalizable conduct is not sufficient to establish common values or a reason for other-regarding conduct among persons. This is so, because the universalization of agent-relative goods does not show P_1 's good to be P_2 's good, nor does it show that the production of P_2 's good provides P_1 with a reason for action, or vice versa. Thus, if P_1 's good should conflict with P_2 's, universalizability would not provide a way out of this conflict.

assuming that the mode of our cognition of something must determine its mode of existence.

Similar considerations also apply to argument (B). As Henry Veatch has written:

If the good of X is indeed but the actuality of X's potentialities, then this is a fact that not just X needs to recognize, but anyone and everyone else as well. And yet given the mere fact that a certain good needs to be recognized, and recognized universally, to be the good of X, it by no means follows that X's good must be taken to be Y's good as well, any more than the actuality or perfection or fulfillment of X needs to be recognized as being the actuality or perfection of Y as well.⁵⁵

It can be true for everyone that some thing or activity is good for someone, even if it is not good for everyone. More generally, a truth about certain goods can be universalizable, even if those goods themselves are not. Further, it is false that some thing or activity cannot be actually good for anyone unless it is so for everyone.⁵⁶ More generally, the universality of the good is not a necessary condition for the objectivity of the good.

Another way of making these points is simply to note that universalizability is not the same as universality. If something is knowable, then it can be universalized, but this does not mean that it is universal. Human flourishing is objective and knowable and thus universalizable, but this does not make it something universal, something nonindividualized.

3. According to the account of human flourishing that has been presented, it is a mistake to treat practical reasoning as a process of comparing proposed acts or rules in terms of which produces "the most" human flourishing for someone. A mere maximizing view of practical reasoning mistakes abstractions for realities and treats one person's version of human flourishing as comparable to another's. Such comparisons are not possible, however. There is in reality no flourishing-at-large, no agent-neutral best end, by which to make a comparison. We cannot think of human flourishing as providing the basis for a unified race, with a single standard of swiftness, where everyone competes for the same prize. Versions of human flourishing are only valuable relative to some individual. Thus, the attempt to aggregate "total outputs" of actions or rules in terms

⁵⁵ Henry B. Veatch, "Ethical Egoism New Style: Should Its Trademark Be Aristotelian or Libertarian?" in his *Swimming against the Current in Contemporary Philosophy* (Washington, DC: The Catholic University of America Press, 1990), p. 194.

⁵⁶ For a recent discussion of this assumption, see Joseph L. Lombardi, "James Rachels on Kant's Basic Idea," *American Catholic Philosophical Quarterly*, vol. 71 (Winter 1997), pp. 53-58. See also Henry B. Veatch, "Modern Ethics, Teleology, and Love of Self," *The Monist*, vol. 75 (January 1992), pp. 52-70.

of some agent-neutral conception of human flourishing is not something in which practical reason can engage.

However, can this position be consistently maintained without lapsing into subjectivism or conventionalism? Surely, we must make comparisons with others and postulate an ideal standard in order to flourish. How else do we know if we are living up to our potentials? Further, if one is to have worthwhile relationships of any kind, let alone relationships such as character-friendships, one needs to be able to look at the world from the perspectives of others. Despite everything that has been said, it remains the case that in order to flourish people must be capable of transcending their own perspectives or points of view. Thus, flourishing seems to require that one treat value and practical reason in an agent-neutral manner. Agent-relativity will not suffice.

It is certainly true that the achievement of human flourishing requires individuals at times to adopt perspectives different from their own. Taking a perspective other than one's own—whether it is ideal, that of a friend, or that of *any* human being—is a valuable instrument for practical wisdom on an agent-relative view of human flourishing. An individual's moral growth, in both its personal and interpersonal dimensions, requires that this procedure be used, because flourishing requires learning about one's potentialities and understanding others.

Nonetheless, when we momentarily distance ourselves from or put ourselves outside our current situation in order to consider abstractly what is the best that is possible for human beings or in order to relate to others, we do not necessarily adopt an agent-neutral conception of human flourishing. It is a mistake to equate the value of taking such perspectives with the idea that values and reasons for conduct should or must be agent-neutral. Indeed, abstraction, imagination, empathy, interpersonal perspectives—speculative reason in general—are tools for practical reason, but they need to be used properly. We need to know when our concern is with knowing what is true and good and when it is with achieving what is good. We must be careful not to confuse speculative and practical reason. We need to distinguish the speculative activity of determining what the generic goods and virtues of human flourishing are and how they are ordered apart from their relation to any particular person, from the practical activity of determining their proper weighting and balance, that is, their value, relative to some individual. In other words, we need to distinguish intellectually discovering what in human flourishing "as such" is dependent on what, from the activity of achieving this good in its proper concrete form for some individual.⁵⁷ The former, abstract analysis is necessary for a general understanding of human flour-

⁵⁷ "To recognize that one must build the foundation of a house before one can build the second story does not require that one value the view from the basement more than the view from the balcony." Den Uyl, *The Virtue of Prudence*, pp. 196–97. See also his discussion of Thomas Nagel's view of practical reason (*ibid.*, pp. 29–34).

ishing, but, after engaging in such abstract considerations, we need to return to our own cases to practically determine what ought to be done. We still need to determine how to achieve a level of excellence with respect to our various potentialities that is compatible with the most complete enjoyment of the other necessary goods and virtues. Human flourishing remains an individualized and agent-relative affair.

4. Closely related to the previous concern is the issue of whether all the goods and virtues that comprise human flourishing can be weighted differently for each individual. Might it not be that there are some whose importance is not relative to the other goods and virtues and which should not be treated in an individualized and agent-relative manner? We need only consider, for example, justice to see this difficulty. Justice is too fundamental to be given different weightings by different people. Indeed, justice might seem to illustrate perfectly what is wrong with this neo-Aristotelian conception of human flourishing. One is either just or not just. It is not a matter of weighting, balance, or emphasis. It is "all or nothing."

This objection is very important; and not all the dimensions of a full response, especially the political dimension, can be developed here.⁵⁸ I can, however, begin a response by noting that there are at least two different senses of "justice." First, we can speak of justice as the overall condition or state of the person. This is the idea of the rightly ordered soul and is but another way of speaking of human flourishing. It certainly does not seem that justice in this sense is the concern of this objection. Second, we can speak of justice as concerned with the interpersonal or social. This is the sense of "justice" that is the concern of the foregoing objection, but we still need further to note two senses in which justice is interpersonal or social.

As stated earlier, human flourishing is achieved with and among others. The specific form in which human sociality is expressed can be termed an "exclusive relationship." Exclusive relationships cover a continuum of relations, and they involve a principle of selectivity on the part of the participants in the relationship. Some people are included and others excluded from the relationship because of some value(s) the participants share. These relationships include everything from close friends and confidants, to business and work relations, to mere acquaintances. It is through exclusive relationships that various types of groups, communities, and even cultures are formed.

Human sociality can also involve the exploration of relationships with new and different people and varied ways of living, working, and thinking. This is the open-ended character of human sociality that I also noted

⁵⁸ See Douglas J. Den Uyl and Douglas B. Rasmussen, "'Rights' as MetaNormative Principles," *Liberty for the 21st Century*, ed. Tibor R. Machan and Douglas B. Rasmussen (Lanham, MD: Rowman and Littlefield, 1995), pp. 59-75; Rasmussen and Den Uyl, *Liberalism Defended*; and Rasmussen and Den Uyl, *Liberty and Nature*.

earlier. It leads me to describe the relationships that might develop as being “nonexclusive.” No principle of selectivity is involved, for I am noting that human sociality, prior to a person’s choice and selection, imposes no limitation regarding with whom and under what circumstances one may have a relationship. Further, nonexclusive relationships often provide the wider context in which exclusive relationships are formed. Many, if not most, exclusive relationships come about only because there was first a nonexclusive relationship.⁵⁹

To identify a need for sociality, regardless of the social or cultural form it takes, is to speak of relationships in a nonexclusive sense, because no principle of selectivity is involved. Yet the recognition of the nonexclusive side of human sociality reveals that two senses of interpersonal or social justice need to be distinguished. I shall call one (a) “metanormative” justice and the other (b) “normative” justice.

(a) When interpersonal or social life is understood in a nonexclusive sense—that is, when we are concerned with relationships with *any* human being—justice can be understood as concerned *not* with the guidance of individual conduct in moral activity, but rather with the regulation of conduct so that conditions might be obtained where morally significant action can take place. Justice, understood as a norm that regulates conditions under which moral conduct can take place, is a “metanorm.”

As a metanorm, justice deals with social life in the nonexclusive sense and does not assume a shared set of values or commitments. Hence, the context is as universal as possible. Justice is only concerned with making possible relationships among humans, each of whom has a unique form of human flourishing, ethically compossible.⁶⁰ The type of moral requirement that is imposed for establishing this context must be both something that everyone’s form of flourishing requires and something that everyone can in principle fulfill. Justice understood in this sense is not a matter of personal flourishing, but a matter of creating, maintaining, and evaluating the political/legal conditions for civil order.⁶¹ It is *not* one of the constituents of human flourishing and thus cannot be weighted.⁶² Rather, justice is the political/legal prerequisite for their achievement. Its fundamental importance is grounded in the social as well as individual character of human flourishing.

⁵⁹ Cf. Rasmussen and Den Uyl, *Liberty and Nature*, pp. 173–219.

⁶⁰ As noted in the sixth subsection of Section II, the open-ended character of our natural sociality creates the need for finding principles that will allow for the possibility that individuals might flourish in different ways (in different communities and cultures) without creating moral conflict.

⁶¹ See note 58.

⁶² The aim of “metanormative” justice is not the human flourishing of the individual. Rather, the aim is establishing a political/legal context so that social life in its widest sense might be possible without requiring the sacrifice of one person’s form of flourishing to another’s. Though the need for “metanormative” justice is based on the character of human flourishing—e.g., its individuality and sociality—the direct object of its concern is not the personal flourishing of the individual.

(b) When interpersonal or social life is understood in an "exclusive" sense, justice is concerned with directing personal conduct for the achievement of human flourishing. So understood, justice is the normative principle of "rendering each his proportionate due,"⁶³ and it is one of the central virtues of human flourishing. However, the proper application of the virtue of justice—that is, understanding what constitutes the correct proportion—is not conveyed by the virtue of justice itself, but, like the application of every other normative virtue, requires practical wisdom. Furthermore, not only does one have to determine what action in the contingent and particular situation is just, one also has to integrate the actions required by this virtue with those required by the other virtues and goods that constitute one's flourishing.

As I have said, the proper course of conduct does not come in some ethical recipe. Knowledge of circumstances, the character of the person one is dealing with, and how a possible course of action integrates with the other actions that one's flourishing requires is needed. Determining what conduct the virtue of justice requires thus involves knowing more than that one is in the presence of a fellow human being. The virtue of justice is neither blind nor applied in an impersonal way. It requires discernment of differences of both persons and circumstances. Therefore, what the virtue of justice concretely requires will vary according to circumstances and situation. Different courses of action will be required.

Accordingly, one can properly decide not to take up a just course of conduct because, although worthy in itself, that conduct does not fit well with all the other aspects of one's flourishing that have been given greater emphasis. This is not, however, merely a practical matter; that is, one does not decide to forgo just conduct because one does not have sufficient time or money. Rather, it is a matter of practical wisdom. Regardless of how worthy the course of conduct may be in itself, it is not one's own proper course of conduct, because it is not consistent with other aspects of one's flourishing. As Den Uyl has noted regarding this very issue, "it is not only acceptable that one not participate, but *right* that one not do so."⁶⁴ Justice as it applies to exclusive relations is, then, *not* an "all or nothing" affair.

5. I have claimed that self-direction is crucial to the character of human flourishing and that an act of self-direction is an exercise of reason. Yet what is it to be self-directed, or when is someone not self-directed? Surely, persons are not self-directed when they do not use their rational faculty. This occurs, of course, when one literally does nothing; but it also happens when one's desires and passions are in control. The core of self-direction is the exercise of reason; and when one's passions are responsible for one's conduct, then one is not self-directed.

⁶³ Aristotle did not clearly distinguish between the exclusive and nonexclusive senses of sociality. Nor, with his use of the term "polis," did he distinguish clearly between society and state. Thus, it should be noted that this account of the virtue of justice differs from his.

⁶⁴ Den Uyl, *The Virtue of Prudence*, 194–95.

If the foregoing is true, however, this seems to create a problem for the claim that human flourishing is an object of desire. If the human good is an object of desire, then how can one be self-directed? If it is our appetites that move us toward human flourishing, then we have lost control of the situation. Our self-direction is but a sham. It would seem that the only way to stay in control and maintain self-direction would be to confine practical reason to procedures that do not let personal desires play a role in the determination of conduct.⁶⁵ In other words, it seems that practical reason must, despite everything that has been said, only consider agent-neutral reasons and universal goods. Once again, then, we have a question about the internal consistency of the conception of human flourishing that has been presented. Can the self-directed character of human flourishing be reconciled with its individualized and agent-relative character?

The answer to this question will provide a useful transition to our discussion of the importance of human nature for this conception of human flourishing, because this answer depends on our understanding of what it is to be human. If human beings are rational *animals*, not merely rational *beings*, then human flourishing is not the flourishing of a pure mind. Flourishing is, of course, a *way* of living and is thus more than self-preservation or survival. Yet it is nonetheless a way of *living* and is thus not intelligible apart from a biocentric context. Desire and appetite are necessarily a part of the process. However, the relation of desire and appetite to human flourishing is even more fundamental than this. They are not merely necessary to achieving flourishing. They are, rather, necessary to the very character of human flourishing. Human flourishing is the enactment of right desire. Correctly valuing something is not distinct from desire. Rather, it just *is* right desire. Thus, only an excessively rationalist conception of human beings would attempt to conceive of flourishing without desire.

Desires and appetites are not fundamental, however. They are for the sake of flourishing. That is to say, they are judged by whether they are conducive to one's fulfillment. Thus, it is not a question of eliminating them or discounting their influence. Rather, it is a question of using and controlling desire and appetite for the sake of human flourishing. There is no necessary incompatibility between them and reason. As Kathleen V. Wilkes has noted:

Aristotle's man is *active*, an agent. His highest good (*eudaimonia*, roughly translated as "flourishing") is glossed in terms of activity: living well, doing well. "A man seems to be a source of actions" (*Nicomachean Ethics*, iii. 3. 1112b31-2); and consider this; "choice is either de-

⁶⁵ Loren Lomasky summarizes this viewpoint well when he observes that Rawlsian contractors are "perfectly pure specimens of autonomy. None can be deflected from rational reflection by the force of any untoward inclination, because behind the veil one does not know what one's inclinations are" (*Persons, Rights, and the Moral Community*, p. 43).

siderative reason or ratiocinative desire, *and such a source of action is man,*" (*Nicomachean Ethics*, vi. 2. 1139b4–5). We become the people that we are by choosing, deciding, acting; we have the responsibility for shaping ourselves, our characters, and our lives. This stress on agency and activity, man *in* the world and not just an observer of it, is one of the most attractive features of his general theory.⁶⁶

Rational desires or dispositions are possible, and it is when one's character is so disposed that we may say one is flourishing.

If it is possible that desires can embody an act of self-direction or an exercise of reason, then there is no basis to suppose that human flourishing cannot be an object of both reason *and* desire.⁶⁷ It is not necessary to adopt procedures that prevent personal desires or interests from playing a role in the determination of conduct. Practical reason need not confine itself to agent-neutral considerations. There need be no inconsistency between self-direction and the individualized and agent-relative character of human flourishing.

If we are to see the possibility of desire embodying self-direction, we must awaken from our Cartesian slumbers. We need to see, of course, that one's exercise of reason cannot be merely the result of factors beyond one's control. Self-direction cannot be reducible to some causal string. It cannot be, for example, the mere result of antecedent genetic or socio-cultural factors. This will not suffice.

Nor can self-direction be some sort of primitive, acontextual, inexplicable, unconditional act, however. It is not radically free. It does not create its context. Instead, it can be evaluated in terms of something other than itself. Self-direction is crucial to the discovery, implementation, integration, and enjoyment of the goods that constitute its end—that is, the actualization of human flourishing—but self-direction does not create its potentiality for that end. The end-oriented character of self-direction is not itself a matter of self-direction.

This neo-Aristotelian view of human nature sees self-direction as neither compelled by external, antecedent forces nor metaphysically unconditioned. This view clearly supposes that human beings are teleological in nature and that teleology provides a middle ground between compulsion and radical freedom. I will examine this view in the next section.

