

IN THIS SECTION:

There are a growing number of “signs” that the worldview of modernism is nearing its expiration date. When solid citizens of modernity speak up in the way Thomas Nagel has done, those who are comfortable with things as they are get worried. Frederick Amrine is our expert guide to this noteworthy defection.

Besides insights, Rudolf Steiner left a vast number of questions to work on further. Many agree on the importance of understanding and experiencing the difference between “thinking” that just moves around pre-formed concepts, and *thinking* that explores a non-physical “higher” world. Frederick Denney worked with consciousness researcher Georg Kuhlwind and introduces us to GK’s friend the Italian anthroposophist Massimo Scaligero.

Owen Barfield penetrated the English-speaking mainstream with his research into words and meanings and what they show about an evolving human consciousness. His grandson is keeping OB’s work available.

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Provoking a Crisis

by Frederick Amrine

Review of Thomas Nagel, *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False* (New York: Oxford UP, 2012).

“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.” (p. 127)

This is an important book, trenchant and brave. Thomas Nagel is a pre-eminent analytic philosopher, but this admirably succinct treatise¹ is non-technical: it can be read and understood by any educated person with good will and a bit of perseverance. It deserves careful study.

Despite the book’s rather sensational subtitle, it is not specifically anti-Darwinian. And Nagel offers no direct comfort to creationists: an avowed atheist, he assures us that he doesn’t have a religious bone in his body. Biblical literalists might well be tempted to befriend Nagel in an enemy-of-my-enemy sort of way, but Nagel isn’t sympathetic. (Nor am I.) Nagel is likewise a critic of creationism’s more progressive wing, “intelligent design,” dismissing it with the stinging (and accurate) critique that it offers only the empty form of an explanation, without any specific content.

Mind and Cosmos describes a paradigm that should be in crisis, but is not.² Nagel means to provoke the crisis that ought to be unfolding on its own. The paradigm at issue is even larger than Neo-Darwinism: Nagel calls it “materialist reductionism.” Because it is the prevailing explanatory model in all of mainstream contemporary science, the stakes are vast.

It will help us understand Nagel’s contentions if we first digress a bit and recall how paradigms work via an extended simile. The analogy might seem too facile at first, but please just stay with me for a moment. A paradigm is like a job that is meant to pay the bills. Some excellent jobs (think medical intern or graduate teaching fellow) can’t cover the bills in the short run, but it is reasonable to accept that limitation because there is a good likelihood that they will turn into high-paying jobs down the road. What matters is paying the bills (and more) in the long run. Highly successful paradigms such as Copernican astronomy and Relativity left large bills unpaid in the short run, but soon enough these “anomalies” (as Kuhn calls them) were explained in light of the new paradigm. If major bills remain unpaid for an extended period of time, the typical and appropriate response is a Kuhnian “crisis”: clearly it’s time to hunt for a better job.

Born in the late Renaissance, “reductionist materialism” is hardly a new paradigm.³ It should be paying the bills and then some. Nagel has sat down at the end of the month, as it were, and inventoried the unpaid bills. The result isn’t pretty: we’re covering food and clothing, so we’re comfortable enough day-to-day; but we can’t cover rent, car payments, or utilities.

Specifically, Nagel argues that materialist reductionism can explain everything *except life, consciousness, human reason, the lawfulness of the universe, and moral values*. Because it



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1 128 pages in a small format. Nagel’s own summary, published in *The New York Review of Books* (“The Core of ‘Mind and Cosmos’”; August 18, 2013), is even more succinct, but you will want to own and read the entire book.
 2 I mean the terms “paradigm” and “crisis” in their specifically Kuhnian senses (Thomas Kuhn, *The Structure of Scientific Revolutions* [1962; Chicago: U of Chicago P, 2012]).
 3 Pace H. Allen Orr, who calls it “the new kid on the block” in his critical review of Nagel (*The New York Review of Books*; February 7, 2013).

has no adequate explanation of consciousness and reason, the prevailing paradigm cannot even begin to explain how science of *any kind* is possible. Moreover, the prospect of finding reductionist explanations of all these fundamental *natural phenomena* (for such they are) is effectively nil. That should be shocking enough. We should feel a sense of overwhelming crisis. We should be looking for a new job. But what is doubly and triply shocking is not that Nagel would dare to mount such a critique, but rather that most scientists remain untroubled, and that many are working overtime to deny such problems even exist.

