

## Cognition as a Further Explanatory Gap in Thomas Nagel's Understanding of Naturalism

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### Abstract

The so-called explanatory gap between the physical and the mental has prompted still ongoing epistemological and ontological discussions. However, at least two very different mental states are usually conflated in the debate: phenomenal experience—including emotions and feelings—, which reveals an unavoidable subjective character, and mental acts that attain objective truth. One notable exception is Thomas Nagel, who insists with equal emphasis on both the subjective nature of phenomenal experience and the mind's capacity to transcend it and grasp objective, timeless truth. In *Mind and Cosmos* he actually describes four explanatory gaps in traditional naturalism, requiring an expanded set of concepts and ontological principles: 1) from matter to life; 2) from life to sentience; 3) from sentience to cognition; 4) from cognition to value. I will focus on cognition as distinct from sentience, since that gap clarifies the abovementioned distinction and reveals more clearly the need of a richer ontology. Nagel argues also that the appearance of mind and rationality in the universe is not accidental and requires a teleology that is part of the natural order. Nonetheless, a further explanation of truth objectively considered is missing in Nagel's account and therefore of why mind would be so central in a metaphysical consideration of nature. I will also give some reasons why Nagel's rejection of theism and his preference for a naturalistic explanation of the universe rest on some misunderstandings, which, duly answered, may also explain the special place of mind in nature.

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The so-called explanatory gap between the physical and the mental has prompted still ongoing epistemological and ontological discussions. In my opinion, however, at least two very different mental states are usually conflated in the debate: phenomenal experience, which reveals an unavoidable subjective character, and some mental acts, which attain objective truth. One notable exception is Thomas Nagel, who insists with equal emphasis on both the subjective nature of phenomenal experience and the mind's capacity to transcend it and grasp objective, timeless truth. Though most of his claims can be found in earlier writings,<sup>1</sup> I will concentrate my analysis on his recent book *Mind and Cosmos*,<sup>2</sup> which has stirred strong polemics among naturalists and non-naturalists alike. In the first section I focus on cognition as distinct from sentience, since that gap reveals more clearly the need of a richer ontology. In the subsequent sections I discuss some of Nagel's arguments and give some reasons why his rejection of theism and his preference for a naturalistic explanation of the universe rest on some misunderstandings, which, duly answered, may also explain the special place of mind in nature.

## 1 SENTIENCE AND COGNITION

The so much discussed *explanatory gap* between the mental and the physical concerns phenomenal mental states revealing essentially a subjective character.<sup>3</sup> Sensory experience, feelings and emotions have a what-it-is-like to themselves that cannot be predicted or explained as a result of physical properties and transformations. Whether the radical novelty of subjectivity and its irreducibility to matter motivate a non-materialist ontology or are only epistemic issues, answerable in principle with the aid of better conceptual tools, the truth is that we seem far from having a satisfactory explanation of the subjective in terms of the physical. Maybe the importance of the existence of a gap in our explanation of phenomenal consciousness

as an anti-physicalist argument is largely due to an exaggerated demand on physicalism,<sup>4</sup> but even for non-reductive versions of physicalism, subjectivity would require a very different conception of the physical.

However, another kind of mental acts entails a further difficulty. Thought and cognition attain at least sometimes objective truths. It is meaningless to say that principles such as that of non-contradiction, that the whole is greater than its parts, or the logical structure of the categorical syllogism, are true or valid from a given point of view. Scientific statements and claims about the world, however limited, also pretend to be objectively true, not the expression of a subjective perspective or experience. Moreover, arguments of any kind presuppose that objective truth can be attained. Objectivity does not indeed qualify experience itself, but a particular kind of *content* revealed in some mental acts. Therefore, if there is a gap between the physical world and phenomenal experience, a different and much deeper one exists between mental acts and contents of universal validity. Such contents stand on themselves, they are neither temporal nor subjective, but universal and timeless. Whether there is or not a cognitive phenomenology —a what-it-is-like of acts of thought and reasoning— is a different issue;<sup>5</sup> the present observation regards the contents of those acts.