V. APPEALING TO HUMAN NATURE

The character of human flourishing is not discovered solely by a scientific study of human nature. Considerations of the requirements and conditions for human volition and action, cultural and social practices,

⁶⁶ Kathleen V. Wilkes, *Real People* (Oxford: Clarendon Press, 1988), p. 213.

⁶⁷ See Dahl, *Practical Reason, Aristotle, and Weakness of the Will*, pp. 93–99.

and common-sense observations are part of the process. Further, we need not assume that our beliefs and practices must be barriers to knowing what is real. It is not necessary to proceed in a Cartesian manner and raze all opinions in order to find some firm foundation. We must start somewhere, and the starting point of an inquiry into the character of human flourishing is with the opinions, *endoxa*, of our society and culture. Indeed, we seldom, if ever, appeal to human nature to understand human flourishing without already having a set of evaluative views. The point of entry for such reflection most often occurs when we examine our lives as a whole and wonder what they are for.⁶⁸ Our general aim is to make our lives as good as possible and to find unity for them.

Yet the fact that we do not begin our investigation of human flourishing *de novo* does not imply that we are confined to the status quo. The claim that rationality is always embodied in a tradition that provides the context that determines whether an argument is a good one⁶⁹ is subject to two interpretations. It can mean either that a tradition determines whether an argument *is* good or merely that it determines whether people *think* an argument is good. The truth of the latter, weaker claim certainly does not imply the truth of the former, stronger claim. Further, there seems little reason to give up the basic and well-established idea that it is an argument's adequacy to its subject-matter that constitutes its goodness and not its counting as so within some tradition.⁷⁰

Of course, we are neither disembodied minds nor asocial beings, and thus it should be admitted that our rationality is always embodied in a tradition—at least in some loose sense of that term. Yet this does not mean or imply that we are thereby trapped and cannot, as a matter of principle, consider things from the viewpoint of other traditions or adopt radically different perspectives. We can appeal to other accounts of human flourishing and in fact attempt to see if there is anything about being human that will give us insight into how to live our lives. There are, of course, practical limitations, for we are limited and fallible. Such admissions do not, however, show that our understanding of reality in general or of human flourishing in particular must be confined to our tradition or point of view. At least, they do not show that we are bound in such a way that we can no longer distinguish between our thinking something thus-and-so and its being thus-and-so.

⁶⁸ John M. Cooper, "Eudaimonism, the Appeal to Nature, and 'Moral Duty' in Stoicism," in *Aristotle, Kant, and the Stoics*, ed. Stephen Engstrom and Jennifer Whiting (Cambridge: Cambridge University Press, 1996), pp. 264–65.

⁶⁹ See Alasdair MacIntyre, *Whose Justice? Which Rationality?* (Notre Dame: University of Notre Dame Press, 1988). For an important and powerful critique of this book, see T. H. Irwin, "Tradition and Reason in the History of Ethics," *Social Philosophy and Policy*, vol. 7, no. 1 (Autumn 1989), pp. 45–68.

⁷⁰ Also, it seems unfair to suppose that those who claim that reason is always embodied in a tradition mean to endorse the view that the truth of a proposition consists just in members of a tradition thinking or believing that it is so.

Human nature sets the general limit on what is ultimately included in or excluded from any account of human flourishing. This being said, it should be noted that the following discussion is essentialistic in a minimal sense: what and who human beings are is not entirely a function of social or cultural forces; and linguistic and conceptual schemes, or systems of interpretation, do not ultimately determine human nature. In other words, there are individual realities of a certain kind to which the term "human being" refers. Further, this discussion assumes that cognitive realism is possible; that is to say, it assumes that we can know what things really are. The manner or mode of our cognition does not determine the very character of the content of our cognition. In this case, this means that what human beings are can be known. These are important assumptions that require defense, which cannot be provided here, but has been provided elsewhere.⁷¹

The neo-Aristotelian view of human flourishing that has been presented appeals to human nature in two basic ways: (1) it assumes that human nature is teleological, that is, that human beings have a *telos* or natural function;⁷² and (2) it assumes that this natural function has moral import. In other words, it assumes that knowing what our natural function is tells us something about the character of human flourishing. Both of these assumptions shall be explained. They cannot be defended, however, in any detail; that task is for a much larger project. My hope, however, is that these remarks will show at least that these assumptions are not as implausible as is sometimes thought.

1. That human nature is teleological is at once the most important and the most controversial assumption of this view of human flourishing. It is the most important, because it is the idea that human flourishing is the end (*telos*) or function (*ergon*) of human life that allows this theory to avoid the "naturalistic fallacy."⁷³ If human flourishing is the natural end

⁷¹ See Douglas B. Rasmussen, "Quine and Aristotelian Essentialism," *The New Scholasticism*, vol. 58 (Summer 1984), pp. 316–35; Rasmussen, "The Significance for Cognitive Realism of the Thought of John Poinsett," *American Catholic Philosophical Quarterly*, vol. 68 (Summer 1994), pp. 409–24; Baruch Brody, *Identity and Essence* (Princeton: Princeton University Press, 1980); Tibor R. Machan, "Epistemology and Moral Knowledge," *Review of Metaphysics*, vol. 36 (September 1982), pp. 23–49; Edward Pols, *Radical Realism* (Ithaca, NY: Cornell University Press, 1992); and Anthony J. Lisska, *Aquinas's Theory of Natural Law* (Oxford: Clarendon Press, 1996).

⁷² We commonly think of artifacts as having a proper function (*ergon*), e.g., the function of a knife is to cut. To claim that an entity has a natural function is to claim that an entity has a proper function in virtue of what it is, not as the result of someone designing it for a certain activity. "Proper" means essential to the entity. The claim that an entity has a proper activity that is its natural function is confined here to the biological realm. Thus, natural functions primarily occur in living organisms. The claim that living entities have natural functions rests, however, on the further claim that *living* entities have an end (*telos*) in virtue of their nature. Thus, the natural function of a living thing is understood in terms of its natural end. "End" means in this context that-for-the-sake-of-which, but it does not necessarily mean "conscious purpose." This claim is explained and defended below.

⁷³ This is the alleged fallacy of deducing a statement of what *ought* to be from a statement of what *is* the case, or deducing a statement about a *value* from a statement about a *fact*.

for human life, and if we understand the human good in terms of that end, then it is simply not the case that all facts are valueless. This means that for human beings their good is based on and understood in terms of facts pertaining to their nature. Indeed, for the class of beings that have natural ends or functions, goodness is ontological in the sense that it is a potentiality that is actualized.⁷⁴ Hence, it is not always a fallacy to go from a fact to a value, because some facts are inherently value-laden. Further, if self-direction is for the sake of the human good, then self-direction is not radically free in the sense described in the previous section. It has an innate potentiality for the good. Thus, reason and motivation need not always be separate, and the problem of finding motivation for being moral need not be insuperable.

That human nature is teleological is certainly a most controversial claim. For some, to link this claim to the neo-Aristotelian view of human flourishing is to render this view beyond the pale. Indeed, it must be admitted that teleology is often associated with dubious metaphysical views—for example, that the cosmos has some end, that species are fixed and do not evolve, and that there is a *scala naturae* ascending from simple elements to an unmoved mover. Alasdair MacIntyre termed such views “metaphysical biology.”⁷⁵ Moreover, teleology is associated with such positions as theism, vitalism,⁷⁶ ineluctabilism,⁷⁷ and genericism,⁷⁸ as well as the fallacy of anthropomorphism. Not surprisingly, there are some advocates of an ethics of human flourishing⁷⁹ who seek to avoid making ontological commitments about the nature of human flourishing.

The situation is not so grim, however. Present-day advocates of natural teleology argue that their position does not require them to uphold any of the foregoing views or to commit any fallacies. It is not necessary to hold that the cosmos, history, society, or the human race is directed toward

⁷⁴ See Rasmussen and Den Uyl, *Liberty and Nature*, pp. 56–57, as well as Henry B. Veatch, *For an Ontology of Morals* (Evanston: Northwestern University Press, 1971).

⁷⁵ Alasdair MacIntyre, *After Virtue* (Notre Dame: Notre Dame University Press, 1981), p. 152.

⁷⁶ Vitalism holds that present in any living thing is an immaterial substance, an *élan vital*, that imparts to that thing powers that are neither possessed by nor result from the inanimate parts that compose it. Vitalism should, then, be distinguished from the view that present in any living thing are emergent properties, which are contingent on the organization of its inanimate parts, but not reducible to them.

⁷⁷ If one's *telos* is ineluctable, then the issue of being responsible for achieving it is irrelevant.

⁷⁸ Genericism is the view “that all developmental processes are generically equivalent across individuals such that individuals come to be little more than repositories of generic endowments” (Den Uyl, *The Virtue of Prudence*, p. 36).

⁷⁹ See Hurka, *Perfectionism*, for an account of human flourishing which does not assume a theory of human nature. See also Robert P. George, “Natural Law and Human Nature,” in *Natural Law Theory*, ed. Robert P. George (Oxford: Clarendon Press, 1992), pp. 31–41, where George argues that basic goods such as knowledge and friendship are self-evidently good and do not require an anthropological basis. See Lisska, *Aquinas's Theory of Natural Law*, for a critique of George's view.

some grand *telos*. Instead, it is only necessary that individuals have ends. Moreover, there are individuating potentialities that are actualized. It is not the case that individuals are little more than repositories for generic endowments and add nothing to the developmental processes. It is not necessary to accept genericism. Thus, the existence of a human *telos* need not be in conflict with the individualized character of human flourishing, as it seems to be for traditional versions of Aristotelian ethics. Nor is it necessary to hold that God has created the universe or individual things to serve some end to which they are drawn. There need only be a *naturalistic*⁸⁰ teleology.

James G. Lennox has argued that there are basically two different models of teleology, or final causation.⁸¹ According to the Platonic model,⁸² which has its origin in the divine craftsman of the *Timaeus*,⁸³ the operation of ends as causes requires the actions of a rational agent or mind whose intentions apply to the entire cosmos. It is in terms of this agent's intentions that processes in the natural world are judged good. Both the cause and the goodness are, for this model, "external" to what is being explained. It is in principle the same view of teleology that is used when speaking of artifacts. Just as we say that a good knife is one that fulfills the purpose for which it is created—that is, cutting—so we say the same regarding entities in the natural world.

According to the Aristotelian⁸⁴ model, final causation is only one of the answers to the question "Why?" and it does not require a rational agent whose universal intentions determine goodness. Instead, teleology is restricted to the biological domain and is "internal" or "immanent" to the organism that is being explained. It is the goal or function of the individual organism, not the "external" designer, that is under consideration. Further, it is not necessary to posit an immaterial, separable force, an *élan vital*, within an organism that provides direction and motivation. Rather, teleology can result from an internal directive principle

⁸⁰ "Naturalistic" is used here to rule out the necessity of any supernatural commitment. It does not mean the same thing as materialism or, at least, not eliminative or reductive materialism. See Elliott Sober's discussion of "Teleology Naturalized" in his *Philosophy of Biology* (Boulder and San Francisco: Westview Press, 1993), pp. 82–87.

⁸¹ James G. Lennox, "Teleology," in *Keywords in Evolutionary Biology*, ed. Evelyn Fox Keller and Elisabeth A. Lloyd (Cambridge, MA, and London: Harvard University Press, 1992), pp. 324–33.

⁸² James G. Lennox, "Plato's Unnatural Teleology," *Platonic Investigations*, ed. Dominic J. O'Meara (Washington, DC: Catholic University Press, 1985), pp. 195–218.

⁸³ The *Timaeus* is Plato's creation myth in which the divine craftsman, the "demiurge," gives purpose to nature.

⁸⁴ See Allan Gotthelf, "Aristotle's Conception of Final Causality," in *Philosophical Issues in Aristotle's Biology*, ed. Allan Gotthelf and James Lennox (Cambridge: Cambridge University Press, 1987), pp. 204–42; Gotthelf, "Understanding Aristotle's Teleology," in *Final Causality in Nature and Human Affairs*, ed. R. F. Hassing (Washington, DC: Catholic University of America Press, 1997), pp. 71–82; and Miller, *Nature, Justice, and Rights in Aristotle's "Politics"* (*supra* note 4), section 10.2, "Natural Teleology," pp. 336–46.

that is an irreducible feature of the developmental processes of the living organism itself. The process is irreducible in the sense that the movement from potentiality to actuality is inherent in the structure of the organism in such a way that other forms of explanation (e.g., mechanical or chemical) are insufficient to account for the phenomenon.

In other words, it is precisely the capacity for the development to maturity that cannot be accounted for by merely appealing to the potentialities of the basic material elements that compose a living thing. For Aristotle, these material elements were earth, air, fire, and water. For us, they are much more complex, but the principle is the same. Development to maturity does occur and requires explanation. Yet appealing to the potentialities of these basic material elements alone does not suffice. Only an inherent potential for the development to maturity will suffice.

Accordingly, contemporary advocates of natural teleology hold that what living things are and how they develop cannot be adequately understood except insofar as they are understood as functioning for the sake of the mature state of the organism. The process of pursuing and maintaining ends is the result of the very nature of living things. Teleology has a place in nature, then, not because the universe has a purpose or because God has created and endowed each creature with a purpose. Teleology exists because the nature of living things involves the potential that is irreducibly for development to maturity.

It is further argued that the theoretical core of Aristotle's teleology—namely, that life-forms are self-directing in virtue of inherent forms or structure—is vindicated by modern biology. Aristotle's accounts of the physical mechanisms (for example, vital heat) that are supposed to be the source of transmission of the formal principle, are, of course, not defensible, but he seems to have gotten the essentials right. As Max Delbrück, founder of molecular genetics, remarked about Aristotle's explanation of the generation of animals:

What strikes the modern reader most forcibly is his insistence that in the generation of animals the male contributes, in the semen, a *form principle*, not a mini-man. . . . The form principle is likened to a carpenter. The carpenter is a moving force which changes the substrate, but the moving force is not contained in the finished product. . . . Put into modern language [what Aristotle says] is this: The form principle is the information which is stored in the semen. After fertilization it is read out in a preprogrammed way; the readout alters the matter upon which it acts, but it does not alter the stored information, which is not, properly speaking, part of the finished product. In other words, if that committee in Stockholm, which has the unenviable task each year of pointing out the most creative scientists, had the liberty of

giving awards posthumously, I think they should consider Aristotle for the discovery of the principle implied in DNA.⁸⁵

This naturalistic approach to teleology is also like "adaptational explanations"⁸⁶ in evolutionary biology, and it has value implications. As Lennox explains:

[I]f a part comes to be because of its contribution to the organism's life, that sanctions its identification as *there for the sake of* that contribution. Taking its continued existence as good for it, those of the animal's parts and behavior that develop to contribute to its life in various ways can be described as for the sake of *the good or the valuable*. Thus, the use of evaluative language in the Aristotelian teleological tradition doesn't depend, as it does in the Platonic tradition, on the end being *seen as* valuable by a rational agent.⁸⁷

Broadly speaking, then, we may "define"⁸⁸ goodness as the actualization by a living thing of its potentialities, since the needs and requirements of a living thing are what give rise to that actualization being an end. Values are not separate from facts when it comes to living things. Further, it is in this sense that goodness might be understood as "ontological" but still ultimately relational. In other words, certain actions of a living thing at a given time benefit its life; that is, they promote its development to maturity. Now these actions, in turn, make possible the repetition by the living thing of those actions in the future, and so on. These actions thus both produce and express the life of the entity. They constitute its life although they are also *for* it. Goodness is therefore neither an intrinsic

⁸⁵ Max Delbrück, "Aristotle-totle-totle," in *Of Microbes and Life*, ed. Jacques Monod and Ernest Borek (New York: Columbia University Press, 1971), pp. 54-55. Fred D. Miller's work (see note 84) first drew my attention to this statement by Delbrück. See also Francisco J. Ayala, "The Autonomy of Biology as a Natural Science," in *Biology, History, and Natural Philosophy*, ed. A. D. Breck and W. Yourgrau (New York: Plenum Press, 1972), pp. 1-16; Ayala, "Teleological Explanations in Evolutionary Biology," *Philosophy of Science*, vol. 37 (1970), pp. 1-15; Robert N. Brandon, "Biological Teleology: Questions and Explanation," *Studies in the History and Philosophy of Science*, vol. 12 (1981), pp. 91-105; Jonathan Jacobs, "Teleological Form and Explanation," in *Current Issues in Teleology*, ed. Nicholas Rescher (Lanham, MD: University Press of America, 1986), pp. 49-55; Charles Taylor, *The Explanation of Behavior* (London: Routledge and Kegan Paul, 1964); W. C. Wimsatt, "Teleology and the Logical Structure of Function Statements," *Studies in the History and Philosophy of Science*, vol. 3 (1972), pp. 1-80; Andrew Woodfield, *Teleology* (Cambridge: Cambridge University Press, 1976); Larry Wright, *Teleological Explanations* (Berkeley: University of California Press, 1976).