Let's consider each of these issues briefly.

LIFE: Nagel devotes little space to this problem because there's no real argument about it. The prevailing paradigm seldom even attempts to answer this question, and when it does, the process is purely—sometimes wildly⁴—speculative. The explanation most often invoked is blind chance—which is to say, the absence of any explanatory principle dressed up to look like an explanatory principle. When it comes to the origin (let alone the meaning) of life, materialist reductionism is *clueless*.

CONSCIOUSNESS: Reductionists themselves refer to this as “the hard problem.” One might call this lack a congenital defect, since it dates from the moment modern science was born. Cartesian dualism not only fails to solve the “mind-body problem”: it created the problem intentionally so that it could pursue materialistic determinism untroubled. Scientific progress was purchased at the price of exporting the mind and all its phenomena to a separate realm, and then declaring the physical substrate to be the sole and proper domain of science. After having issued IOUs for going on half a millennium without having paid down a dime of the principal, materialist reductionism has now begun simply to deny the existence of a debt: *there is no mind*; what feels like mind is just “sparks and drips at the synapses”;⁵ nothing else is there. Or as the

noted geneticist Francis Crick notoriously put it: “You,⁶ your joys and sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules. Who you are is nothing but a pack of neurons.”⁷ At most, mind is a pleasant fiction, good enough for literary diversions but entirely unworthy of philosophical consideration.

As for the “mind,” which Nagel holds could not have been brought into being merely by Darwinian natural selection, it has played a magnificent part in English poetry: in Marvell, Keats, Wordsworth, Gerard Manley Hopkins, and so on. But it is not at home in philosophy. The “mind-body problem,” a sort of Indian rope-trick, is a toy which has been teasing and entertaining philosophers for too long.⁸

Or if the existence of consciousness can't be denied, at least its importance can be minimized, as in Orr's specious counter that consciousness is rare in nature, so why worry about an exceptional problem? Such arguments duck the real issue here: materialist reductionism “cannot provide the basic form of intelligibility for this world” (p. 53).

RATIONALITY AND LAWFULNESS: Nagel argues these are attributes of Nature herself. It is not at all clear how consciousness, let alone rationality, should have survival value, since so many species

have survived very well without either. The *implied* answer is that rational creatures (humans) have survived and prospered as a species; therefore rationality has survival value. But that would be a textbook logical fallacy, so sophomoric that it wouldn't even rate a response. Hence proponents won't say it aloud. Here Nagel elegantly deploys the aporia of a simple calculator. We tap in “5+3=” and we obtain the correct answer “8.” The mechanism of the calculator can be reduced to physics, *but not the meaning of the answer*.

review of Nagel (*The Threepenny Review*; Fall 2012).

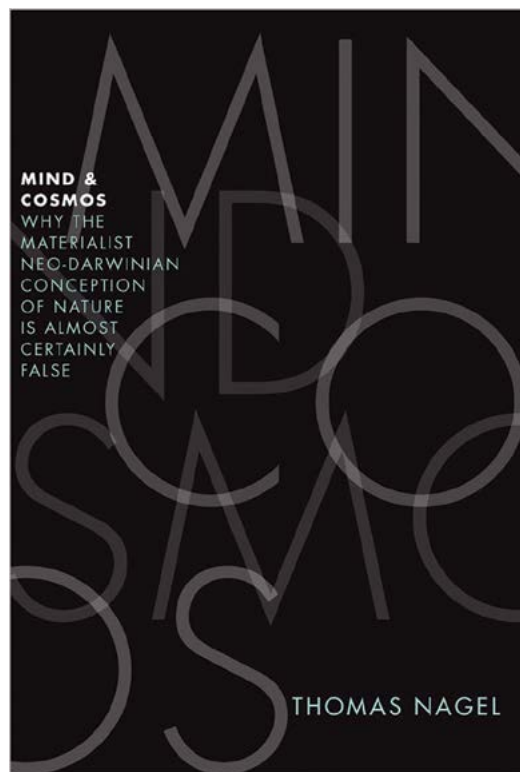
6 These telling internal quotes are Crick's own.