The American philosopher Thomas Nagel is known for his defense of the irreducible character of phenomenal experience and of its unavoidable perspectival nature.<sup>6</sup> But Nagel also defends the mind's capacity to transcend subjectivity by means of reason and to attain universal truth in the realms of logic, mathematics, science and ethics. In his recent book *Mind and Cosmos* he outlines what he believes are the conditions for a successful naturalistic worldview in light of our present knowledge. The existence of mind and rationality is the central issue and he argues that the inability of physics and chemistry alone to account for life and consciousness, ultimately disqualify them to explain the mind as well, because life and consciousness appear to be requirements for mind.

According to Nagel, a comprehensive explanation should meet two types of requirements: first, it should be constitutive or structural, i.e. it should account for all the basic elements that make up the universe; and second, it should offer a historical or evolutionary version of how things came to be since the universe began. The first type of requirements suggest the existence of several gaps apart from the one between phenomenality and physicality. Each element Nagel mentions (life, consciousness, cognition, value) appears to answer to a different set of principles: 1) the origin of the genetic code and of all existing forms of life can hardly be

understood as a result of physical laws; 2) that a combination of physical elements should necessarily produce a subjective mental state seems like magic; 3) our active capacity to think beyond a subjective starting point and discover what is objectively true demands a much larger conception of the natural order than naturalism is presently able to provide; 4) values also defy a simplistic naturalist ontology, since what is good for an individual can be generalizable by reflection to all individuals, somehow joining the subjective with the objective.

Each one of these elements deserves a specific treatment, but my interest is mainly in the third one. Nagel is quite categorical in calling truth timeless and objective. Whereas sentience in general—including perception, feelings and emotions—could be explained because of its evolutionary advantage and utility, we cannot trust reason on evolutionary principles. Reason is justified by itself, because it connects with truth directly; perception, on the contrary, requires highly complex physical and neural mechanisms to take place and always remains perspectival. According to Nagel, “[r]eason ... has completely general validity, rather than merely local utility”<sup>7</sup> and “[i]n the criticism and correction of reasoning, the final court of appeal is always reason itself”.<sup>8</sup> There are “eternal and necessary truths of logic and mathematics”,<sup>9</sup> and also science and ethics are built on timeless norms of thought.<sup>10</sup> So, neither biology nor culture can account for the validity of systematic reasons.<sup>11</sup> By reason we can have “immediate contact with the rational order of the world, or at least with the basic elements of that order”.<sup>12</sup>

The significance of this further gap lies in the mind-independent character of truth. Sensory qualities are not completely independent from the constitution of the perceiving subject, even if real things can be assigned as their cause: how the world appears to us is inseparable from our particular bodily constitution. Instead, what is objectively true is not relative to us, but in itself. It is one thing to perceive something and another one to know the truth about that same thing. Things and the perception of them can perish, but the truth about what they are is imperishable. What the mind grasps when we know any truth is timeless. Therefore, the appearance of mind is not to be compared with the appearance of sensory faculties.

## 2 TELEOLOGY OR INTENTIONALITY?

In Nagel’s view a successful naturalistic explanation would have to show that the origin of life, consciousness and rationality in the universe is not

accidental, but responds to an immanent purpose or teleology. An accidental explanation of the appearance of organisms gifted with a mind and able to know the truth and discern what is objectively good for themselves and for others equals to no explanation at all. A historical or evolutionary view of the universe favors a teleological account, one in which there would be laws increasing the probability of some paths of evolution rather than others, because they would drive the evolutionary history towards the appearance of the kind of organisms with the required complexity to be subjects of rationality.<sup>13</sup> Teleology is by all means to be preferred to mechanism too.<sup>14</sup>

Nagel opposes also teleology to intentionality, which he associates with theism, specifically in its creationist version. He believes that theism places the explanation outside the natural order and makes it completely contingent that rational beings exist in the universe. What he has in mind, and is probably right in rejecting, is a version of divine interventionism according to which the natural order is a set of dispositions that make life, consciousness and mind possible, but which have no intrinsic tendency towards their appearance in the universe, so that their existence would be the result of a divine purpose external to the whole process. Nagel claims that “theism pushes the quest for intelligibility outside the world”,<sup>15</sup> leaving us with no explanation, since we would not share this transcendent being’s purpose.

