

REZENSIONEN / BOOK REVIEWS

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Thomas Nagel (2012). *Mind and cosmos. Why the materialist Neo-Darwinian conception of nature is almost certainly false*. Oxford: Oxford University Press.

Thomas Nagel is professor of philosophy and law at the New York University. He is rather well known as an advocate of the idea that consciousness cannot be satisfactorily explained using current concepts of physics or natural science in general. Nagel primarily stated this idea in one of his most famous articles, called "What is it like to be a bat?" (1974). In this paper Nagel argues that consciousness is essentially subjective; it has what he calls a "what is it like to be me"-aspect that is irreducible to objective physical facts or conditions.

In his latest book, *Mind and cosmos. Why the materialist Neo-Darwinian conception of nature is almost certainly false* (2012), Nagel presents a well-argued critique of present day mainstream scientific explanations of life, consciousness, cognition and ethics. A review of the book could start with quoting some lines from the Conclusion, which gives a good summary of the gist of its message:

In the present climate of a dominant scientific naturalism, heavily dependent on speculative Darwinian explanations of practically everything, and armed to the teeth against attacks from religion, I have thought it useful to speculate about possible alternatives. Above all, I would like to extend the boundaries of what is not regarded as unthinkable, in light of how little we really understand about the world. It would be an advance if the secular theoretical establishment, and the contemporary enlightened culture which it dominates, could wean itself of the materialism and Darwinism of the gaps – to adapt one of its own pejorative tags. I have tried to show that this approach is incapable

of proving an adequate account, either constitutive or historical, of our universe. (p. 127)

Nagel sees "dominant scientific naturalism"¹ and "speculative Darwinian explanations" as nothing less than "a heroic triumph of ideological theory over common sense" (p. 128). This scientific ideology now rules mainstream scientific discourse simply because of a stubborn resistance to anything that smacks of religion or metaphysics. It is based on the assumption that ultimate reality cannot be anything else than material or physical, in spite of our everyday experience that there is much more to the world than this. Many people in present Western culture have been browbeaten to believe that any other, alternative point of view simply cannot be scientific.

Of course, science has many times proved our everyday understanding to be more apparent than real, but so far there is no empirical evidence proving that the basic assumptions of physicalism or ontological materialism are true. The evidence produced by research in the relevant fields is, as Nagel points out, fully compatible with different interpretations. Many researchers are also well aware of the difficulties that their favourite explanations entail. Yet they manifest a surprising degree of confidence in rejecting other possible ontological interpretations. This, Nagel maintains, can only be understood as "an *axiomatic commitment* to reductive materialism" (p. 49; my italics). A specific problem with such commitments is that not only are presently known facts considered to be explained or explainable by reductionist materialism, but also things that are *not yet known* but may be discovered in the future are believed to be explainable in the same way. Such attitudes obviously contradict the essence of science, which is open-minded and unprejudiced investigation.

As for the "speculative Darwinian explanations", anyone with a slightly critical mind must have noticed them when reading accounts of present

1. Naturalism is a philosophical term with different meanings. In this context it means that things like human culture and other non-physical and non-biological phenomena have no relevance for what is ultimately real and true about the world.

evolutionary biology. Based on the axiomatic ideas of the survival of the fittest and the drive for genetic reproduction inherent in all organisms, researchers construct any kind of hypothetical story that seems to account for the observed facts, without the slightest piece of evidence. This indeed becomes a “Darwinism of the gaps” – a mirror of the “God of the gaps” for which science has long criticized the religious worldview (anything unexplainable is understood as an act of God).

The main part of Nagel’s book is concerned with showing the weaknesses of the reductive materialist and evolutionary biology research program(s) for explaining the development of 1) consciousness; 2) cognition; and 3) ethics and moral values. We cannot assume that these three basic elements of our everyday experience are not real just because present science has no explanations for them. A satisfying scientific theory must explain why consciousness, cognition and values are not mere contingencies, with an infinitely small probability of appearance in the universe, but on the contrary are probable considering (so far undiscovered) natural laws and the nature of the world.