7 Quoted by Andrew Ferguson in his review of Nagel (*The Weekly Standard*; March 25, 2013).

8 These appalling words conclude the late P. N. Furbank's review of Nagel (*The Threepenny Review*; Fall 2012).

4 E.g., Francis Crick's hypothesis of “directed panspermia,” discussed on p. 124.

5 Berkeley neuroscientist John Kihlstrom, quoted by Louis B. Jones in his



Nagel rightly terms our awareness of meaning a “miracle,” because it is not susceptible to reductionist analysis. As Louis B. Jones puts it so very well in his review, “Only a sovereign consciousness sees that. Furthermore—and this is an additional leap of cognition that Nagel finds almost numinous—the little equation pertains to a logical, cognizable universe. How is it that this universe happens to fit, like a glove, our cogitations and surmises?” Reductionist materialism cannot begin to answer this question.

MORAL VALUES: Nagel is a “moral realist.” For him, values are (mentally) perceptible *facts*: “... pain is really bad, and not just something we hate, and ... pleasure is something good, and not just something we like” (p. 110). We can be as confident about the wrongness of slavery, or cruelty to children, as we are about the chemical composition of the air or the boiling point of water. We needn’t agree with Nagel on this point specifically to feel the force of his argument. It is enough to admit that civilized people *act* as though moral values were real in their everyday experience; morality is in that sense a pervasive natural phenomenon in need of explanation. Materialist reductionism cannot begin to explain why “it is the case that the interests of others provide us with reasons for action,” or why reflection should lead us to feel “some degree of benevolence” (p. 101). Altruism and selflessness are not necessarily advantageous to specific individuals; indeed, the opposite is a much more plausible argument. The philosopher Sharon Street has argued rightly that a moral realism such as Nagel advocates “would make no contribution to reproductive fitness” (p. 107), and therefore it must be false, because we hold the Darwinian account to be true. Nagel boldly turns the point of this argument around and flings it right back: because we can be confident that moral realism is true, Darwinistic accounts of value judgments are implausible.

Such accounts have not lacked extramural critics, but Nagel’s criticism is especially painful because it comes from within. Materialist reductionism isn’t just unacceptable to the devout: now an eminent philosopher contends that it fails key tests of scientific rigor. *Materialist reductionism is bad science*. Nagel’s assault on the paradigm’s innermost citadel has elicited three persistent refrains from his critics: 1) Nagel has betrayed science as such by siding with its detractors; 2) philosophers shouldn’t be poking their noses into scientists’ business; scientists know better;

and 3) Nagel’s proposed alternative paradigm, “natural teleology,” is a non-starter. The third complaint has merit. The first two have none, but because they are so symptomatic, let’s consider them before turning to the third.

Many scientists’ feathers are ruffled by Nagel’s having taken science to task. However by their own lights, this should neither surprise nor annoy them: they should welcome it. *Rational self-criticism is integral to the way science works*. Such complaints betray a fundamental misunderstanding of the proper role of philosophical reasoning within scientific method.⁹ To be sure, scientists have grown unaccustomed to philosophical critique because by and large Anglo-American philosophers have become apologists for the reigning paradigm, working overtime to