⁸⁶ "Characteristic *c* is an adaptation for task *t* in a population if and only if members of the population now have *c* because, ancestrally, there was a selection for having *c* and *c* conferred a fitness advantage because it performed task *t*" (Sober, *Philosophy of Biology*, p. 84).

⁸⁷ Lennox, "Teleology," in *Keywords in Evolutionary Biology*, p. 327.

⁸⁸ See Rasmussen and Den Uyl, *Liberty and Nature*, pp. 51-57, for a critique of G. E. Moore's "open-question argument" and his claim that goodness cannot be defined.

(nonrelational) feature of things or actions, nor is it merely a subjective phenomenon of consciousness. Instead, it is an aspect of reality *in relation* to the needs of a living thing. Indeed, we might say that apart from living things there are no intrinsically good, right, or beautiful things. Things are only good, right, or beautiful in relation to living entities.⁸⁹

For human beings, becoming good, flourishing, is not something to which they are driven. Teleology does not require ineluctability. Human beings, insofar as they are moral agents, actualize their ends through their own self-direction. This occurs through a person's dispositions for the proper desires and actions—dispositions which are ultimately a matter of moral responsibility. It is human reason that forms the conception of what is good for a person that is expressed in one's character or dispositions.⁹⁰ It is the ability to have a conception of what is good for oneself (that children and nonhuman animals do not possess) that creates the causal power necessary for the nonaccidental production of good outcomes. This is crucial for a given activity's being morally right or wrong and thus for someone's being morally responsible.⁹¹ As Aristotle states:

[R]eason is for distinguishing the beneficial and the harmful, and so too the just and the unjust. For this distinguishes a human being from the other animals—that he alone has perception of the good and bad and just and unjust and the rest. (*Politics*, 1253a14–18)

Human beings are part of the natural order and are not immune from its influences. Self-direction is part of the process, but it is, nonetheless, an activity for which beings of our kind are responsible.

2. The claim that human flourishing is a *telos* is intimately connected with the idea that there is a distinct human nature. It is in terms of one's nature that the activity of flourishing or the process of "perfection" is measured. To "perfect," to "realize," or to "actualize" oneself is not to become God-like, immune to degeneration, or incapable of harm, but it is to fulfill those potentialities and capacities that make one human. This is to achieve one's natural end or perform one's natural function.

There are, however, some important objections to this line of thought. They are as follows:

(A) Even if we know what the function of a human being is, this does not entitle us to speak legitimately of what a good human being is, because this inference requires that human beings have instrumental functions and purposes in terms of which they are judged good or useful.

⁸⁹ Tibor R. Machan, *Human Rights and Human Liberties* (Chicago: Nelson-Hall, 1974), p. 66.

⁹⁰ Aquinas, *Summa Theologiae*, Ia.5.1.

⁹¹ Susan Sauvé Meyer, *Aristotle on Moral Responsibility* (Oxford, UK, and Cambridge, MA: Basil Blackwell, 1993), p. 166.

Yet human beings are not tools that have instrumental functions or purposes.⁹²

(B) From the fact that some capacity is peculiar or unique to human beings, it does not follow that a good human being is one who exercises this capacity. Neither does it follow that it is good for human beings to exercise this capacity.⁹³

(C) Even if performing one's natural function determines what makes someone a good human being, it does not follow that it is good for any individual human being to exercise the capacities that comprise this function. There is a difference between what is a good human being and what is good for a human being.⁹⁴

I shall respond to each objection. Regarding (A), it is not necessary to assume that human beings have instrumental functions like tools in terms of which their conduct can be judged as functioning well or poorly. In fact, not only is it not necessary that people be viewed instrumentally, it is necessary that they *not* be viewed instrumentally. Human beings have a function because of what they are. Their function is "internally," not "externally," determined. They are living organisms, and the performance of their function by them is for their sake or benefit, not for some further end. The inference from what the function of a human being is to what it is to be a good human being is confined to individual living things that are members of a natural kind and whose benefit is at least in part determined by the characteristics in virtue of which each is a member of that kind. The activities that compose the function, which I will discuss shortly, serve no further ends or purpose but are inherent to those characteristics that are responsible for membership in that kind. Yet it should be emphasized that for this neo-Aristotelian view one cannot identify the function of a certain kind of living organism without introducing the notion of benefit for members of that kind. Thus, formal and final causes coincide.⁹⁵ As noted earlier, when it comes to the nature of living things, giving an account of an organism's function is not merely a matter of moving from a purely descriptive account to an evaluative account. There are values "all the way down."⁹⁶

Regarding (B), a human being's function is not determined by what is peculiar or unique.⁹⁷ Instead, a human being's function is determined by

⁹² W. F. R. Hardie, *Aristotle's Ethical Theory* (Oxford: Clarendon Press, 1980), pp. 23–24.

⁹³ Robert Nozick, "On the Randian Argument," *The Personalist*, vol. 52 (1971), pp. 282–304. See also Thomas Nagel, "Aristotle on Eudaimonia," in Rorty, ed., *Essays on Aristotle's Ethics* (supra note 8), pp. 7–14.

⁹⁴ P. Glassen, "A Fallacy in Aristotle's Function Argument about the Good," *Philosophical Quarterly*, vol. 7 (1957), pp. 319–22.

⁹⁵ That is to say, what a human being is (its formal cause) and what a human being is for (its final cause) synchronize in the idea of benefit for members of a kind.

⁹⁶ Whiting, "Aristotle's Function Argument: A Defense," p. 39.

⁹⁷ T. H. Irwin, "The Metaphysical and Psychological Basis of Aristotle's Ethics," in Rorty, ed., *Essays on Aristotle's Ethics*, p. 49.

what is "proper" or "essential" to a human being. It is human nature as a whole, not some part of it, that is being considered.⁹⁸ In other words, if human beings are defined as rational animals, then any account of a human being's function must consider not only the referent of the differentia, but the referent of the genus as well. For human beings, this involves animality and all that goes with it, particularly the fact that a human being is a living creature. Moreover, it needs to be realized that any definitional statement of an entity's nature is a condensation of a vast number of facts and is meant to provide the means by which it is sorted conceptually from other things. It thus implies the presence of many qualities and features other than those explicitly noted by the definition.⁹⁹ The character of the human *ergon* is not settled in terms of what is distinctive alone.

For the neo-Aristotelian theory I have been describing, then, fulfilling our human function—not disembodied reasoning—is "the practical life of man possessing reason." Fulfilling our function includes exercising capacities shared by other animals, such as those for pleasure and health, and, as will be noted, many other things as well. What the distinguishing characteristic does is to characterize the *modality* through which the development of these other faculties will be successful:

The *ergon* of man is indeed "activity of the *psuche* in accordance with a rational principle," the "rational principle" in question is, broadly, intelligence in general: intelligence that may be applied to art, craft, science, philosophy, politics, or any other domain.¹⁰⁰

Regarding (C), the distinction between what is a good man and what is good for a man is a distinction without a difference, *if* the beneficial sense of "function" is recognized. One cannot determine a human being's function or excellence apart from a consideration of the specific needs and requirements a human being has in virtue of the kind of living thing he or she is. Such a determination cannot be divorced from the biocentric context. Further, if the human function is taken to be the life of practical reason,¹⁰¹ not contemplation, and if the inclusive, individualized, and agent-relative character of human flourishing is recognized, then the alleged conceptual gap between what perfection requires (what is a good human being) and what is beneficial (what is good for a human being) is

⁹⁸ See Aquinas's discussion of abstracting the "whole" nature of a being in *Being and Essence*, 2nd ed. rev., trans. Armand Maurer (Toronto: The Pontifical Institute for Mediaeval Studies, 1968), pp. 37–44.

⁹⁹ See Rasmussen, "Quine and Aristotelian Essentialism" (*supra* note 71), pp. 328–29.

¹⁰⁰ Wilkes, "The Good Man and the Good for Man" (*supra* note 48), p. 568.

¹⁰¹ Henry B. Veatch, in his classic *Rational Man* (Bloomington and London: Indiana University Press, 1962), calls the human function "rational or intelligent living."

closed.¹⁰² Whatever remaining basis there is for it will not be a matter of principle but of situation and circumstance.

Isaiah Berlin has argued against the usefulness of any appeal to human nature when it comes to providing ethical knowledge. For Berlin, the dominant ethical fact is the diversity of moral values—what he calls “value pluralism.” By this, however, he does not intend to claim that ethical relativism, in either subjectivist or conventionalist form, is true. Instead, he means that there are many objective values of inherent worth and that these are not compatible. Thus, it is futile to attempt to find some ethical standard that will provide universal guidance. Whether Berlin consistently avoids ethical relativism and whether he ever shows these objective values to be *inherently* incompatible are not issues that concern me here.¹⁰³ What concerns me are two brief remarks that he makes in passing. He notes that

forms of life differ. Ends, moral principles, are many. But not infinitely many; they must be within the human horizon.¹⁰⁴

Also, he states that ultimate objective ends, though incompatible,

cannot be unlimited, for the nature of men, however various and subject to change, must possess some generic character if it is to be called human at all.¹⁰⁵

It is to what Berlin calls the “generic character” of human beings that the conception of human flourishing described in this essay appeals.

The general parameters of human flourishing are provided by human nature. Their concrete form is not. As I have noted many times, this conception of human flourishing does not suppose that the pattern or weighting of the goods and virtues that comprise human flourishing can be determined by simply appealing to human nature. Thus, without endorsing Berlin’s characterization of value pluralism, this conception of human flourishing accepts the idea that there are many objective goods that are valuable in their own right. Yet this form of value pluralism does not suppose that these goods must be incompatible. As noted earlier,¹⁰⁶ the existence of a plurality of goods does not in itself entail any incom-

¹⁰² This gap is discussed in L. W. Sumner, *Welfare, Happiness, and Ethics* (Oxford: Clarendon Press, 1996), pp. 78–79. However, Sumner does not consider a view of human flourishing that is inclusive, individualized, and agent-relative.

¹⁰³ See Rasmussen and Den Uyl, *Liberalism Defended*.

¹⁰⁴ Isaiah Berlin, “The Pursuit of the Ideal,” in Berlin, *The Crooked Timber of Humanity* (New York: Alfred A. Knopf, 1991), p. 11.

¹⁰⁵ Isaiah Berlin, “Alleged Relativism in Eighteenth-Century European Thought,” in *ibid.*, p. 80.

¹⁰⁶ See reply (2) in Section III above.

patibility. Rather, the question of their compatibility must be worked out in light of each individual's nexus and thus cannot be decided *a priori*. Further, since an agent-neutral conception of human flourishing has been rejected, there is no single model to which each person's pattern or weighting of these goods must conform. Such ethical rationalism has been rejected.

A consideration of human nature does allow one to make a list of generic goods. These goods form a cluster concept that is open-ended and subject to revision. Such a list is not intended to be exhaustive; nor is the list particularly novel. Indeed, it is not meant to be. It involves knowledge, friendship, justice, creative work, leisure, pleasure, health, aesthetic appreciation, honor, self-esteem, and moral virtue. These seem to be goods that no one, as Aristotle states, would choose to be without. They are, however, wide abstractions that help to outline the general character of human flourishing; they take on actuality and value only in relation to and because of the efforts of individual human beings. It is thus an error to suppose that they can be fulfilled in any manner apart from individual and agent-relative considerations. These goods are manifested in various activities in individual lives and take diverse forms in different cultures.¹⁰⁷

Since human beings are not purely minds, the pivotal role of moral virtue in assisting practical wisdom should not go unmentioned. We have feelings and emotions that move us toward objects of apparent benefit and away from objects of apparent harm. We are eager for the former and fearful in the case of the latter. However, what we desire as worthwhile and fear as harmful might not really be so. The problem is not with our emotions and feelings themselves. Being eager or afraid, pleased or sad, excited or bored, satisfied or discouraged—indeed, the whole range of emotional responses—are forces of our very being. We cannot flourish without them. Rather, the question is whether the objects of such emotions and feelings merit the responses and reactions that we give them. Is the implicit value judgment behind our emotional responses accurate? It is thus important to have the ability to use and control our emotions and feelings so that they will more accurately respond to what the situation merits.

Not surprisingly, if we do not properly use and control our emotions, they can be sources of conflict. We can come to have rational desires for some things and mere appetites for others. We can be emotionally pushed and pulled, torn apart, rendered dysdaimonic. Hence, our creation of moral virtues, that is, rational dispositions, that form our moral character is extremely important. Our appetites and desires can be revamped or reshaped into rational dispositions by our intelligence so that what we

¹⁰⁷ However, these goods may not all be on the same level; some may be more fundamental than others. But this is a matter for further investigation.

ought to desire and what we in fact do desire can be in harmony. This is where such rational dispositions as integrity, courage, temperance, and honesty play a crucial role in assisting practical wisdom in its task. When considered as a whole, moral virtue is necessary for the coherent achievement and use of multiple basic human goods, and, along with practical wisdom, pervades the entire activity of flourishing. Moral virtue aids practical wisdom in finding the mean. In fact, moral virtue and practical wisdom are mutually interdependent, because the compossibility they seek is one of thought and feeling, not mere abstract goods.¹⁰⁸

Yet, when considered not as a whole but as one good among many, moral virtue can be given more or less emphasis—for example, a person with a career in the military might require greater emphasis on the virtue of courage than would otherwise be the case. Thus, an individual needs to achieve a proper weighting or balance of the moral virtues or rational dispositions that define his or her character as well.

Obviously, any complete account of this neo-Aristotelian conception of human flourishing will have to consider the relationship of the moral virtues to practical wisdom in detail.¹⁰⁹ Moreover, a thorough investigation of all these proposed goods and virtues is required—particularly, such goods as nobility, honor, and self-esteem. Nonetheless, the crucial feature of this conception of human flourishing remains: an individual must use his practical wisdom if he is to fashion a worthwhile life. It is the task that our nature gives us, but does not do for us.

VI. CONCLUSION

The final question for this account of human flourishing remains: Is this a perfectionist theory? If we judge “perfectionism” as it has been traditionally understood, then the answer to this question must be “no.” Though the conception of human flourishing that has been presented does appeal to human nature to discover generic goods and virtues, these goods and virtues are no more than general parameters. They cannot alone determine what form of flourishing is proper for the individual. Rather, in determining what form of flourishing is best for the individual, moral consideration has to be given to what is unique to the individual. Seldom has the role and importance of the individual for an understanding of the human good been given such emphasis.

By offering an account of the human good that is not agent-neutral, while still being objective, and a view of practical wisdom that avoids the hubris of ethical rationalism, while still allowing a place for rational desire, this essay presents a view of human flourishing that is a form of moral pluralism. Human flourishing can be both objective and agent-

¹⁰⁸ Veatch, *Rational Man*, pp. 86ff.

¹⁰⁹ See Den Uyl, *The Virtue of Prudence*, pp. 200–213.

relative as well as universalizable and individualized. Further, it can be socially achieved and still personal. This is certainly not a view of the human good that is usually associated with a theory that appeals to natural teleology, even a natural teleology understood in a contemporary manner. Indeed, it might even be the case that the view of human flourishing that has been presented is more quasi- than neo-Aristotelian.¹¹⁰

Be this as it may, the view of human flourishing that has been presented combines plausibly an appeal to human nature with a recognition of human individuality. The fundamental intuition behind this project has been not only that it is the flourishing of individual human beings that ultimately matters but the individuality of flourishing as well. David L. Norton expressed this point well by noting that

to emulate a worthy man is not to re-live his individual life, but to utilize the principle of worthy living, exemplified by him, toward the qualitative improvement of our individual life.¹¹¹

Thus, one's aim in using practical wisdom is not to imitate "the worthy man," but to emulate him. It certainly seems fair to call such an activity as this *self-perfection*.

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¹¹⁰ See Richard Kraut, *Aristotle on the Human Good* (Princeton: Princeton University Press, 1989), for an important criticism of the inclusivist interpretation of Aristotle's ethics.