The theories explaining these things are cosmological because they are basically about the whole of existence. They are of two kinds: historical and constitutive. Historical theories purport to explain how things like consciousness etc have arisen and developed through time. The basic question for constitutive theories is to explain how mind and body, or consciousness and its biological organism relate to each other. Constitutive theories are primary because historical explanations build on them.

An example of a non-reductionist constitutive theory prevalent today is so-called emergentism. According to this view, consciousness emerges as the result of sufficiently complex nervous systems. It is a qualitatively new level of being with properties very different from physical and biological substances and processes. Nevertheless it is dependent for its existence on those “lower” levels being organised into a sufficiently complex system. Nagel rejects this view because it does not really *explain* the appearance of consciousness. Simply referring to the level of complexity of the living organism means nothing but stating a belief that complexity makes consciousness appear. Considering the qualitative difference between biochemical life processes on the one hand and the subjective experience of “being

me” on the other, it is still hard to see how the first can give rise to the second, and emergentist theories entail no explicit explanations of this.

The same argument is of course applicable to the more hard-core theories that *reduce* consciousness to mere physical brain processes (the so-called identity theory and the theory of consciousness as an epiphenomenon). Nagel suggests that the many dead ends that materialist attempts to explain how mind arises out of matter – a dualism introduced at the birth of modern science – may be more hard to get out of than we imagine. It may be easier to assume that consciousness is part of the very fabric of the universe: “Conscious subjects and their mental lives are inescapable components of reality not describable by the physical sciences” (p. 41).

That is a summary of how Nagel deals with present constitutive theories. As for the historical theories they are of course dominated by Darwinian evolutionary biology. But any theory of the evolution of living organisms must explain the appearance of such organisms with consciousness, cognition and moral values, and in these respects Darwinism falls short. Natural selection based on physical fitness to survive is not a sufficient explanation of consciousness as such. But the real crux is how to explain cognition and the achievement of objective knowledge.

Since adherents of Darwinism obviously claim that their theory is objectively true they must also adhere to the possibility of objective knowledge and cognition. Inspired by evolutionary biology a kind of naturalized epistemology has arisen, the basic tenet of which is that our perceptual and cognitive abilities are reliable – that is, they make objective knowledge possible – *because* they have developed as a result of natural selection. But is it really credible that natural selection in the distant prehistoric past should have resulted in abilities that are effective in present time purely theoretical pursuits that were completely unimaginable at the time?

Furthermore, and more important, the reasoning is circular “since any confidence we could have in the truth of [...] an evolutionary explanation of our cognitive capacities would have to depend on the very exercise of those capacities” (p. 24). The fact that certain cognitive processes have had a selective advantage in the general struggle for survival cannot by itself guarantee that the cosmological explanations *of the whole of existence* they help us to

construct must be true.² To believe that it does, that is, to believe that an argument is true not because it fulfils the criteria of rationality, logic and reason but because it has been constructed by a capacity that has developed through natural selection, implies a serious erosion of the authority of reason as such, and the trust in its capacity.³

At this point, Nagel comes close to an argument more or less explicitly present in Steiner's epistemology. It can be summarized as follows: cognition or reason cannot be explained by anything outside itself, because it is always cognition/reason that constructs the explanation (cf. Dahlin, 2009). Whatever explanation we may formulate of the process of coming to objective knowledge, it is formulated in and by a process of rational thinking. Hence, rational thinking can only explain itself by rational thinking. To refer to something outside of thinking itself, such as biological evolution, is self-contradictory. The consequences of such an insight for cosmology are radical. Nagel seems to realise this when he says, "a postmaterialist [cosmological] theory would have to offer a unified explanation of how the physical and the mental characteristics of organisms developed together" (pp. 46-47). Such a theory would describe not only physical or natural processes but must include a "mental history of the appearance and development of conscious beings" (p. 52). This implies that evolution is driven not only by physical causes, something more than that must be at work from the very beginning.