defend reductionism by denying “the ghost in the machine.” But philosophy isn’t the handmaiden of science (or its “underlaborer,” as Locke asserted); it’s just that so many philosophers have abdicated their responsibility. No wonder they want to brand Nagel a heretic—literally! In his review of Nagel, the Cambridge philosopher Simon Blackburn asserted that “[i]f there were a philosophical Vatican, the book would be a good candidate for going on the Index [of Prohibited Books].”¹⁰ Nor is such discourse at all exceptional: molecular biologists themselves refer to the prevailing paradigm as “the central

dogma,” and both scientists and philosophers are quick to refer to problems such as the conscious mind as an unknowable “mystery”—the same fideistic dodge that early modern philosophers and scientists had criticized so mercilessly. Leon Wieseltier’s riposte is rhetorically delicious: “What once vitiated godfulness now vindicates godlessness.” It is not Nagel who is the apostate here: the shoe is on the other foot.

The eminent evolutionary biologist Richard Lewontin is aware of what he is doing, at least: “...we are forced by our *a priori* adherence to material causes to create an investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter

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9 Contrary to the disingenuous claims of countless popular scientific presentations, the scientific method is not simply empirical, and it never proves anything. As Karl Popper has demonstrated, experimental science is “hypothetico-deductive,” and it proceeds via falsification. The key moment in the process of “justification” is the application of rational analysis in the devising of experiments and the evaluation of their results. “Discovery” is an imaginative act that transcends both empiricism and rationality.

10 Quoted by Leon Wieseltier in *The New Republic* (March 8, 2013).

how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot into the door.”¹¹ Needless to say, science should not be dealing in such preconceived notions, and if it does, philosophy’s proper role is to protest. Nagel is far more reasonable and balanced than his opponents. Like Rudolf Steiner, he is not opposed to materialism as such, merely to its overstated claims. Ferguson argues well on this point, in defense of Nagel, that materialism is “a premise of science, not a finding . . . The success has gone to the materialists’ heads. From a fruitful method, materialism becomes an axiom: If science can’t quantify something, it doesn’t exist, and so the subjective, unquantifiable, immaterial ‘manifest image’ of our mental life is proved to be an illusion.” Ferguson agrees with Nagel that materialism has its place as a valid scientific methodology, but it can be sustained as a comprehensive metaphysics only through “a heroic feat of cognitive dissonance”—by simply ignoring the unpaid bills Nagel itemizes.¹² Or begging the question dogmatically by simply asserting what is at issue. “The question, then,” Orr writes, “is not whether [Nagel’s proposed] teleology is formally compatible with the practice of science. The question is whether the practice of science leads to taking teleology seriously.” But the question we are asking is whether the current practice of science is correct. Orr’s assertion is tantamount to saying, “Given that the current practice of science is correct and does not include teleology, we may safely disqualify Nagel’s alternative explanation.” Hearing such arguments, one wants to shout, “Is there a philosopher in the house?”

Nagel proceeds from itemizing unpaid bills to job hunting as it were, and that is where he falls short. The critics’ third objection does have merit, but for a different reason: whereas they accuse him of having been led astray, I fault him for not having gone further in the right direction. Ironically, Nagel’s powerful analytic focus seems to have given him tunnel vision regarding possible alternatives, and makes him seem captive to the tradition in which he was trained. More than one critic has quoted a key sentence, couched in four negatives, as symptomatically vague and tentative: “I am not confident that the Aristotelian idea of teleology without intention makes

sense, but I do not at the moment see why it doesn’t” (p. 93). *Mind & Cosmos* is a thoroughly admirable book, and there is no doubting the sincerity of Nagel’s convictions, but this is hardly persuasive rhetoric, and associating the idea of “natural teleology” principally with an ancient philosopher makes it feel like a throwback. That move strikes me as unfortunate and unnecessary.