¹¹¹ David L. Norton, *Personal Destinies* (Princeton: Princeton University Press, 1976), p. 13.

Revelation and the Essentiality of Essence

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Abstract: It is usually agreed that the *Revelation Thesis* about experience – the idea that the knowledge we gain by having an experience somehow “reveals” the essence, or nature, of this experience – only requires that we know the essence of the experience, not that we know, of this essence, that it is the essence of the experience. I contest this agreement. In the light of what I call the “Essentiality of Essence Principle” – the principle that whatever is in the essence of something is also essentially so – I argue that the Revelation Thesis does require that we know, of the essence of an experience, that it is the essence of the experience, and draw some conclusions about the plausibility of that thesis.

Keywords: essentiality of essence principle, experience, qualia, revelation thesis

1. The Revelation Thesis about Experience

This paper is concerned with the so-called ‘Revelation Thesis’ about experience,¹ the idea that the knowledge we gain by having an experience ‘reveals’ the essence, or nature, of this experience, what it is or what it takes to be that experience.

Often formulated in relation to *qualia* – the phenomenal properties instantiated in our experiences – as the claim that *when we have an experience with quale Q, we thereby (are in a position to) know the essence of Q*,² the relatively few philosophers who have paid attention to the thesis have disagreed on a number of points, the most important of which including the questions whether *Revelation* is to be considered part of our folk-psychological notion of experience (Lewis 1995 thinks so; Stoljar 2009 thinks not), and whether it should be dismissed as inconsistent with physicalism (Lewis 1995 and Stoljar 2009 think so; Damjanovic thinks not). (I shall briefly return to these questions in the last section.)

Yet, those philosophers all seem to agree on one point: on a proper formulation of the Revelation Thesis, the expression ‘knowing the essence, *F*, of a

¹ So named after Johnston 1992, also referred to, by Lewis 1995, as the “Identification Thesis”.

² Following Williamson 2000, Damjanovic (2012, 71-72) suggests interpreting ‘being in a position to know’ the essence of *Q* as meaning that the essence of *Q* is ‘open to one’s view,’ so that ‘all that must be done to know that [essence]’ is for us to reflect on our experiences. For our limited purposes, an intuitive reading of the expression will work as well.

quale *Q*' is to be understood as 'knowing that *Q* is *F*,' and *not* as 'knowing that *F* is the essence of *Q*.' In other words, they agree that there is a substantial distinction to be made between a 'weak' (or *de re*) version and a 'strong' (or *de dicto*) version of the Revelation Thesis:

(*Weak Revelation*) When we have an experience with quale *Q*, if it is in the essence of *Q* that *p*, we thereby (are in a position to) know *that p*.

(*Strong Revelation*) When we have an experience with quale *Q*, if it is in the essence of *Q* that *p*, we thereby (are in a position to) know *that it is in the essence of Q that p*.³

and that by *Revelation*, we ought to refer to the former version, not the latter.⁴

It is the legitimacy of this agreement which I wish here to consider. And I shall contest it on the grounds that *Weak Revelation* entails *Strong Revelation* as a special case. So that if it is in the essence of quale *Q* that *P*, *Revelation* does not only require that the experiencer know that *P*, but also that he know that it is in the essence of *Q* that *P*. Or so shall I argue in the light of a principle not generally discussed, but which I take to be as natural as can be when it comes to reasoning about essences (or natures).

³ In these two formulations and throughout the paper, *p* stands for any sort of proposition that can be true of a quale. I certainly acknowledge that distinguishing between knowledge of essential truths and knowledge of essential properties might be relevant in the context of a discussion of Revelation – Damjanovic 2012 is a good illustration –, yet not with respect to the purpose of the present paper in which *p* will be used to refer to any kind of claim that can be true of a quale (property ascriptions, identity claims, etc.).

⁴ Daniel Stoljar (2009), for instance, warns us that:

Knowing the essence of experience might be interpreted as knowing (e.g.) *that this itch is F*, where *F* is *in fact* the essence of the experience; or it might be interpreted as knowing *that F is the essence of this itch* (Stoljar 2009, 119)

and makes it clear that we ought to adopt the first formulation (for reasons that will be addressed in the last section); followed in this by Nic Damjanovic (2012), who explicitly assumes from the start that:

If it is in the nature of the taste of peaches that *p* then *Revelation* only requires that we know that *p*, and not that it is in the nature of the taste of peaches that *p* (Damjanovic 2012, 71, fn. 4).

On this point, most people who have lent some thought to the thesis have agreed with them. (An exception is Byrne and Hilbert 2007 who defend a form of *Strong Revelation*, but in relation to colours, rather than to experience. For this reason, this exception shall not detain us here).

2. The Essentiality of Essence

The principle I have in mind states that whatever is essential to something is also essentially so. To be precise, this 'Essentiality of Essence Principle,' as I shall call it, states that:

(*Essentiality of Essence*) For any thing (or class of things) X and any proposition p , if it is essential to X that p then it is essential to X that it be essential to X that p .

(Remark. I will use the expressions 'it is essential to X that p ' and 'it is in the essence of X that p ' interchangeably.) This principle follows, it will be seen, from basic, uncontroversial considerations regarding the connections between essentiality and necessity.

The question whether the essential *versus* accidental property distinction can be properly rephrased in modal terms has been, and still is a matter of dispute – most notably between those who think that being essential basically amounts to being necessary (a view often associated with Kripke 1980), and those who contend that essential properties cannot be analyzed in modal terms but need be characterized otherwise (for instance in definitional terms as in Fine 1994, or in explanatory terms as in Gorman 2005).⁵ There are, however, two undisputed and, I believe, undisputable claims that can be made, connecting essentiality with necessity on the one hand, accidentality with possibility on the other hand:

($E/\Box$) For any proposition p and any object (or class of objects) X , if it is essential to X that p then it is (metaphysically) necessary that p .

($A/\Diamond$) For any proposition p and any object (or class of objects) X , if it is accidental to X that p then it is (metaphysically) possible that not- p .

And these two claims, together with the following (also natural) claim:

($\neg E/A$) For any proposition p and any object (or class of objects) X , if p is true of X and yet it is not essential to X that p , then it is accidental to X that p .

are all that we need in order to derive the above Essentiality of Essence Principle.

To see this, let A be an object, P a proposition, and assume that P is not only true of A , but is also an essential truth about A (for instance, A could be water and P the proposition that water is made of H₂O molecules). In other words, assume that:

⁵ This is an oversimplified view of the debates. For a survey of the literature on the analysis of the essential/accidental property distinction, see Robertson and Atkins 2013.

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(1) It is essential to A that P

Then, by $(E/\Box)$:

(2) It is also necessary that P .

On the other hand, assume, for *reductio ad absurdum*, that:

(3) It is not essential to A that it is essential to A that P .

Then, by $(\neg E/A)$:

(4) It is only accidental to A that it is essential to A that P .

This, by $(A/\Diamond)$, implies that:

(5) It is possible that it is not essential to A that P .

Which, by $(A/\Diamond)$ again, implies that:

(6) It is possible that it is possible that not- P .

This, of course, is incompatible with (2) as a matter of basic modal logic. By *reductio*, (3) is false and as a consequence:

(7) If it is essential to A that P , it must also be essential to A that it be essential to A that P .

(So, for instance, if it is essential to water that it be made of H₂O molecules, then it is also essential to water that water be essentially made of H₂O molecules.)

Since A and P are arbitrary in the foregoing reasoning, we can thereby see that the Essentiality of Essence Principle follows from fairly uncontroversial claims regarding essentiality, accidentality and modality.⁶ It is this principle that will play the pivotal role in my argument against considering *Weak Revelation* and *Strong Revelation* as if they were two substantially different theses.

3. From Weak to Strong Revelation

In the light of the Essentiality of Essence Principle, it should clearly appear that *Weak Revelation* entails *Strong Revelation* as a special case.

For consider *Weak Revelation* again:

(*Weak Revelation*) When we have an experience with quale Q and it is in the essence of Q that p , we thereby (are in a position to) know that p .

Suppose that, in fact:

⁶ Although I have derived the Essentiality of Essence Principle from claims connecting essentiality/accidentality talk with necessity/possibility talk, it is worth mentioning that this principle is also a theorem of the 'logic of essence' associated with Kit Fine's non-modal, definitional approach to the concept of essence, as found in Fine 1995 and Correia 2000. I take this as a further reason to endorse the principle.

(1) We have an experience with quale Q

and assume that:

(2) It is in the essence of Q that P

for some arbitrary Q and P .

From this latter assumption, (2), and the Essentiality of Essence Principle, it follows that:

(3) It is in the essence of Q that it is in the essence of Q that P .

Now, given (3), we can substitute 'it is in the essence of Q that P ' for p in *Weak Revelation* above, so that we get:

(4) If we have an experience with quale Q and it is in the essence of Q that it is in the essence of Q that P , we thereby (are in a position to) know that it is in the essence of Q that P .

And from this, together with the conjunction of (1) and (3), it follows by *modus ponens* that:

(5) We thereby (are in a position to) know that it is in the essence of Q that P .

We may therefore conclude that:

(6) If we have an experience with quale Q and it is in the essence of Q that P , we thereby (are in a position to) know that it is in the essence of Q that P .

That is, we get *Strong Revelation*.

Therefore, assuming the truth of the Essentiality of Essence Principle, *Strong Revelation* is but a special case of *Weak Revelation*. In other words, if it is in the essence of a phenomenal property Q that P , the Revelation Thesis requires not only that we know P , but requires that we know P to be essential to Q as well. Hence, the agreement found in the literature on the supposedly substantial distinction between a weak and a strong version of *Revelation* is ill-grounded.

4. Is (Strong) Revelation Plausible?

Now, what bearings does this have on the plausibility of the Revelation Thesis as part of a theory of experience? We just established that *Weak Revelation* entails *Strong Revelation* as a special case. This should sound like bad news for advocates of the Revelation Thesis. Here are two reasons why.

(A) A first point that might be pressed is that, as Stoljar (2009) points out, *Strong Revelation* amounts to requiring experiencers to antecedently possess some concept of essence, while "surely it is implausible that those who are itchy require the concept of essence." Stoljar might be right on this but what he says needs a little supplementation.

(i) If, as Stoljar thinks, knowing something to be the essence of a given quale requires possessing the concept of essence *in general* (rather than the concept of the essence of this or that quale in particular) – which seems to be Stoljar’s intended interpretation –, then I agree with him that *Strong Revelation* can hardly be true. Whatever meaning ‘possessing the concept of essence’ might have – whether we understand it as being able to articulate (some of) its conditions of application, or simply as being able to exercise, even unreflectively, that concept with (some) success, or as merely requiring that one have some notion of what makes a thing the thing it is –, people (even professional metaphysicians) surely have had lots of experiences long before they possessed the concept of what makes a thing the thing it is.

(ii) If, on the other hand, knowing something to be the essence of a quale requires possessing the concept of the essence of this quale *in particular* (rather than the concept of essence in general), this is likely to tense up the ears of anyone who thinks that the notion of qualia is to play a role in a proper understanding of experience. And the reason for this is that *Revelation* could easily be used in a sceptical argument against qualia talk. The argument in question would go like this. If knowing something to be the essence of a quale requires possessing the concept of this quale, then (*Strong*) *Revelation* entails that (1) one cannot have an experience with a quale *Q* unless one first has some notion of what makes *Q* the thing it is; but (2) one cannot have some notion of what makes *Q* the thing it is unless one could and did attend to *Q* in the first place; but, of course, (3) one cannot attend to *Q* at all before one has an experience with *Q*; therefore, (4) one could never have an experience with *Q* at all! – a result that a qualia theorist would not be willing to accept.

(Remark. Although such considerations incline me to agree with Stolar that *Strong Revelation* is implausible, I disagree with him in that he takes that implausibility to be a reason why proponents of *Revelation* – of which, by the way, he is not – should retreat to its *Weak* version. For if *Strong Revelation* just is a special case of *Weak Revelation*, as I have argued, the implausibility of the former might so well be taken as a reason to dismiss the whole idea of *Revelation* in itself as implausible.)

(B) One might also press another point against proponents of the *Revelation* thesis, a point that echoes Lewis’s objection to the thesis. Considering it in its *Weak* version, Lewis has famously argued that *Revelation*, which he takes to be part of the folk theory of experience, should be rejected as false if physicalism is true, that is, “if qualia are physical properties of experiences, and experiences in turn are physical events.” For “then it is certain that we seldom, if ever, [know the nature of] the qualia of our experiences. Making discoveries in neurophysiology is not so easy!” (Lewis 1995, 328). Lewis concludes that our folk theory of qualia has to be revised.

I do not wish here to consider whether physicalism is true or false, or even whether it is compatible with *Revelation* or not (see Damnjanovic 2012 for a

compatibilist position on this latter question). Yet, I am confident that anyone sympathetic to Lewis's argument will find it at least as effective when directed at *Strong Revelation*. For if *Strong Revelation* were true, it would not only be easy to discover the neurophysiological correlates of the qualia of our experiences – e.g. that this pain is a C-fiber firing –, but also to discover ontological truths about these correlations – viz. that it is in the essence of this pain to be a C-fiber firing. This is likely to sound incongruous to many ears. What is more, note that this incongruity would hold even if physicalism were false: whatever properties, events, be they physical or not, whatever truths are part of the essence of an experience, (*Strong*) *Revelation* entails that these properties, events, truths, are revealed to us as such. But making discoveries in the metaphysics of mind, we might say, is not so easy either!

I have mentioned these two points – there may well be many more, which I leave it to others to press – just to give a feel of how problematic *Revelation* might turn out, once established the implication from its *Weak* to its *Strong* version. Establishing this implication was my main purpose here. If the essence of an experience is ever revealed to us, then it is revealed to us as such.

References

- Byrne, Alex and David R. Hilbert. 2007. "Colour Primitivism." *Erkenntnis* 66: 73-105.
- Correia, Fabrice. 2000. "Propositional Logic of Essence." *Journal of Philosophical Logic* 29: 295-313.
- Damjanovic, Nic. 2012. "Revelation and Physicalism." *Dialectica* 66: 69-91.
- Fine, Kit. 1994. "Essence and Modality." *Philosophical Perspectives* 8: 1-16.
- _____. 1995. "The Logic of Essence." *Journal of Philosophical Logic* 24: 241-273.
- Gorman, Michael. 2005. "The Essential and the Accidental." *Ratio* 18: 276-289.
- Johnston, Mark. 1992. "How to Speak of the Colours." *Philosophical Studies* 68: 221-263.
- Lewis, David. 1995. "Should a Materialist Believe in Qualia?" *Australasian Journal of Philosophy* 73: 140-144. Reprinted in his *Papers in Metaphysics and Epistemology*, 325-331. Cambridge: Cambridge University Press. All references are to the reprinted version.
- Robertson, Teresa and Philip Atkins. 2013. "Essential vs. Accidental Properties." *Stanford Encyclopedia of Philosophy*. <http://plato.stanford.edu/entries/essential-accidental/> (Retrieved on July 14, 2014).
- Stoljar, Daniel. 2009. "The Argument from Revelation." In *Conceptual Analysis and Philosophical Naturalism*, eds. David Braddon-Mitchell and Robert Nola, 113-138. Cambridge: MIT Press.
- Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.

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The Paradox of Self-knowledge

ABSTRACT: In this paper I explore the conflict of philosophical intuitions that makes it hard to get a grip on the nature and scope of first-person knowledge. First, I shall sketch the shape of this disagreement, applying it to a debate between philosophical accounts of self-knowledge and psychological ones. Secondly, I shall argue that philosopher's current work on self-knowledge opens up an entirely new way of thinking about many of our first-person claims. But while, this new way of thinking is inspired by philosophical considerations, it is driven by psychologist's empirical findings. I suggest that the philosophical and psychological accounts of self-knowledge can be reconciled; it may simply be a matter of calibrating this debate in terms of the kinds of mental states and processes under consideration, or the kinds of situations in which first-person judgments are made, or the kind of self-judging subject in question (that is child or adult). I suggest an emphasis on the claim that more work needs to be done on methodological direction of acquiring self-knowledge that can subsume this psychological work on first-person error while leaving the inalienable, intentional authority of agents intact.

KEY-WORDS: epistemology of self-knowledge, first-person authority, empirical evidence

In the traditional explanation, first-person knowledge is explained by the special access that we enjoy to the states and operations of our own minds. We have an abiding faith in first-person authority: 'I am in the best position to make claims about the contents of my own mind'; on the other, we do recognize that we are fallible creatures: we may get things right much of the time, but nothing we do is entirely free from error, even if that something is making judgments about our own mental states.