Nonetheless, intentionality is not against a natural teleological order of things, absolutely speaking. That would be true of an agent with no control over the principles and laws that govern the material with which he acts, but if the nature of things depends upon that agent, the natural order will somehow reflect the agent’s intentions. That only the artist is fully aware of the meaning of his work does not subtract intelligibility to it. It only sets a limit to the observer’s understanding of the work of art without consulting the author. After all, if God exists and has created the world, why couldn’t it be the case that only He possesses perfect knowledge? In spite of his rejection of theism, Nagel leaves open the possibility of understanding creation as compatible with the constitution of a robust natural order, provided however that divine intervention is excluded at all points.<sup>16</sup>

In this sense, Nagel’s sophisticated form of naturalism confronts both the naturalist and the theist with the challenge of developing a metaphysics of nature that is able to explain why intelligent beings are somehow to be expected in the natural course of the universe. But it is one thing to claim that there is a natural order—an explanation from within, in Nagel’s terms—and another one to claim that a condition for accepting a natural order is that it exclude receptiveness to any form of divine action, however we may conceive of it, let alone that this order must be closed in itself. Divine interven-

tion should not be taken recourse to indiscriminately as a way of filling the gaps in our explanation, but a theist cannot discard it in principle. That “divine intention would underpin the totality”<sup>17</sup> does not necessarily suggest that the universe has no intrinsic order, and there is no forceful reason to accept that if there is an intrinsic order created by God, then He would have to leave that set of laws undisturbed.<sup>18</sup> Nagel’s argument is understandable as a reaction to an uncritical interventionist account of the universe, but it certainly does not apply to every form of theism.

### 3 THEISM OR NATURALISM?

An intrinsic teleological account may eventually explain the appearance of mind, but not the objective truths discovered by the mind. Cognition raises two different issues: how to understand mind as part of the natural order,<sup>19</sup> and the issue about objective truths themselves, which comprise also the norms that guide our thinking in our quest for truth. In cognition, the mind and its acts, on the one hand, and the truths attained by them, on the other hand, are of different nature. Teleology could eventually work for the mind, but not for truths themselves, because these don’t *appear*, as if generated during a process. Now, theism may be understood, according to Nagel, as the complete reverse of materialism. Whereas materialism is an attempt to derive everything, including the mind, from physical laws, theism places the mind in the origin of everything, even of physical laws themselves. Nagel rejects both, favoring an expanded form of naturalism. But whereas his reasons for rejecting materialism are quite solid, his arguments against theism do not seem so compelling. In fact, in his own words, his atheism is mostly motivated by him hoping and wanting that there is no God<sup>20</sup> rather than by a rational conclusion.

The opposition between a teleological and an intentional explanation of the world is one of Nagel’s arguments against theism. Another argument is that theism provides an incomplete explanation, since the divine mind would be a stopping point.<sup>21</sup> But theism does not pretend to explain everything. The belief that the universe depends upon an intelligent creator does not dispense with doing science. Quite the opposite, it has triggered the passion for knowledge, as well as it supplies an explanation for the intelligibility of the universe that scientific research presupposes.<sup>22</sup> The same reason that may move a theist to pursue science also moves him never to stop in the quest for knowledge, because somebody who is convinced that the source of the intelligibility of the universe is an infinite mind cannot reasonably

believe to have reached the limits of what there is to be known. For at least some forms of theism these three claims hold inseparably together: 1) the world is intrinsically intelligible; 2) only God has perfect knowledge; and 3) there is no stopping point to our search.

Nagel also claims that both for a materialist and a theist “either the laws of physics, or the existence and properties of God and *therefore* of his creation, cannot conceivably be other than they are”.<sup>23</sup> The consequence is a *non sequitur* for theism. An infinitely perfect being would not be forced to create anything, and if He does create something, there is no set of laws, whether deterministic or probabilistic, that would condition or determine Him. That laws of nature cannot be other than they are does not follow from a theistic position. Instead, and assuming that materialism could account for any sort of regularity, this could be true of a materialist conception. Unless the materialist claims them to be the result of chance, but then chance would become the stopping point, and a worse one, since there is no explanation for the outcomes of chance. Things do not look better for Nagel’s enlarged naturalism, because even if mind is seen as “a fundamental principle of nature along with physical law”,<sup>24</sup> the question remains open: why should there be minds? After all, at least minds like ours have appeared quite late in the history of the universe, but the truths we discover, also those relative to the centrality of mind in the universe, would have been at work all along. They apparently don’t need any minds in order to be in force.