The third aspect of human existence that present scientific theories cannot explain satisfactorily is our ability to grasp the significance of moral values. This ability is of course based on cognition and consciousness but entails something more. Here Nagel argues for a form of value realism and against the subjectivism of the Humean tradition (which is compatible with Darwinism and reductive materialism). His value realism has – according to himself – no ontological implications, that is, he does not imply that values exist like some kind of objective facts. At the most it is metaphysical in a negative sense in that it denies that all truths must be either natural or mathematical. Even though

judgements about what is objectively valuable are not true because they refer to something objectively existing, they have a similar truth like mathematical inferences. Like mathematics, a moral reason or argument is an experience in pure thought, not a fact of nature. Such a moral realism is incompatible with all Darwinian accounts of how our moral capacities have developed. In this case Nagel uses a philosophical theory to argue against a theory in empirical science; a strategy that is often questionable (cf. how some philosophers rejected Einstein's relativity theory on the basis that Kant had shown that time is a transcendental category of consciousness). But Nagel maintains that philosophical theories are of relevance when it comes to questions about the validity of cosmological theories purporting to explain our moral capacities.

In this respect too, Nagel comes close to Steiner's ethical philosophy, in that he sees the cognition of values as motivating, inspiring and even *explaining* moral action:

[T]he distinctive conception of human beings that is implied by value realism is that they can be motivated by their apprehension of values and reasons, whose existence is a basic type of truth, and that the explanation of action by such motives is a basic form of explanation, not reducible to something of another form, either psychological or physical. (p. 114)

Here Nagel says the moral values exist as "a basic type of truth", which is somewhat contradictory to his other claim, that moral realism does not entail any consequences for what exists in the world. However, perhaps to exist as a *type of truth* is distinct from existing as a *fact*. Again the analogy to mathematics is apparent: mathematical truths need not refer to facts in the natural world. Nagel could claim that ethical truths have an "ideal" existence, not a factual one, and that metaphysics deals only with the latter. This again could be contrasted with the metaphysics proposed by Deleuze and Guattari (1994), for whom the ideal or the virtual, and the factual or the actual, are two aspects of one and the same reality.

In the quote at the beginning of this review Nagel talks about "possible alternatives" to mainstream scientific materialism. The alternatives that Nagel speculates about in his book include such notions as monism, panpsychism and teleology. He calls his monism naturalistic and describes it as neutral with respect to the classical opposition between idealism

2. The argument that we can trust our senses since they are a product of evolution is valid, but the same argument applied to our reason is not.

3. The antirealist view that "reality" is a subjective construction Nagel rejects as self-contradictory since then Darwinism itself is reduced to a mere subjective construction.

and materialism. He rejects all beliefs in a creator God and all ideas of an Intelligent Design (ID) character. He recognizes however that the specific rational arguments against Darwinism that have been put forward by ID-researchers⁴ are both relevant and valuable as eye-openers to the limitations of Darwinism:

I believe the defenders of intelligent design deserve our gratitude for challenging a scientific world view that owes some of the passion displayed by its adherent precisely to the fact that it is thought to liberate us from religion. (p. 12)

Nagel's monism purports that mind and matter are essentially one, which means that mind or psyche is universally present; he calls this a kind of panpsychism. Mind "is not just an afterthought or an accident or an add-on, but a basic aspect of nature" (p. 16). This assumption is linked to another, which is basic to science, namely that the world is intelligible, that we can have objective knowledge. This belief that "rational intelligibility is at the root of the natural order" (p. 17) makes Nagel in his own words an objective idealist in line with Hegel or Schelling. However, he never expands on this statement.

As for teleology, Nagel is of course aware that such explanations have been rejected by science for a long time (starting with Francis Bacon who likened them to barren virgins). But the time may have come to resurrect teleological thinking:

[T]he idea of teleological laws is coherent, and quite different from the idea of explanation by the intentions of a purposive being [...] Formally, the possibility of principles of change over time tending toward certain types of outcome is coherent, in a world in which the nonteleological laws are not fully deterministic. (pp. 66-67)

Here Nagel probably has in mind the recent developments of complexity and chaos theory, which have indeed pointed out some "not fully deterministic" laws of nature (see for inst Robertson & Combs, 1995).