In this regard it will be useful to recount briefly our intuitive understanding of self-knowledge. Two main characterizations that are often noted about self-knowledge are its authority, immediacy. Knowledge resulting from privilege access is often taken as epistemically superior to any other kind of knowledge. Epistemically speaking, being in a secured or authoritative position is being in a position where one is capable of knowing the truth always. Traditionally

this authority has been understood in terms of characteristics like infallibility (they cannot be false), incorrigibility (they cannot be corrected), indubitability (they cannot be doubted). Now, an incorrigible claim need not be infallible as well since a claim that cannot be corrected can nonetheless be false. However, according to the traditional understanding of self-knowledge, infallibility does imply incorrigibility since if a claim is always true then it can never be corrected. Having authority, that is to say, enjoyment of infallibility, incorrigibility etc., is thus explained by our having an 'immediate' way of being acquainted with and justifying any knowledge claims about our own mental episodes.

Recent thinkers announce their distance for the classical picture of mind to which mental states and episodes enacted in front of the mind's eye. So, one might expect that as a result of the downfall of the Cartesian picture of mind, and also of this realization about the frequent failures of claims of infallibility, either the epistemic advantage would be denied, or taken to consist solely in the special access without implying complete authority. The special access, however, may involve considerable reliability. Thus, the question of how one arrives at such reliability from privilege in access and also of whether authority can be understood in terms of such reliability become relevant once one renounces the Cartesian picture of transparent mind.

Contrary to these reasonable expectations, however, the specialness of privileged access of self-knowledge continues to be explained in terms of the authority that one enjoys in one's knowledge claims about these states. What philosophers like Davidson (1987), McKinsey (1998), Peacocke (1992), Boghossian (1989) and others say is that it is true that there are cases where we will not get the content right but that there are at least some cases where we do always get it right (these cases are variously termed as 'normal' (Burge), 'standard' (Davidson), 'basic' (Burge and McDonald), etc. without any clear explanation of what such normalcy, standardness or basicness might consist of). They concede the possibility of error in some cases, but this is just to delimit the scope of our privileged access. Thus, contrary to Descartes they do not claim that 'there is nothing in us of which we are not in any way conscious'; rather what they claim is that there is a limited class, consisting of first-person-claims about occurrent states in relation to which we enjoy privileged access.

However, such a privilege does consist of infallibility since claims of this class can never turn out to be false. Thus, while delimiting the scope of self-knowledge, these philosophers still understand its authoritative nature in terms of the associated infallibility. In a fashion similar to the traditional philosophers, they further explain such authoritativeness by pointing to the fact that such knowledge claims are immediately known. But almost no account is provided how one arrives at authoritativeness from immediate access. This move calls for careful scrutiny. This is because one may argue that authority need not

be understood in terms of infallibility. This is because one may argue that authority can be understood in terms of responsibility. Knowing what we are doing involves knowing the intentional states that cause and give reason for our acts, and that implies initiation and control. I think that if we take under serious consideration the above account of authoritative self-knowledge then we will end up with a revised epistemology of self-knowledge that is open to subsume the findings of psychological experiments on first-person authority.

This emphasis on responsible agency can lead philosophers like Bilgrami (1994) and Wright (1989) to argue that if a cognitive agent genuinely believes or sincerely avows that she has a certain intentional state, then she has that state. The condition of responsible agency, for Bilgrami, is met if and only if 'the kind of intentional state that is picked out by the embedded clause in a higher-order belief ascription is one which potentially (along with other such intentional state) leads to actions or conclusions that can be the objects of justifiable reactive attitudes, that is, free and responsible actions. Bilgrami intended to establish the claim that under conditions of responsible agency avowals and second-order beliefs can't fail to be true.

However, given his goal, it would be patently circular for Bilgrami to 'assume that [...] an agent [...] has actually acted or concluded something on the basis of a certain intentional state', then to 'suppose that he judges or avows that he has that intentional state, thereby expressing his second-order belief', and finally to conclude that 'under these conditions of responsible agency, the second-order belief must be true'. This last conclusion is naturally unwarranted because all Bilgrami did was in effect to assume what he set out to prove. Moreover Bilgrami only dealt with situation in which the intentional state which the agent has is the kind of intentional state that actually leads to free and responsible actions. If the relevant intentional state potentially, but not actually, leads to free actions, then there is no real responsible agency. In that case, even if 'self-knowledge [a fortiori, true self-belief] is a necessary condition of responsible agency' it does not follow from the fact that the agent has an intentional state which potentially, but not actually, leads to free actions that she knows or even believes that she has that state.

No matter whether Bilgrami's argument is sound or not, we should keep in mind that the main aim of Bilgrami's 'Self-Knowledge and Resentment' is to make a case for the thesis that self-knowledge is a matter of responsible agency. Hence, a general failure in our first-person authority would signal to others that we do not understand what it is a responsible agent. If we value and so wish to preserve the structure of our various interactions –linguistic, social, political, moral- we cannot but engage with one another as responsible agents. To be viewed properly as agents, we must be construed as actively involved in forming, reviewing, revising, suppressing, and selectively acting on the first-

order states we 'know' about because we are the ones generating those very cognitive processes.

At this stage, let's take the findings on self-knowledge from the cognitive dissonance research in psychology in order to see then how they can be utilized by the epistemology of first-person authority. Recently, R. Nisbett and T. D. Wilson have catalogued a variety of experiments that demonstrate that people have no reliable subjective access to the cognitive processes underlying their judgments and their behavior. They argued that people can easily be misled about what factors influence their decisions, their choices, even though they will give explanations of these as if based on knowing acquaintance with the internal processes that led to them spontaneously. In other words, they may attribute their preferences, for example, to intrinsic features of the objects they prefer, when preferences are really driven by the situational conditions under which choices between objects are made. Thus, subjects were unaware of the true causes of their own behavior, and instead confabulated such causes. In one of their studies, preferences among four identical pairs of panty hose were influenced by the positions of the items in a display. Subjects denied that position influenced their choices, and instead offered various spurious explanations. Nisbett and Wilson concluded that people have little or no introspective access to higher order cognitive processes.

Cazzaniga advances a confabulation model of self-attribution based on split-brain experiments. When a commissurotomy patient's left hemisphere is 'blind' to what the right hemisphere sees, the talking left hemisphere still confabulates a story about what is in view. Cazzaniga therefore postulates a left-brain-based module called the 'Interpreter', which constructs explanations of the agent's behavior by creating plausible theories.

In developmental psychology, Josef Perner (1991), Alison Gopnik (1993), Henry Wellman (1990), and others have made some interesting discoveries relating directly to our first-person experience of intentional states. In a series of experiments with young children, they have found that three-year olds do not have immediate and incorrigible access to their intentional states and thus they are unable to make correct judgments about their own beliefs once they discover them to be false.

Gopnik says that three-year olds do not have a representational model of the mind as adults do, rather they think of belief and desire as a matter of a direct relation between the mind and the objects of the world, not a relation mediated by representations or propositions. Since Gopnik takes a representational model of the mind to be an essential part of the commonsense adult notion of intentionality, three-years-olds, she says, must lack this notion. This means that three-year-olds lack the belief that the contents of beliefs and desires are not the things themselves but what we think about those things.

The question she wishes to address is whether this change in the child's concept of the mind during the third year is also applicable to the self. If these children have direct and incorrigible access to their own beliefs then even though they are mistaken in their views about the psychological states of others, they would not make such errors in their understanding of their own psychological states. The answer is that children make errors about their own immediately past mental states similar to those they make about the states of others.

In an experiment Gopnik (1993a) investigated children's ability to identify the sources of their beliefs. Children found out about objects that were placed in a drawer in one of three ways; they saw the objects, were told about them, or figured them out from a simple clue. Although they knew where the objects were they did not know how they knew. What Gopnik finds interesting here is the parallel between children's understanding of the psychological states of others and their understanding of their own immediately past psychological states. Yet we normally consider the process of discovering our own psychological states to be fundamentally different from that of discovering other people's psychological states. While we observe the behavior of others, she says, we simply report our own psychological states. We need not infer them; we need not, indeed, use any theoretical account of the mind at all (1993a: 9).

The experimental findings on the experience of young children, however, show that their reports of their own immediately past psychological states are consistent with their accounts of those others. Also, children seem to be capable of reporting their psychological states in some cases. She finds that the evidence 'suggests that there is dissociation between the psychological states that cause the children's behavior and their sincere conscious report of their psychological experience. Either we have to deny that three-year-olds have psychological states like ours, or we have to deny that their experience of those states is like ours. If we take the second option, we must also deny that children learn about these psychological states through direct psychological experience' (*ibid*: 10).

Gopnik's point is to argue that adults do not have first-person knowledge of intentionality either, that our experience of it is an illusion. I agree with her that our experience of it is an illusion, but I think that it is misleading to go from this to the conclusion that first-person knowledge of intentionality is an illusion. In fact, the most Gopnik is justified in claiming is that first-person knowledge is not direct, immediate and infallible. She has given no argument to show that it is not privileged nor has she shown that it cannot be seen as authoritative.

All the above empirical findings can open up an entirely new way of thinking

about many of our first-person claims. Where then must philosophers base a revised epistemology of self-knowledge that can subsume the psychological work on first-person error while leaving the intentional authority of agents intact?

We can now say that self-knowledge is not and cannot be direct, immediate and infallible. Self-knowledge is mediated by psychological, physical and social environment. I suggest, that self-knowledge requires investigation, for how else would I be able to know my physical, social and psychological environment, that is, the things by which my knowledge of my thoughts are mediated. Now, of course, many of my thoughts appear to be known immediately because the investigation was undertaken some time ago. I know some of the individuating conditions of the word 'water' because English is my native language and I know that water is H₂O because I learned it to school. But the investigation of the individuating conditions of a concept, let's say, might well involve consulting a dictionary or an expert.

Analogically, knowledge of our mental contents requires investigation. Let's look at a thought experiment to see whether it makes sense to talk about investigation in these cases. In T. Burge's brisket example (1993) we have a person, call him Gilbert, who believes that brisket is beef when in fact brisket is defined as the upper chest meat of any four-legged animal. When Gilbert says or thinks 'Brisket is delicious', he does not, on the Burge story, have knowledge of the individuating conditions of brisket and therefore does not have authoritative self-knowledge. On the revised view of self-knowledge we have been suggesting, Gilbert has access to the individuating conditions of his thought because this knowledge is available to him, therefore Gilbert does have self-knowledge. How is this possible?

First, let us recall what self-knowledge is on this picture. It is the result of an investigation of the knowledge available to me given my social relations. Some of this knowledge is available in that I remember it from previous investigation, that is, I investigate my memory. Some is available because I can investigate my physical psychological or social environment. It is also possible that his investigation is poorly conducted. He may conclude that brisket is beef on the basis of always getting beef when he orders brisket at his uncle's deli. In either case we must say that Gilbert has not adequately investigated his beliefs. In fact, it is quite likely wrong to attribute to Gilbert the belief that brisket is beef, rather we must say that he uses the term 'brisket' to refer to beef without ever having the thought 'brisket is beef and only beef'. The answer to Burge's brisket example on the revised, relational theory of self-knowledge is, then, that Gilbert has not adequately investigated his beliefs, though knowledge of them is certainly available to him.

There are, of course, several obvious objections to this view that one

could raise. It may at first seem that introspection would be a problem on this view. This view seems to suggest that introspection is not possible, yet we obviously sometimes know things without having to embark on an empirical investigation. We could, however, see introspection to be a special case of investigating the knowledge available to me. In other words, introspection too requires investigation – investigation of one's memory. Investigation of one's memory would be the most convenient first step in any investigation into the content of a thought or a psychological state.

We could say then that I always know the individuating conditions of my thoughts because I can investigate them. For this reason it is never the case that I do not know my own mind, though it certainly is the case that I have not always adequately investigate my beliefs, leaving them confused.

As I have already developed in that paper, in spite of the usual belief of many persons that they possess reliable, authoritative, and immediate self-knowledge, no empirical evidence is available to support this belief. In so far as this indeed the case, the doubt that we have privileged access to ourselves, which grants self-knowledge, a doubt several philosophers have raised and argued for, questions the assumption above as well as the viability of explaining what I call the puzzle of self-knowledge. The way that I propose to overcome the problem appeals to psychological investigation that provides empirical evidence which questions the privileged access of self-knowledge. I suggest that a special emphasis needs to be done on a view of self-knowledge that does not undermine privileged access and at the same time gives credits to the process of the investigation of my privilege access. I can have thoughts that I do not reveal to others, but that does not mean that they are not subject to responsible to know what I am thinking and to undertake investigations to correct and verify my revision, that is, I may be mistaken about what I think. I am still, under normal circumstances self-knowledge. This gives me a privilege in knowing myself that no one else has in knowing me. This is not to say, however, that I have this knowledge immediately or without investigation, only that each of us, under normal circumstances, is in a better position to investigate our own thoughts than anyone else is. According to the methodology that I suggest then, all knowledge, even self-knowledge, requires investigation, whether it is of the world, of memory, or both. Knowledge, even self-knowledge, is never immediate or unmediated and is thus always fallible. Knowledge of the individuating conditions of one's thought is always available, so it is never the case that one does not know one's own mind, although it is certainly the case that one has not always adequately investigated one's beliefs, leaving them, as it were, obscure and confused to some degree.

We cannot, however, know our own minds completely, once and for all, it

would seem, because the individuating conditions of our thoughts are, or can be, continually changing. Self-knowledge is a work-in-progress. Gopnik comes to argue that '[...] real psychopsychology is more like real psychophysics and perception than like folk or philosophical picture of privilege access. We can be and often are mistaken about our own mental states, in the sense that our subjective experience does not match the structure of our psychological states. And often these illusions are the result of top-down influences on subjective experience. Our theories of the world or the mind, our general knowledge, our other beliefs and expectations, our expertise, play as great a role in shaping our subjective experiences as the mental states or physical states those experiences are apparently about' (1993b:273).

This suggests that we cannot isolate ourselves from the experimental psychology and the epistemology of the responsible self-knower. The responsible self-knower, in my account, is called the knower who takes self-knowledge as a deliberate process of the empirical investigation of our mental states.

The above methodological direction allows philosopher to concentrate on the investigation of self-knowledge by the responsible agent and at the same time allow the experimental psychologist to explore the cognitive and sub cognitive processes of the self-knowledge procedure.

REFERENCES

- Bilgrami, J., *Self-knowledge and Resentment*, MS, Columbia University, 1994.
- Boghossian, P., 'Content and Self-knowledge', *Philosophical Topics*, 17 (1989), pp. 5-26.
- Burge, T., 'Content preservation', *Philosophical Review*, 102(1993), pp. 457-88.
- Davidson, D., 'Knowing One's Own Mind', *Proceedings of the American Philosophical Association*, 60 (1987), pp. 441-58.
- Gazzaniga, S., *Nature's Mind: The Biological Roots of Thinking, Emotions, Sexuality, Language, and Intelligence*, New York: Basic Books, 1992.
- Gopnik, A., 'How we know our own minds: the illusion of first-person knowledge of intentionality', *Behavioral and Brain Sciences*, 16 (1993a), pp. 1-14.
- Gopnik, A., 'Psychopsychology', *Consciousness and Cognition*, 4 (1993b), pp. 264-280.
- Nisbett, R. & Wilson, T., 'Telling more than we can know: Verbal reports on mental processes', *Psychological Review*, 84 (1997), pp. 231-59.
- Peacocke, C., *A Study of Concepts*, Cambridge MA: MIT Press, 1992.

Perner, J. (1991), *Understanding the Representational Mind*, Cambridge, MIT.

Wellman, H. (1990), *A Child's Theory of Mind*, Cambridge: MIT.

Wright, C. (1989), 'Wittgenstein's Later Philosophy of Mind: Sensation, Privacy, and Intention', *The Journal of Philosophy*, LXXXVI: 622-34.

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Being, Essence and Existence (In Anaglyphs)

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BEING, ESSENCE AND EXISTENCE

(In Anaglyphs)

1. *Essence.*

Thesis: Whatever is, in thought or fact, has an essence.

Definition: An essence is a meaning, a structure, the character, the nature of an entity, "what" it is.

Distinction: Each entity has at least three distinguishable essences. It has a permanent essence, the character it maintains in diverse contexts. It has a specific essence, the character it shares with other entities. And it has a total essence, the character it has here and now as this unique object.