#### 4 THE PLACE OF MIND IN NATURE

Nagel’s particular way of understanding naturalism leaves open two metaphysical options: either the world has been created by an intelligent being who is remotely but no less truly reflected in intelligent creatures, or the existence of minds “is a part of the lengthy process of the universe gradually waking up and becoming aware of itself”.<sup>25</sup> Once the universe has achieved self-knowledge, it “has become not only conscious and aware of itself but capable in some respects of choosing its path into the future”.<sup>26</sup> This second statement may be partially accepted by a theist too, although not without a specific sense of responsibility and subordination that a non-believer will probably not share.

The main difference between both worldviews is that the mind comes first for the theist, but second, or last, for the naturalist. The theist has an advantage at this point, because he can give at least an ultimate reason for the existence of a natural order, including its contingency. The missing link

in the expanded naturalistic version results from accepting that there can be timeless objective truth together with the absolute absence of mind. But order, purpose and truth are attributes of mind. The mind-independent character of truth applies to any finite, contingent, limited mind like ours, but not to mind absolutely speaking.

The recourse to an infinite divine mind is therefore required by the very existence of truth itself, and is not an unwarranted claim. For theism God is not the placeholder for non-available explanations<sup>27</sup> but the warrant that there is an explanation. There would be something odd in a natural order that existed ‘just because’, even more so if it could eventually produce beings with freedom, who could depart from that order as well. It is more logical to think that just as the natural order itself is the product of a mind, those beings gifted with mind, and consequently with freedom—however they came to exist in the universe; that’s a further point—are capable of acting according to and also deviating from it. The theist has an explanation for this; the naturalist would have to accept it without explanation.

## 5 CONCLUSION

In spite of its wide acceptance, naturalism is hard to define. Owen Flanagan lists fifteen uses of the term, with no pretense to exhaust the possibilities<sup>28</sup>. He discusses the claim that the common denominator for all forms of naturalisms is the rejection of supernaturalism, i.e. of the invocation of any entities not belonging to the natural world but allegedly having some kind of causal role in it. Flanagan argues that such a characterization is questionable, because, besides being negative and therefore necessarily short-handed to provide a clear definition, it easily conflates the epistemological with the ontological. An economist who does not take recourse to divine action or to an immaterial soul in his explanations of an economic crisis could therefore perfectly be an epistemological naturalist and a religious believer. The fact that he does not take recourse to God or the soul does not turn him into a naturalist in any other-than-epistemological meaning of the term. And the same could be said of any other scientist. In fact, almost anybody could be a naturalist regarding science and a religious believer as well.

The truth is that many naturalists are also materialists or physicalists, insofar they couple the methodological constraint with a reductionist ontology. And this seems in fact to be an inborn tendency in most forms of naturalism. But the shortcomings of physicalism as a successful explanation of the world have prompted expanded versions of naturalism, which



not only accept physical realities, but also logical, mathematical, abstract, modal, intentional, evaluative and moral ones, without endorsing neither supernaturalism nor any form of knowledge exceeding the possibilities of reason.<sup>29</sup> One should beware however of expanding so much the limits of what can be comprised by naturalism that the very term loses its meaning.<sup>30</sup> Besides, sooner or later the naturalist will have to answer the ontological question of what there is.

By confronting Nagel's thoughts about naturalism, my intention has been precisely to suggest that the very existence of a natural order, within the realm of physics, but also of anything else that may count as nature, points towards something beyond the boundaries of nature. Far from being at odds with an explanation *from without*, an explanation *from within* would not be complete without it. It must be counted among Nagel's merits that he explicitly acknowledges that his notoriously platonic position about cognition and the mind draws him dangerously close to a religious stance, mentioning an understandable "fear of religion"<sup>31</sup> in this respect. But even if naturalism succeeded in meeting Nagel's conditions, there would be no cogent reasons to reject theism. The question is: why stop at the natural order? The burden of proof is on the naturalist's side.