I agree wholeheartedly that the crisis calls for “a major conceptual revolution at least as radical as relativity theory . . . or the original scientific revolution itself” (p. 42), but I wonder whether “teleology” is the best term for it, and (as Nagel himself recognizes) Aristotelian teleology as such is a non-starter because it is too theistic and intentional. Even if we restrict ourselves to teleology, there is a distinguished modern school of philosophical, non-theistic teleology

reaching back to Kant via important biologists such as Karl Ernst von Baer and Jakob von Uexküll. Indeed, Stephen Jay Gould gives us one version of this lineage in his important first book, *Ontogeny and Phylogeny*,¹³ which inspired the new field of evolutionary developmental biology or “evo-devo” that “elaborates important new lines of inquiry into self-organization of life forms.”¹⁴ This and many other similar developments suggest that materialist reductionism is indeed slowly giving way to a new paradigm of emergence.

I propose that what we need is not an alternative form of causality, but rather an even more radical paradigm that makes room for indeterminacy and the historical emergence of previously unknown levels of complexity, a paradigm in which phenomena are correlative to consciousness. Some of Nagel’s critics have inadvertently pointed us in the right general direction by accusing Nagel of having harkened back to German Idealism¹⁵ and its central concept of Spinozist *natura naturans*, or of trying to “re-enchant the world” (in the Weberian sense of that term) after the manner of the Romantics. Goethe’s non-reductive science is a kind of Spinozism recast in the light of German Idealism, and Spinoza was also the philosopher most admired by Einstein. Spinoza lies at the heart of the

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11 Quoted by Nagel in a footnote on p. 49.

12 Nagel calls materialist reductionism “a heroic triumph of ideological theory over common sense” (p. 128).

13 Cambridge: Harvard UP, 1977.

14 John H. Zammito in *The Hedgehog Review*, vol. 15, No. 5 (Fall 2013).

15 Zammito. See also Malcolm Thorndike Nicholson, “Thomas Nagel is not crazy” (*Prospect*; October 23, 2012): “Nagel concludes, in a vein similar to the German idealist philosophers of the late 18th and early 19th century, that the nature of reality is such that there is a natural progression towards consciousness.”

profoundest philosophical writing of the last half-century, Gilles Deleuze's metaphysical, scientifically advanced monism.¹⁶ Many other such figures could be listed. The index of Nagel's book is filled with minor analytic philosophers, but these major alternative thinkers are conspicuous in their absence.¹⁷

When Nagel writes, "After all, whatever one's philosophical views, so long as there is such a thing as truth there must be some truths that don't have to be grounded in anything else" (p. 103), he is invoking what German Idealism means by the *a priori*. Kant or Fichte could have written the words: "As with cognition in general, the response to value seems only to make sense as a function of the unified subject of consciousness" (p. 115). Nagel does indeed seem to be reviving Idealism's moral realism, as worked out by Schiller and further elaborated by Rudolf Steiner. And Hegel could have written Nagel's radiant claim that "[e]ach of our lives is a part of the lengthy process of the universe gradually waking up and becoming aware of itself" (p. 85).

But Nagel need not have gone all the way back to German Romanticism and Idealism; there is a source closer to home. What he is seeking is a *philosophy of freedom* that is embedded within an overarching notion of *the evolution of consciousness*. Readers of *being human* will recognize these radical ideas as familiar ground. Ferguson rightly describes Nagel as looking for a "Third Way" between theism and materialism. That "Way" already exists—in the form of anthroposophy.¹⁸ It is one of the tragedies of our era that great minds and honest seekers such as Thomas Nagel seem unaware of the work of Rudolf Steiner.

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¹⁶ See my essay "Gilles Deleuze's Philosophy of Freedom," *being human*, Spring 2012.

¹⁷ To his credit, Nagel does refer to Stuart Kauffman's work on emergence. And he also identifies himself as "an objective idealist in the tradition of Plato, and perhaps of certain post-Kantians, such as Schelling and Hegel" (p. 17), but then, oddly, none of these three names appears in the index.

¹⁸ Cf. Frederick Amrine, "Discovering a Genius: Rudolf Steiner at 150," *being human*, Spring 2011: "Steiner . . . occupies the seemingly excluded middle ground between science and religion . . ."