When the constant features of an entity are distinguished from the transient ones, the total essence is divided into a permanent essence and accompanying accidents. When the characters which an entity shares with others are distinguished from those which it alone possesses, the total essence is divided into a specific essence and individual traits.

Problem: The total essence comprises the entire nature of an entity. There is nothing left over, unless it be the unintelligible of which we can know nothing and which has no nature, and thus is not something left over. Yet an essence is the essence of something. There must be something left over unless the essence, instead of expressing the nature of something, were identical with that of which it is only the essence.

Clarification: The definition of essence states only the essence of essence. There must be that to which the definition applies, the essence as existing. The essence is, only as both together; it has being because it is an existent essence.

Like every other entity, an essence has an essence, an existence and a being. As a being it contrasts with another being, together with which it constitutes a reality.

Resolution: An essence is an "essence of." It points beyond itself. It says that it points beyond itself by referring its own es-

sence to its own existence. The essence says internally that it externally refers to a correlative existence, for it is united with something not contained in it, in the very way in which it itself unites its own real essence with its own existence. By internally exhibiting that there is something outside essence, an essence makes evident that there is something external to it. This which is external to it, this which it leaves over, is not unintelligible. The essence says internally and accurately just what this is—it is existence, localized, specialized, correlative with essence and constituting with it a being encompassing both.

An essence is incomplete and says internally that it is incomplete and what would complete it. It is internally and partially completed by a part of existence, and it externally points to a further existence as that which would in fact complete it. By internally referring to existence it says that it is incomplete, and since this existence is inseparable from an existence beyond, the essence internally tells what is needed to complete it.

An essence is a unity of structure (which expresses the essence of that essence) and a content (which is the existence of that essence.) This unity is itself a structure for an outside existence. That there is an outside existence to which the essence refers, the essence itself says by referring its own essence to its own content. It internally affirms that beyond essence there is a correlative existence. By saying that to be an essence is to be correlate with an existence, the essence says that there is something more than essence, that there is a correlative existence and therefore a being in which the existence and essence are one.

Nothing, thus, is unintelligible. An essence states everything about that of which it is the essence. There is nothing surd left over. The essence gives the full meaning of what of which it is the essence, by virtue of the way in which it refers its own essence to its own content, a content which is connected with existence outside the essence.

All existents form one realm; any existent which was to constitute a separate realm would have to be existentially opposed to any other and thus would self-contradictorily be continuous with that other.

Consequences: a. Things are intelligible only so far as they possess a structure. They are encounterable only so far as they

are distinct with natures of their own. Everything that we can know or encounter therefore has an essence.

b. An essence may be an abstraction, a description; or it may be a plan, a prescription. In either case, it is a unit of thought—that which is judged, that which is known, that from which and to which we infer.

c. An essence is not necessarily permanent, since if it were, a transient being would be unknowable and unencounterable.

d. Not every part of an essence is shared or even shareable. Otherwise it would be impossible to know or encounter anything here and now. We can therefore always isolate characters which are peculiar to an entity, either as having such and such a date, place or relation to others, or as merely pertinent to one being. These characters do not suffice to “individuate” the essence, for to do this they would first have to be united with the essence in an intimate, individual way. The individual traits are qualifications of a specific essence. They stand in relation to that essence as an intensity to extension, quality to shape, content to structure. Together with the specific essence they constitute a universal which expresses the total essence of a singular, unduplicatable, concrete reality.

e. An essence can be dealt with in one of four ways. 1. We can identify ourselves with it. This is what we do when we understand what an entity is. 2. An essence can be confronted as the unity of structure and content. To have it to think about is to have it as a single unity of structure and content standing over against us. 3. We judge by referring an essence beyond itself, by holding it to ourselves while pointing beyond it. 4. We can inquire for an essence. To do this we must acknowledge it as a relationship, as a possibility for connecting distinct elements.

As the first and second, an essence gives the meaning of ourselves as knowers and of something else as intelligible. As the second and third, it provides a locus for elements and must be localized elsewhere. As the third and fourth it is part of a more concrete reality. As the first and third it is a spread between terms and that to which terms are given so that they can be related. As the first and fourth it is a category of the understanding awaiting something to be understood, of which it will be the

essence. As the second and fourth it is the categorized awaiting understanding by means of its own structure.

Every essence has four sides answering to the above. It is at once relational and non-relational, a meaning and a being. It is a unity which serves to connect elements by referring to an external entity to which its united elements belong—or equally, it is a unity pointing to an external entity which provides it with distinct elements to relate. The parts of the essence, like the whole of it, have pivotal positions by virtue of the fact that they each contain an essence and an existence in a simple and in a relational unity.

f. Essences are related to one another as compatible, as conflicting, as independent, as similar, as different and so on. Because every entity has some essence, all entities form sets of compossible, antagonistic, independent etc., entities. And since it is one of the tasks of logic to study the relations which essences bear to one another, the results of a logic are pertinent to everything that is, in any sense, anywhere.

g. My knowledge involves a union of a subject and a predicate to constitute an essence which is sustained by me the knower. That subject and predicate are pivotal entities, belonging together as elements in the same or in different essences. As unified by me, the elements, in order to be more than sheer creations of mine, must belong to something other than myself. I am aware of a realm in which they might be unified at the very moment that I provide a unity for them, because I am aware that they are inseparable from an external existence, thereby making my unitary grasp of them an essence for that external existence. I am aware in short that there is an external world whenever I make any claim, justified or not, right or wrong, to have some knowledge.

My knowledge of an external world is a grasp of the contents of my knowledge as at once unified by me and as continuous with a realm in which they have some other relationship, equally or less intimate. My knowledge of the external world is one with the knowledge that I know, that I am not my knowledge, that the known is not the knower or the reality known, and that I, in knowing, have in my knowledge the essence of what it is I do not get into my knowledge in fact.

h. What I know are essences which have been integrated with my existence to constitute my being as a knower. The essences have a locus external to me as well. Together with external existences they constitute the being of that which I know by means of the essences. An object known is known therefore by a being who abstracts the essence of that object known, accepts some of the existence of that object known, and solidifies the two in an individual way. We who know are continuous with what we know, share an abstract of it, and stand over against it by virtue of the way in which we unite the abstract with an existence continuous with what we know.

Historical: a. Aristotelians identify permanent and specific essences. A specific essence is for them a kind of permanent essence, perhaps the only kind. As a consequence they suppose that individual traits are a kind of accidental character. For them there is nothing to know but general characters and irrelevant details.

b. Spinoza remarked that a grasp of the nature of man does not enable us to know whether or not there are men and how many men there are. Spinoza was right: we do not know, by studying the essence of a man, how many men there are. But this is not because the essence is something general, referring to kinds of beings, but because the (total) essence of each man is unduplicatable, unique, telling us nothing of other men beyond.

c. The total essence is analogous to what Hegelians term a concrete universal. But it is still an essence. It is not the being whose nature it expresses. It is the essence of an individual, not the individual of which it is the total essence. Hegel rightly insisted that the rational is real. But he failed to observe that the real is always more than rational, having existence as a component. Hegel also rightly insisted that the real is rational. But he failed to observe that the rational is always less than the real, since it lacks the existence characteristic of that real. A real rational, a true essence points beyond itself, and thus presupposes a reality which completes it by means of an alien existence. A rational real, a distinct existence, has a nature which, because abstracted in some way by whatever confronts it, is less concrete than the being which confronts it.

d. The Platonic "receptacle," the prime matter of Aristotle,

the ether of Boyle, the Kantian space, the "individuals" of symbolic logic, and the *élan vital* of Bergson are the products of so many different attempts to acknowledge inside essence entities supposedly standing over against all essence. It is only because there is something more than a bare structure to an essence that there can be something for the essence to express, for the essence says internally what it in fact is in relation to something outside it.

There is some recognition of this point in Plato when he brings into the realm of idea the indefinite dyad, for this is the filling which a bare idea would require in order to be the essence of something. Aristotle too in his definition of essence speaks of it as involving the formal statement that there is a particular kind of matter to which it pertains. The individuals of modern logic are never referred to in isolation, but always as in propositional contexts; at least tacitly there is an admission that these "individuals" are existences to which the essences internally refer, and that they do not therefore stand over against the essences. Boyle's ether was endowed with properties without which it would have lacked all definiteness and function. Instead of being placed over against all essence, it was thus thought of as infected by some essences. As such it either had the status of a real essence, presupposing beyond it an existence such as Newton's divine sensorium, or it was thought of as something like a Spinozistic substance, defining every other supposed existence as an abstraction. Kant in some places spoke of space as though it were a whole, inseparable from the essences it helps objectify. He thereby corrected his tendency to think of it as a kind of counterweight to unextended concepts. In the last resort he had, as is evident in the antinomies, to bring space somewhere inside the realm of essence,—a conclusion insisted on by the post-Kantians and particularly Hegel. The *élan vital* of Bergson, precisely because it is cosmic, is never experienced or known except as part of a canalized and therefore abstracted part of the whole; only as such does it purport to give the essence of that whole.

e. Duns Scotus maintained that each entity had its own individual form. Aquinas opposed him, asserting that individuality required a reference to what transcended form. They can be reconciled. Each individual has an individual essence. But this

essence does not individuate the individual; it leaves something out. An individual essence is the total essence and is that which is known when we know an individual. It is not identical, however, with the individual who is being known. There is an existence outside the individual essence; with that existence the essence must be united if the essence is to be an essence of something, and thus an essence at all.

f. Berkeley denied that there was something to which knowledge could be referred. But then what he had in mind could be neither true nor false, right nor wrong, since these are characters which accrue to an essence by virtue of a proper or improper connection with an external entity.

In knowing something we relate an essence to its external correlate, thereby providing an actual link between the essence and that of which it is the essence. It is because we do this that we not only have something which we know but know about something. Berkeley neglected to refer the essence beyond itself in the way internally indicated by the essence itself.

g. A number of contemporary philosophers maintain that the mind is diaphanous, that it touches the substances of realities without intermediaries. For the opposite reason they end where Berkeley did. They are forced to say that there is nothing which could be true or false. Truth or falsehood requires that there be a distance between essence and that of which it is the essence, and that this distance be bridged.

The link between essence and what is outside the essence is not provided subsequent to the isolation of the essence. The act of isolating an essence is the very act of maintaining a hold on that which the essence needs in order to be a functioning essence. The existence which is part of an essence is continuous with an external existence, itself a part of the being which is known by means of the essence. Because to know is to relate essences to existences, we know our essences to be essences only so far as we know them to be the essences of existents standing apart from us. All of us all the time refer the essences we contemplate to external existences inseparable from the existences of the essences contemplated.

h. The view here presented has been partly anticipated by C. S. Peirce in his theory that the predicate of an assertion is an

icon of the assertion, having parts duplicating those of the assertion. His theory of pragmatism is a corollary from this. According to him the essence whose meaning we seek to know is an element in a being larger than itself, though we confront it perhaps as a unitary meaning only so far as we hold it over against such a being. As an element in a being the essence expresses the nature of that being; to understand what the essence means is to understand the nature of the adventures to which the being subjects the essence. As standing over against such a being, the essence has only those adventures which accrue to it as part of the being of a knowing mind.

We make clear the meaning of an essence just so far as we take account of the adventures it undergoes as part of the being it helps constitute, whether this be a real mind or an extra-mental reality.

2. *Existence:*

Thesis: Whatever has essence also has existence.

Definition: Existence is opposition, divisiveness, exclusion, separation *from* essence, *for* essence and *in* essence.

Distinction: 1. Existence is separation from essence. It is external to essence as a mere existence. As such it opposes itself, for like everything else existence has an essence. Existence thus is internally divisive, a sheer multiplicity of bare excluding points. 2. Existence is separation for essence. It is a force of opposition present in different degrees in different entities, spreading between, holding them together at a distance. It encompasses essences in a realm of space, time, spirit, heaven, mind etc. in each of which there is a different grade and kind of opposition with which essence confronts essence. 3. Existence is separation in essence. It opposes itself both as a mere existence and as a realm, to constitute a spread inside essence.

Problem: Knowledge gets only the essence of things. We can have a knowledge then only of the essence of existence. Existence as existing would seem to be unknowable.

Clarification: Separated from essence, existence is an abstraction and thus an essence which can be only so far as there is a further existence for it. To be at all, existence must have an essence of its own over against which it can function as mere

existence. Real existence is existence separated not from its own essence, but from other essences.

As separation for essence, existence enables essences to be distinct and together. It has this function only as constituting, together with those essences, the realities of space, time, thing, mind etc.

As a separation in an essence, existence helps constitute the being of that essence. It then functions as part of an essence in a way analogous to that in which it functions as part of the being which it and an essence constitute.

Resolution: Existence is not alien to what one knows. It is present inside essences, and merges also with essences as a relation between them. It can escape the grasp of the understanding only insofar as it is itself internally divisive, endlessly dividing itself against itself. But it never can be in such a pure state. It can stand outside all essences, only so far as it has a being of its own and thus has an essence existentially opposed to the other essences, or only so far as it is a constituent of a greater reality and thus is inseparable from a correlative essence, having some degree and kind of existence.

There is nothing surd, nothing unintelligible to existence. It has an essence, an existence and a being just as everything else does. And like everything else, its being and therefore its existence extends beyond its essence. To grasp what it is, is not to lose it but to possess it in a delimited way. It is to possess its essence and some part of its existence, and to refer them existentially to the rest of itself as a needed correlate and completion.

We know there is more to existence than what we judge it to be, for judgment is the holding of an essence to ourselves and thus the opposing of it to something beyond, while and as we refer it to that which is beyond. When we know the nature of existence we existentially relate its essence to a correlative existence with which the essence constitutes the being of existence.

Existence is fragmentarily grasped by us now as an existence ingredient in the real essence of itself. The more surely we know existence and thus possess its essence, the more surely do we hold to it as an oppositional correlate. That correlate is continuous with the existence of the essence we know.

Any limited part of existence is existentially limited. It is a

part actually divided from other parts, and with them constitutes a single realm of existence.

Consequences: a. Existence and essence have essences which are dissimilar, as their definitions reveal.

b. Existence and essence exist in different ways. The one exists as a divisive force, the other as multiplicity. The one is productive of differences, the other presupposes them.

c. Essences exist only because existence does. But existence has an essence only because there are essences it can oppose.

d. The essence of existence and the essence of essence are existentially opposed as essences; the existence of existence and the existence of essence have different essences which are logically diverse and which together with those different existences constitute a real essence and a real existence.

e. Because every essence exists in some way and somehow, it is a brutal matter of fact, holding out over against all other essences and other types of being. To divorce essence from existence is to make it cease to be and therefore to be an essence. Were essence a sheer creation of ours, a bare plan of what might be, whose elements were forged by us and united solely in our minds, it nevertheless would, because other than the act by which it was produced, have an existence of its own. To create an essence is necessarily to create an existent. Because every fiction in some sense is, to forge a fiction is to be confronted with a fact.

f. Ideas, possibilities, fictions exist. "Non-being," "nothing" "griffin"; are here or there, noted or unnoted, inside or outside mind, space or the world. They have existence somewhere and somehow. They stand over against other beings, possible or actual.

g. No essence states that it exists. Existence, however, is inseparable from it, and there is always existence to which it is correlative. "An essence exists," and "an essence is the essence of a being existent in some realm" are necessary but synthetic truths.

h. Because existence is ingredient in every essence, the 'ontological' argument is always valid and for every being. But because essence and existence are external to one another, we cannot know from a knowledge of the one what the nature of its correlate is and what being they together constitute. We know, for

example that the essence "God" exists, but we do not know, just from the fact it is an essence, whether there is an existence external to that essence, constituting a real God with it, or whether instead there is external to the essence only the existence of our minds which, together with the essence "God", defines an idea of God. To prove God we must go beyond the fact that there is an essence 'God'.

i. Any attempt to move from essence to existence presupposes that the movement has already begun and been partly carried out. The movement can occur only in the realm of existence. A movement to existence is a movement which has already left essence behind. It is to be existentially passing from one area of existence to another.

j. We can know a world beyond our ideas because we have ideas only so far as we are, by virtue of the existence ingredient in them, already immersed in a world beyond our ideas. The act of knowing is an existential act occurring within an existential domain encompassing the known as well.

k. The existence ingredient in a real essence is different from the existence ingredient in real existence. The former is an attenuation of the latter, existentially opposed to but continuous with it. To move from the former to the latter, we must oppose the opposition they now have for us and thereby existentially pass from one to the other.

l. Essences are definite, express natures only because they are existentially opposed to one another. Since existence has an essence and since each essence presupposes other essences with which it stands in contrast, there must be at least one essence outside and opposed to the essence of existence. That outside essence (which has its own existence) constitutes, with existence, a being greater than either.

m. The universe can be viewed as a single existent. It will then be seen not only to have an essence of its own, but to stand existentially over against an alien essence. The more solidly we hold on to the existential universe, the more do we separate it from at least one essence, and thus presuppose that there is an existence which the universe does not encompass.