#### NOTES

1. See T. Nagel, *Mortal Questions*, Cambridge University Press, Cambridge 1979; *The View from Nowhere*, Oxford University Press, Oxford 1986; *The Last Word*, Oxford University Press, Oxford-New York 1997.
2. T. Nagel, *Mind and Cosmos*, Oxford University Press, Oxford 2012.
3. See T. Nagel, *What is it like to be a bat?*, «The Philosophical Review», 4/83 (1974), pp. 435-450. F. Jackson, *Epiphenomenal Qualia*, «The Philosophical Quarterly», 32 (1982), pp. 127-136. J. Levine, *Materialism and Qualia: the Explanatory Gap*, «Pacific Philosophical Quarterly», 64 (1983), pp. 354-361.
4. Cf. T. Crane, *Elements of Mind*, Oxford University Press, Oxford 2001, pp. 88-93.
5. Cf. T. Bayne and R. Montague, *Cognitive Phenomenology*, Oxford University Press, Oxford 2011.
6. See T. Nagel, *What is it like to be a bat?*, cit.; *The View from Nowhere*, cit..
7. T. Nagel, *Mind and Cosmos*, cit., p. 81.
8. T. Nagel, *Mind and Cosmos*, cit., p. 83.
9. T. Nagel, *Mind and Cosmos*, cit., p. 86.
10. Cf. T. Nagel, *Mind and Cosmos*, cit., p. 72.
11. Cf. T. Nagel, *Mind and Cosmos*, cit., pp. 79f.
12. T. Nagel, *Mind and Cosmos*, cit., p. 83.
13. Cf. T. Nagel, *Mind and Cosmos*, cit., pp. 92f.
14. Cf. T. Nagel, *Mind and Cosmos*, cit., p. 7.

15. T. Nagel, *Mind and Cosmos*, cit., p. 26.
16. Cf. T. Nagel, *Mind and Cosmos*, cit., p. 95.
17. T. Nagel, *Mind and Cosmos*, cit., p. 22.
18. Cf. T. Nagel, *Mind and Cosmos*, cit., p. 26.
19. Cf. T. Nagel, *Mind and Cosmos*, cit., p. 72.
20. Cf. T. Nagel, *The Last Word*, cit., p. 130.
21. Cf. T. Nagel, *Mind and Cosmos*, cit., p. 21.
22. J. Pieper, *Kreatürlichkeit. Bemerkungen über die Elemente eines Grundbegriffs*, in B. Wald (ed.), *Josef Pieper Werke*, vol. 2, Felix Meiner Verlag, Hamburg 2001, pp. 441-464.
23. T. Nagel, *Mind and Cosmos*, cit., p. 21, emphasis mine.
24. T. Nagel, *Mind and Cosmos*, cit., p. 22.
25. T. Nagel, *Mind and Cosmos*, cit., p. 85.
26. T. Nagel, *Mind and Cosmos*, cit., p. 124.
27. Cf. T. Nagel, *The Last Word*, cit., pp. 132-133.
28. See O. Flanagan, *Varieties of naturalism*, in P. Clayton and Z. Simpson (eds.), *The Oxford Handbook of Religion and Science*, Oxford University Press, Oxford 2006, pp. 430-452.
29. See M. de Caro and A. Voltolini, *Is Liberal Naturalism Possible?*, in M. de Caro and D. Macarthur (eds.), *Naturalism and Normativity*, Columbia University Press, New York 2010, pp. 69-86. See also B. Stroud, *The Charm of Naturalism*, in M. de Caro and D. Macarthur (eds.), *Naturalism in Question*, Harvard University Press, Cambridge, MA 2004, pp. 21-35 (reprinted from *Proceedings and Addresses of the American Philosophical Association*, 2/70, 1996, pp. 43-55.)
30. G. Gasser and M. Stefan, *The Heavy Burden of Proof for Ontological Naturalism*, in G. Gasser (ed.), *How Successful is Naturalism?*, Ontos, Frankfurt 2007, pp. 159-181.
31. Cf. T. Nagel, *The Last Word*, cit., pp. 127-143.

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