Many people seem to think that the general rejection of teleological explanations is based on some *a posteriori* scientific discovery, but it is hard to find any evidence for such a belief (see Hawthorne and Nolan, 2006; to whom Nagel also refers). The rejection of teleology is rather more like a judgment *a priori*. To be sure science has found many things

that can be sufficiently explained by purely effective causes (causes working from the past), but this is no proof that there cannot be any valid teleological explanations. In addition, "even if fundamental teleology [teleology as a basic feature of the world] has no place in contemporary physics and chemistry, it is much less obvious, if one is a non-reductionist, that it has no place in contemporary zoology or ecology or psychology or sociology" (ibid., p. 269).

Teleological explanations are linked to the idea that some outcomes are more valuable than others, which in turn connects to the notion of some being who evaluates these outcomes. But, as indicated above, Nagel rejects that such a being, usually called God, should exist. His teleology is one without intention; there is no universal being intending certain things to happen. Yet future states of the world may have an impact on what happens in the present. He admits that he cannot give a fully satisfactory explanation of how this is possible.

I have already pointed to some affinities or compatibilities between Nagel's and Steiner's thinking. In a general sense, Nagel's "possible alternatives" are fully reconcilable with the anthroposophical worldview. His saying that "consciousness is not epiphenomenal and passive but [...] plays an active role in the world" (p. 115) could even be imagined as a direct quote from one of Steiner's philosophical works. (In this respect his view that ideal truths have no ontological status is somewhat contradictory.) But these agreements or overlappings of course do not mean that Nagel would accept any of Steiner's much more concrete and detailed descriptions of the genesis and development of the cosmos and of humanity. We should however remember that Steiner appreciated Darwin's theory of evolution and would probably even today side with him rather than with Intelligent Design, at least as far as the latter adopts a mere dogmatic belief in creationism. Similarly, Nagel too accepts Darwinian explanations regarding the *details* of the historical development. It is the cosmological claims of Darwinism and reductionist materialism that he rejects and for which he seeks alternatives. Seemingly, the "alternative" that Steiner represents would fulfil what Nagel wishes for, namely "[a]n understanding of the universe as basically prone to generate life and mind" (p. 127); a cosmology that recognizes "a cosmic predisposition to the formation of life, consciousness, and the value that is inseparable from them" (p. 123). At the same time he admits that such a cosmology "will probably require a much

4. For an interesting example of this, see Dembski & Kushiner (2001).

more radical departure from the familiar forms of naturalistic explanation that I am at present able to conceive” (p. 127). Anthroposophy is obviously such a radical departure and, like Nagel says about his own vague alternatives, “in the present intellectual climate such a possibility is unlikely to be taken seriously” (p. 123). In spite of the fact that even many mainstream researchers admits, that the appearance of life and consciousness are close to miraculous in a purely material universe, governed by accident and physical laws.

References

- Dahlin, B. (2009). On the path towards thinking: learning from Martin Heidegger and Rudolf Steiner. *Studies in Philosophy and Education*, 28(6), 537-554.
- Deleuze, G., & Guattari, F. (1994). *What is philosophy?* New York: Columbia University Press.
- Dembski, W. A., & Kushiner, J. M. (Eds.). (2001). *Signs of intelligence. Understanding intelligent design.* Grand Rapids, Michigan: Brazos Press.
- Hawthorne, J., & Nolan, D. (2006). What would teleological causation be? In J. Hawthorne (Ed.), *Metaphysical essays* (pp. 265-284). Oxford: Clarendon Press.
- Nagel, T. (1974). What is it like to be a bat? *The Philosophical Review*, 83(4), 435-450.
- Robertson, R., & Combs, A. (Eds.) (1995). *Chaos theory in psychology and the life sciences.* Mahwah, NJ.: Lawrence Erlbaum.