Historical. a. Hume correctly takes each distinct impression to have a distinct existence. But he forgets that each of his

"fainter" impressions also exists and as such has a career of its own, and that his "darker" impressions are *impressions* which do not merely exist but are impressions of something beyond them.

b. According to Parmenides "non-being" has no existence. A variation of this position seems to be maintained by Bertrand Russell when he denies existence to "the king of France," "a man" etc. But whereas Parmenides acknowledges that only "being" has existence, Russell allows existence to any essence which remains after analysis and which is part of a real spatio-temporal entity or some derivative from it. But "non-being" and "a man" could not possibly *be* rejected or analyzed by these men were these essences devoid of all existence.

c. Though Hegel treats essence as but one of a multiplicity of categories, it is nevertheless true that for him there can be nothing but essences, rational natures together constituting a single, rational whole. The existence of those essences or the whole they form is not an essence. If it were, there would have to be still another essence which expressed the fact that there **were** essences, and this essence would not state that it itself was. The claim that the entire system of essence exists, requires us to admit that in addition to essences, separately or together, there is existence; that existence is an indispensable correlate needed by and needing the essences.

d. Leibniz thought that each essence had its own degree of **inclination towards existence**—a degree which the essence itself defined. But so far as an essence defines an inclination, the essence does not incline. A defined inclination is but a possibility, in no way connecting the essence with existence. Only an inclination not defined by, not a product of, not a component of the essence, only an inclination which transcends the essence, an inclination which is continuous with an existence outside the essence, can pull an essence into an existential realm now outside it. An inclination towards existence is the existence of an essence existentially directed towards the existence which lies outside that essence.

e. Spinoza thought that all essences had existences correlative with them, and that the adventures of the one were paralleled by the other. In his terminology, thought is coordinate with ex-

tension. But extension, like everything else, has its essence. That essence interplays with other essences, but the extension which is supposed to be coordinate with it has nothing with which to interplay. The essence of extension thus has no necessary fixed relation to the existence of extension. Both are, to be sure, part of the being of extension, but even then they are not parallel. They are to be correlated in a constantly changing way, enabling the essence to have different relations with other essences at different times without ceasing to be the essence of extension.

f. Stemming from Spinoza is the popular theory that if the mind be viewed as a tissue of essences whose adventures parallel those of the brain or body, we can explain, without recourse to the difficult supposition that minds act on bodies or conversely, how it is that we know certain things when we are bodily stimulated in certain ways, and how it is that our knowledge enables us to act better than we otherwise would. It is to be noted at the outset, however, that this proposed solution does not deal with essences as essences but with their existence. It does not ask what an essence implies, but what its associations are, i. e., what other essences might accompany, follow, exclude it in fact. If successful the theory would help one understand *how* men think. It would not tell us the relations that essences thought about have to one another as essences, and therefore would not throw light on *what* men think.

The theory requires one to show that the changes in the nature and relation of an essence are paralleled by changes in the nature or relation of the parts or whole of the brain or body. For this result to be possible, there must be a one-to-one relation between existence and essence. The contrary, however, seems to be the case. An essence is correlate with the existence of the mind which thinks about it and with the existence of the realities which the essence purports to be about. Since a change in these realities may be accompanied by a change in the relation of the essence and the existence rather than in the realities themselves, the adventures of an essence, despite the correlation of essence and existence, need not be paralleled by adventures in existence.

We can continue to think about what is no longer present. We can stop thinking about that which persists. Essences accord-

ingly can exist and function though there be no parallel external existence appropriate to them, and there can be existents for which we have not yet found appropriate essences. To save parallelism we must ask God to think of whatever exists, and ask Him to make existence behave in accordance with the demands of logic. But when God thinks of all that exists He does not then think of Himself as an existent knower of all existence, and when He makes existence conform to the demands of logic, He sets it over against an essence it cannot encompass.

A theory of parallels goes counter to the facts. Entertained as a hypothesis, it confesses to be incomplete, presupposing as it does an existence and an essence outside the paralleled. That outside existence and that outside essence are not necessarily in accord.

g. It is the error of Platonists to suppose that essences do not presuppose existences outside themselves. But even they admit at times that an essence requires that there be other essences each with its appropriate existence, constituting by virtue of their mutual existential opposition, a realm of essence with it. Such an admission, however, is not yet sufficient. Essences must be acknowledged to refer not only to one another but to existents outside the realm of essence. If they do not do this, they are not essences but structural aspects of entities, unseparated from the existence of those entities. The entities of which they were structural aspects would differ from those we daily encounter in space and time, only in that they would have a lesser degree of existence ingredient in them. In the last resort, Platonism depends on the supposition that the degree of existence ingredient in an essence is sufficient to make the essence substantial, independent, forceful, a being cut off from beings in other realms.

An essence lacks the force of opposition characteristic of a thing. The degree of existence ingredient in it is less than that of a thing. It is thrown off from something having more existence. By itself it has not strength enough to resist the incursion of the existents in this world. It can be only so far as we or some other being existentially holds it away from this world.

To suppose that the existence ingredient in an essence is a derivative from existence here and now is to view all essences as universals, abstractions, derivative possibilities. To treat them

as derivatives from a different, equal or richer existent—traditionally termed God,—is to view them as values, ideals, demanding realization. The suppositions are complementary.

h. Essences are correlative to beings beyond them. They are relevant possibilities, changing in number, nature, or relation when their correlates do. Any essence independent of and opposed to that of the universe, requires a substantialization equal to that which the universe can provide.

i. The essence of God exists as essence, is an idea helping constitute the being of a mind, and is a pertinent possibility of all that is desirable. An interest in the proof of the existence of God is an interest not in these truths but in the question as to whether or not we can prove that the essence of God (the most perfect of beings) demands that there be an existential God from which that essence is inseparable. The proof has three analogous modes, traditionally termed the teleological, the cosmological and the ontological. They are equally strong and equally ultimate. The teleological: Possibilities are possibilities that can be realized only so far as they stand apart from what realizes them. The possibility "God" is pertinent to the universe as that which could be realized only if sustained by an existence other than that which the universe now provides. But only an existent God can make the possibility of a perfect being relevant to the universe. The cosmological: The essence of God excludes and is excluded by the entire universe. It is existentially separate from the universe. It must be sustained by an existent not in the universe. Only if God exists can the essence of God be forceful enough to exclude the existent universe. The ontological: The essence of God encompasses all other essences as delimitations. The existence which is correlative with it must be greater than that which is correlative with other essences. The existence which the essence God presupposes is at least as rich as the existent universe, from which it is to be distinguished.

The three proofs are unsatisfactory if held apart, since they then fail to show that the existence correlative with the essence God is richer than the existence possible to any universe. Taken together they assert: The things in the universe face a single relevant future (teleological) which stands over against them (cosmological) and is sustained by something strong enough to

oppose them all (ontological). At every moment the future is reached and the possibility which that future presented, that ideal which it expressed, is partially fulfilled. To the degree that it is fulfilled another future must be made available. The endless source (cosmological) of the future as a domain of essences relevant to what exists (teleological) is an existent richer than any existent, correlative with a specific subordinate essence, could be (ontological). The essence God would require an existent other than but no richer than the universe, were it not that the future which the universe confronts, as independent though relevant to it, is continually changing.

The face of God continually alters in the face of the needs and the achievements of the universe. This is His providence (teleological) which gives direction to the things in the universe only because sustained by an existence (cosmological) which is rich enough to be correlative to an endless number of essences expressing the nature of an infinitely perfect being (ontological).

3. *Being*:

Thesis: Whatever is, is a being.

Definition: Being is a unity of essence and existence.

Distinction: 1. Being is existence existentially subordinated to essence. It is existence made into an essence distinct from and placed over against all other essences. This is categorical being, endlessly multiplied. 2. Being is essence essentially subordinated to existence. It is essence made into an existence opposed to other existents. This is being as the categorized, as sheer content, from which everything whatsoever, concrete or abstract, is a derivate. 3. Being is both categorized and category, essence as existent, and existence as essence. It is both essentially and both existentially, an existential union of category and categorized, and an essential unity of category and categorized, ad so on without end. This is being in its being.

Being is always bi-valent, containing within it bi-valent components—that is to say, beings, and nothing else. It is an existential unity of essences, and an essential unity of existences, a one and a many, a structure which is content and a content which is structure. Its own essence, though encompassing all existents, is but one among the existents it encompasses; its own existence,

though providing a field for all essence, is but one among the essences it relates.

Problem: Being is the most inclusive of all denominations. But then it cannot be known or be, for to be known or to be is to stand over against something else. What cannot be known and what cannot be is Nothing. Being is identical with Nothing, its opposite.

Clarification: Being is the inescapable frame within which everything whatsoever occurs, including itself, and at the same time it is that limiting emptiness which stands over against all that is in any sense, and thus even itself as empty. Being is an existential point uniting all existences without exception; it is all-inclusive essence opposed to every existent whatsoever. It is a simple, bi-focal unity, encompassing its own existence inside its own essence, at the same time that it existentially spreads between and thereby holds apart its own and other essences. It is unified existence and thus only essence; it is self-divided essence and thus only existence. It is a perpetual circle, without magnitude: an essence comprising an infinitude of essences existentially opposed to one another and itself; an existence made up of an infinitude of existences all having the same essence.

Resolution: There is nought but being. Multiple beings can be separated from one another and thus be multiple only by means of being, and are so far not separated. This is a truth of being; it states the essence of it. Such an essence must have an existence other than it, and must stand over against the existent knower. These two existences have their own essences, so that the truth of being has (essential) being only so far as there are other essences having a (existential) being of their own. The essence of being exists inside being as existing, and thus *means* to be all-inclusive only so far as it is not all-inclusive. An all-inclusive essence defines an all-inclusive existence to be identical with Nothing.

The object of all discourse and reference is being. It exhausts the substance of everything whatsoever. That being is an ultimate all-inclusive fact. Such a fact has an essence in terms of which it is known, and opposes the essence of Nothing as an essence it rejects. These separate essences have their own appropriate existences. The fact of being thus has (existential) being

only so far as there are other existences having a (essential) being of their own. The existence of being is defined to be inside being as essence, and thus is all inclusive only so far as it does not *encompass* all meaning. An all-inclusive existence defines to be the essence of Nothing an all inclusive essence.

If either essence or existence be taken to be all-inclusive, the other is taken to be Nothing. Nothing is being as existence or essence over against itself as essence or as existence. But also: Nothing is both essence and existence, for these are incompatibles, the one uniting the other dividing, the one solidifying the other dispersing. What is the one cannot be the other. Being, true full being, is neither essence nor existence, but the unity in which both lose their distinctive oppositional essences and existences.

The converse of the last proposition is also true. The existence of being encompasses all essence, including the essence of being. The essence of being encompasses all existence including the existence of being. Being is essence inside existence, existence inside essence, the two distinct yet together. Beyond it as the two could only be that which was neither existence nor essence,—Nothing.

Nothing is relative to the full, to exhaustive being. It is an existence contrasting with an all-inclusive essence, an essence contrasting with an all-inclusive existence, both essence and existence contrasting with what was neither, and neither essence nor existence contrasting with the indivisible unity of the two.

Being as essence or as existence, as neither or as both stands over against existence or essence, both or neither. As such it is real. This which being opposes is Nothing only so far as this Nothing has a status of its own, only so far as it is strong enough to oppose being in return, and thus only so far as it is itself being, but in a different mode. Nothing is essential being viewed from the vantage of existential being; it is existent being viewed from the position of essential being; it is neither approached from being as both, both viewed from the standpoint of being as neither. Nothing is being in one mode approached in terms of but standing apart from the other. Together with the being it opposes it constitutes a reality.

Whatever terminates a mode of being is a being in that mode. But nothing terminates without also limiting. What limits

one mode of being is Nothing from the point of view of that mode, which is to say, Nothing is being in a reciprocal mode, itself terminating in because limited by that which terminated in it.

Being is bi-valent. One of its valencies is Nothing, just so far as the other is taken to be full being. But each valency, because it has being of its own, is also bi-valent. To include Nothing inside being is yet to leave a Nothing outside in some other mode.

Consequences: a. Being is the highest, most inclusive of categories. From its perspective, what is to be categorized, is a Nothing, a Nothing which in fact terminates in the original category as a kind of categorizable content.

b. Being is sheer content, undifferentiated, extended stuff. A category from its standpoint is being arbitrarily delimited, an abstraction, a forced separation. A category applying to it is, from its perspective, Nothing, a Nothing which in fact makes the original stuff a kind of category.

c. From the standpoint of essence, existence is, as existing, Nothing; from the standpoint of existence, essence, as essence, is Nothing. Essence terminates in the essence of existence because it is really limited by the existence which for it is Nothing; existence terminates in the existence of essence because it is really limited by the essence which for it is Nothing.

d. We can know something beyond essence only because we who know are existents, approaching existentially an existence continuous with the existence of the essence we know.

e. We can have knowledge because the essences in terms of which we know are, on the one side, delimitations of a category of being—our minds as able to know,—and on the other side are delimitations of being as categorizable—existence as that which is to be known.

f. From the standpoint of nature, there can be no God with a distinct essence; from the standpoint of God, a separately existing nature is Nothing. The real is both, forever opposed and together.

g. Being as categorizable and as category are one and the same reality. Accordingly knowledge and that of which we have knowledge are different specifications of reality. Similarly, God and nature are one and the same reality, though from the stand-

point of nature there can be no separate essence for God and from the standpoint of God there can be no separately existing nature. We can know this double fact because we are realities who at once are able to know and to exist in nature.

h. Because we exist in nature, whatever idea of God we have is a product of the meeting of our beings with that which exists outside us. "God" but names the juncture of ourselves with an existential world beyond. And because our minds are specifications of an ultimate category of being, we must act to know. "Action" is the bridge by which we pass from our ability to know to a world to be known.

i. We can be single beings only so far as our existence and our essence are one, and thus only so far as we relate ourselves to other existents through the agency of mind, at the same time that we existentially oppose our natures to theirs.

j. Becoming is the existential conversion of essence into existence. Passing away is the essential conversion of existence into essence. The former presupposes a realm of existence which spreads to unrealized essences and divides at them; the latter presupposes a realm of essence progressively encroaching on existence.

k. Immortality is the coming to be of that which passed away. Since what passed away, passed away in its essence, in its existence and in its being, immortality has three distinct senses. 1. From the standpoint of this existent world, existence is an eternal matrix in which essences are constantly entering and departing. We become immortal, because we have an essence appropriate to part of this existent matrix. When we pass away we continue to be attached to some existential place, community, adventure etc. because we have, as part of our essence, an essence which is inseparable from a part of the matrix of existence. 2. From the standpoint of essence there is a constant coming to be and passing away of existence. Immortality is achieved when an existence is endowed with a new and steady essence. What becomes immortal becomes part of a realm other than that in which it lived before. In passing away it continues to be because existence encompasses an existence appropriate to an unchanging essence.

What is immortal in either of these ways is not immortal of

itself. It is immortal only by being attached to an existence or essence, replacing one that had passed with time. 3. A true immortality is the immortality of a being continuous with one which passed away. The immortal being cannot, however, be identical with, any more than it can be alien to what passed away. If it were identical with it, nothing would have passed; if alien to it, nothing which had been would be immortal. The immortal must be a part of the being that passed. Only a part which, on the passage of the whole, can replace the whole, can be immortal. This is possible if the essence or existence of ourselves can, on the passage of ourselves as encompassing both, become beings in their own right. Immortality in the third mode is the preservation of part of the being we once had; it replaces our original being by the being of our original essence or existence.

Our souls are immortal because constituted of an essence which is part of a constant essence and of an existence which is continuous with the everlasting matrix of existence. Until death intervenes, the soul is not a separate being. It is the essence of ourselves as single beings in time. We achieve immortality by allowing the essences and existences of our beings to pass away, we living thereafter as souls each with its appropriate essence and existence. We can do this both because our souls are essences whose existences are overlaid by the existences of our bodies, and thus has no occasion to exist on their own so long as those bodies continued, and because our souls are existents with undying essences, obscured though they are by the essences we have as beings in time.

All beings in this world pass, and all are immortal in the first and second ways. But only man has a being containing an essence and existence capable of independent being. All others contain essences and existences which, on passing away, become part of and are sustained by new beings.

Historical: a. Parmenides described being as complete, immovable, continuous, indivisible, finite, without (temporal) beginning and end, resting in the self-same place constantly, like a rounded sphere. The characterization is accurate, but only from the standpoint of what, from the perspective of this being, would be Nothing. A converse characterization would also be in

order. Being is endlessly extensive, divided endlessly against itself, forever restless. Such a characterization is accurate, but it presupposes the other as a frame.

b. Plato correctly remarked against Parmenides that the latter's assertion, "Being is" involves a distinction between what we have called the essence from what we have called the existence of being. Being is thus not merely, barely one. Plato affirmed too that non-being was a kind of being, and being a kind of non-being. What he did not make clear was that non-being is one aspect of being viewed from the standpoint of the other. Plato thought of being and non-being as different entities rather than as different sides of reality.

c. Democritus tried to separate being from being by Nothing. He knew that being connects and does not separate being from being. But he failed to observe that Nothing cannot separate. Only being can separate being from being; and that separating being must be other than the beings it separates. This is possible because being has two sides. From the standpoint of the separated, what separates is Nothing, though in fact it is being just as much as that which is separated.

d. Descartes thought of being as a single extensive spread, terminating in Nothing. But an extensive spread is precisely that which is always terminating. Nothing cannot terminate, unless it be being in an oppositional guise to the being which spreads between the terms.

e. Aristotle remarked that "being" was an ambiguous term. He was right, but this alone would require him to deny, contrary to his own views, that there could be a single object to which the term 'being' referred. But there is such an object. Being is a one, to which we can unambiguously refer. But that one is over against itself as many. As many "being" refers ambiguously to different beings. But such beings are over against being as one. The ambiguous term "being" presupposes itself as unambiguous, and conversely. There is one being because there are many beings over against it, and there are many beings because there is one being over against them.

f. Bergson observed that the idea of Nothing is the idea of a being supplanting an incompatible mode of being. He spoiled the insight by then going on to say that there is more in the idea

of non-being than that of being. It would have been more in consonance with his own views to have said that Nothing is neither more nor less than being. Nothing is being as incompatible with being, being in one mode standing over against itself in another mode.

g. Matter, existence, concreteness are for idealism Nothing; spirit, essence, the abstract are for materialism Nothing. The one has no plurality, the other no universals. Each is evidently wrong against the other; each is evidently right in its own terms. The acknowledgment of the ambivalence of being makes it possible to see them both as isolated phases of a larger view.

h. An opposition between matter and form, outside and inside, concepts and percepts, intelligence and intuition, time and duration, the public and the private, mind and body, if taken as the opposition of sundered beings, cannot be bridged. Dualism is a possibility only because there is a reality, in which it can occur. It expresses an opposition between two phases of one reality, an opposition which *is* and thus one in which a further opposition can be found, and so on.

i. Fichte's attempt to generate the non-ego from the ego, though taking account of the fact that the non-ego is in essence one with the all-encompassing ego with which he began, ignores the fact that the non-ego differs from the ego in existence, and as such has an existence which is Nothing, but only from the standpoint of the ego. The opposition between ego and non-ego makes evident that there is a real being of which each but stresses an aspect in opposition to and as presupposing the other.

j. Hegel saw that the essence of being was without content. He saw too that Nothing is as extensive as being. He maintained as a consequence that being was Nothing and Nothing was being. But being is Nothing only in that it is without form, in that it is content viewed from the vantage of being as mere form; Nothing is being only in that it is without content, a form of which everything is a part and therefore for which there is no alien content.

k. Becoming, thought Hegel, is the transition from being to non-being, from non-being to being. But since being and non-being are equally beings, a transition between them would then be only a rest in being. Becoming is instead the conversion of

the essence of a Nothing into the essence of a being, and the conversion of the existence of a being into the existence of a Nothing.

I. Existenz philosophers speak of existences acquiring appropriate essences. But if it had no appropriate essence to begin with, an existence would not be able to acquire any one definite essence.

There are nought but beings which, as opposing one another, constitute wider beings encompassing both opponents. As encompassing opposing beings, a being has the status of a reality; as encompassed it has the status of either an essence or of an existence opposing an existence or an essence. The most comprehensive of realities is still only a being, standing over against encompassed beings; encompassed beings are full beings, standing over against anything that might encompass them. There are, there can be no existences without any essence, or essences without any existence. But the two are distinct as beings. A knowledge of the one leaves us in ignorance of the other in its full being; to have or to be the one is to lack something of the other. Our lives, as minds, as bodies and as both, are perpetual struggles to overcome this lack. We are constantly seeking to encompass the beings which oppose us, to give substance to the emptiness they present to us. To the degree we succeed, we become fuller realities, as minds and as bodies, and as both together.

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3

How Should Essence Be Determined? Reflections on Hegel's Two Divergent Accounts

Logical rigor and the challenge of Hegel's two accounts of essence

Hegel's *Logic of Essence* has presented a special challenge to readers. On Hegel's own account, the categories of essence are the most difficult to comprehend¹ and that difficulty has been accentuated by the primacy that often gets ascribed to them. The logic of essence addresses determinacy as determined by some prior determiner, something exemplified in such two-tiered relationships as essence and appearance, ground and grounded, a thing and its properties, a whole and its parts, and cause and effect. Accordingly, the categories of essence appear privileged to those who regard determinacy as always grounded in some foundation.² That presupposition is shared by conscious experience in that consciousness constitutively treats its mental contents as representations reflecting objects that ground their truth. Even when philosophical speculation makes a transcendental turn and treats the object of experience as determined by the structure of knowing, constructed objectivity remains within the orbit of the logic of essence.³ Whether grounded in things in themselves or in cognition, what is knowable gets construed in categories of essence, where determinacy is always posited by a determiner, whose own determining character resides in its relation to its posit.

If this categorical framework of essence were to be absolutized, reason would be trapped within the foundationalism endemic to the opposition of consciousness, where knowing always must adjudicate its claims by appeal to some privileged ground. In that case, the object of knowing would always be a determined determinacy, determined by some foundation. Because knowledge would extend only to what is founded upon

a foundation, the foundation would itself always elude cognition insofar as it cannot qualify as a determined determinacy but only as a privileged determiner. If the foundation were to comply with its own standard for knowledge, it would have to determine itself. Then, however, the foundation would cease to determine something derivative, eliminating the distinction between what is founded and what founds. Foundational justification would thereby collapse, leaving as its remain that which is self-determined rather than determined by a prior determiner.⁴ The reason at work in logic escapes this dilemma insofar as logic's thinking of thinking has an object that cannot be determined by anything but itself. To validly conceive valid thinking, the thinking of thinking can be no different from its object. Hence, what must conceptually order its subject matter is that subject matter itself. Although logic may be self-ordering, that does not mean that categories of essence cannot arise as part of the logical development of self-thinking thought. These categories of essence cannot be all-encompassing, but they can make up a way station by which conceptual thinking constitutes itself in its full self-determined development.

Within that development, the dual relationship of determined and determining determinacy presents a theoretical challenge posed by every category pair that essence involves from its emergence out of the logic of being until its self-elimination at the threshold of the logic of the concept. At each juncture, thought must contend with comprehending how one term can ground another, even though its grounding character depends upon what results from its positing.

What compounds this difficulty is a fundamental discrepancy without parallel in Hegel's development of logic. Generally, Hegel's *Science of Logic* and *Encyclopedia Logic* correspond as well as any comprehensive systematic treatment can match its abbreviated chapbook presentation. In the case of the opening of the *Logic of Essence*, however, one finds a glaring disparity. The *Science of Logic* begins determining the categories of essence with an entire first chapter devoted to detailing the contrast of the essential and the unessential, which resolves itself into the relation of essence and illusory being, which generates the relation of reflection, which takes three successive forms: positing, external, and determining reflection. Only with the completed development of these forms of reflection does Hegel proceed in Chapter 2 to address the determinations of reflection, beginning with identity, which then entails difference, which engenders contradiction. By contrast, the final 1830 version of the *Encyclopedia Logic* begins the development of essence directly with identity, from which point the succession of categories

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Keywords: intelligence; human essence; new evolution of human beings; social system

1. Introduction

As we enter the 21st century, the development of the information society of human beings has entered a new stage of intelligent development. A scenario that we can imagine is that a large number of traditional industries have been or will be replaced by robots and machine systems. The rapid growth of unemployed people will also become an inevitable trend of the development of human society. To explain this trend, people have begun to put forward various future reveries, which also cause deep panic and anxiety. However, we believe that as the degree of machine intelligence in social development increases, the shortening of the necessary labor time for human beings will be an irreversibly inevitable trend, and the resulting rapid growth of the number of unemployed people is the concentrated expression of social progress. Correspondingly, the traditional relevant theories and doctrines putting production labor as the concentrated embodiment of the essence of human beings should also be rethought. So, this paper is going to talk about a series of problems such as the human essence, the ways and characteristics of the formation of human essence, and the new evolution of humans [1].

2. Characteristics of Human Essence

Humans have their own unique essence, which is totally different from animals. Animals have their essence when they are born, but the essence of humans cannot be completely determined at

birth, and they create their own essence in the multi-dimensional interaction factors in the acquired environment. These corresponding dimensions include the natural, the social, the physiological, the psychological, and the behavioral. An obvious fact is that children raised by wild animals do not have the essence of humans. They generally behave in the same way as their adoptive parents. The concrete essential aspects of those who grow up in different social environments also vary [2]. The essence of humans is open. Landmann said that “Human beings are more inherently indeterminate than animals. This means that the life of human beings does not follow a pre-determined route. In fact, nature only makes human beings walk over a half way, and the other half is still to be done by the human beings themselves.” [3].

From the process of the development of human history, from the individual characteristics of humans and the construction of the way of existence, we can conclude that humans have no absolute and fixed essence. The essence of humans is the combination of nature and society, history and reality, innate substrate and acquired creation, and is the unity of determinism and indeterminism, certainty and uncertainty.

3. Characteristics of Labor as the Real Essence of Humans

Labor, as a concentrated form of the real essence of human beings, is also a concrete and historical phenomenon. This historical concreteness of labor should include two aspects: First, at different stages of human history, labor has its own concrete forms of existence that are consistent with that particular historical stage; second, the historical concreteness of labor will eventually lead to a trend in which, with the continuous improvement of social productivity, at a certain stage of human development, labor will also change its dominant position in human activity. The form of activities that carries the real essence of human beings will no longer be labor, but other activities of human beings.

The historical concreteness of labor makes our understanding of the essence of human beings a transition from abstract labor to vivid and concrete labor. It is based on the special understanding of labor that we have seen the rich diversity, historical concreteness and overall structure of human essence.

Dialectics regards the inherent contradiction of things as the basis for the development of things. Labor, as the main form of human activity, still has its own inherent contradictions. The aspect of this internal contradiction is nothing else but the structure of labor itself. It is the contradictory movement of the unity and conflict of opposites of the inner structure of labor itself that constitutes the history of the evolution of labor itself, which fully embodies the historical, concrete existence and development of human essence.

Although the conditions for return to labor itself were gradually developed in the development process of industrial civilization, the real realization of these conditions depended on another new transition of human civilization, which was the arrival of the era of civilization with information, automation and intelligence. It was the information and intelligence development that had greatly enhanced the ability of human beings to create material and spiritual wealth. Furthermore, one future scenario of its development that had been seen in the reality was the general adoption of intelligent systems and intelligent robots, and their ability to replace and even surpass human beings' physical and mental labor in some aspects, in terms of large degree and scale, which made human beings a new species to achieve their own purposes through their own created intelligent machines.

4. A New Way of Human Evolution

Cultural anthropologists have proposed the different ways of evolution between general organisms and human beings a long time ago, which are about the theories of “two-track evolution” and “in vitro evolution” in human society. “Two-track evolution” refers to biological evolution and cultural evolution. The former is the evolution of genetic genes, which is the evolution within the body; the latter is the evolution of cultural traditions and patterns, which is in vitro evolution.

However, a new trend in the development of science and technology of human beings proposes a more revolutionary way of human evolution. That is the new life evolutionary approach of

“reshaping and regenerating” life body itself caused by the new fusion of artificial intelligence and bioengineering [4]. Canadian biologist Charles Lumsden and American biologist Edward Wilson once emphasized in their co-authored book *Genes, Mind, and Culture: The Co-evolutionary Process* that “many philosophers and scientists still consider the gap between the biological and social sciences to be a permanent discontinuity... We view it (human evolution) instead as a largely unknown evolutionary process, a complicated, fascinating interaction, in which culture is generated and shaped by biological imperatives while biological traits are simultaneously altered by genetic evolution in response to cultural innovation...” [5]. Michael Dannemann, postdoctoral research associate at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, and Fernando Racimo, assistant professor of the Department of Integrative Biology of University of California, Berkeley, also think that human evolution is a process of admixture and adaptation, part of which comes from the inheritance of ancient genetic material, or comes by learning from other similar kinds and adapting to the environment. So we can say that in human evolution, something is old and something is borrowed [6]. From this, we can see that this new evolution way will lead to a fusion together of “two-track evolution” in the traditional sense, so that the original, relatively isolated two evolutionary tracks will be fused together to a certain extent, thus by means of cultural evolution directly acting on changes of the genotypes, and thus altering the pattern of genetic evolution.

We are not prophets, but we can start from the current and predictable trends in science and technology of human beings and call for humans to make rational choices about the future. In order to avoid disasters, for the sake of humanity’s well-being, human beings should rationally choose the way humans evolve themselves, adopt reasonable policies and measures, and establish a reasonable social system. This is the cause of human beings, as a whole, which should transcend the interests of classes, countries, nations and regions.

5. Conclusions

Based on the discussion in this thesis, we can make the following conclusions:

First, human beings have no absolute, fixed essence. The essence of humans is the combination of an innate substrate and acquired creation, which is the unity of determinism and indeterminism, certainty and uncertainty.

Second, the labor that centrally embodies the essence of human beings is historical, concrete and developmental. Human’s labor was initially dominated with the production of material goods, and then it gradually separated, generated and intensified some new forms of labor: spiritual production, optimization of human’s own production, human relationships’ production and virtual production.

Third, with the improvement of mechanization and intelligence, the concentration of labor in the essence of human beings will also be reduced day by day, and the essence of other aspects of human beings may become increasingly prominent such as autonomic learning, conscious research, free creation, games, entertainment, tourism, leisure, etc. This is not only the development and display of the comprehensive essence of human beings, but also the inevitable trend that the liberation of human beings should achieve.

Fourth, the combination of future artificial intelligence and human augmented bioengineering technology will highlight a new way of human development. This new way of development has brought uncertain anticipation to the development prospects of human beings. One extreme result will lead to the differentiation of human beings and the differentiation of human essence. How to avoid negative effects, and the research, discussion, design, and establishment of new economic, political, and social systems will be the key to leading the future.

Fifth, for all kinds of discussions about robotic slavery to human beings, we hold the view that there is only human oppressing human, human using machines to oppress human, and there is no machine directly oppressing human.

Sixth, in the face of future development, the primary task of human beings is how to establish a reasonable social system avoiding war and stopping infighting, as well as establishing a shared

economy and shared society, letting human beings truly enter a completely new era by creating the future freely and consciously [7].

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References

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2. Wu, K. On the Multidimensional Existence of Humans. *Qiushi J.* **1995**, *5*, 18–22.
3. Landmann, M. *Philosophische Anthropologie*; Li, F., Translator; Workers Press: Beijing, China, 1988; p. 8.
4. Harari, Y.N. *21 Lessons for the 21st Century*; Lin, J., Trans.; CITIC Publishing Group: Beijing, China, 2018; pp. 6, 251, 377–385.
5. Charles, J.L.; Edward, O.W. *Genes, Mind, and Culture: The Coevolutionary Process*; World Scientific Publishing Co. Inc.: Singapore, 2005; p. 352.
6. Dannemann, M.; Racimo, F. Something old, something borrowed: Admixture and adaptation in human evolution. *Curr. Opin. Genet. Dev.* **2018**, *53*, 1–8.
7. Wu, K.; Da, K.Y. The Comprehensive Human Essence and the New Evolution of Human Beings. *Academics* **2019**, *8*, 185–194.



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References

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