Bringing Mind to Matter

Raymond Tallis

The American philosopher Thomas Nagel has been responsible for two of the most important contributions to the philosophy of mind in the twentieth century. Both have made understanding how minds fit into an overwhelmingly mindless universe more difficult.

The first was in a famous 1974 paper that asked the question, "What Is It Like to Be a Bat?" Nagel pointed out that most philosophers of mind had somehow, unaccountably, overlooked the defining features of minds: namely, that they are conscious, living in a world of felt sensations. Nagel's paper helped bring into the mainstream the idea that an organism is conscious only if "there is something it is like to *be* that organism"—that is to say, if the creature has its *own* experience of the world. Whereas it does not make sense to say that it is like something to be a pebble, it is perfectly obvious that being a human—at least, a particular human being at a particular time—is like something, indeed like many things.

Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False
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This difference between a person's experience and a pebble's non-experience cannot be captured by the sum total of the objective knowledge we can have about the physical make-up of human beings and pebbles. Conscious experience, subjective as it is to the individual organism, lies beyond the reach of such knowledge. I could know everything there is to know *about* a bat and still not know what it is like to *be* a bat—to have a bat's experiences and live a bat's life in a bat's world.

This claim has been argued over at great length by myriad philosophers, who have mobilized a series of thought experiments to investigate Nagel's claim. Among the most famous involves a fictional super-scientist named Mary, who studies the world from a room containing only

the colors black and white, but has complete knowledge of the mechanics of optics, electromagnetic radiation, and the functioning of the human visual system. When Mary is finally released from the room she begins to see colors for the first time. She now knows not only how different wavelengths of light affect the visual system, but also the direct experience of *what it is like* to see colors. Therefore, felt experiences and sensations are more than the physical processes that underlie them.

Some philosophers have accepted this conclusion, but have argued that Mary would not have additional *knowledge*. But this is really Nagel's point: the new experiences Mary has are fundamentally different from objective knowledge. And this conclusion is closely connected with Nagel's other key contribution to the philosophy of mind: the observation that the first-person view of the perceiving subject is incommensurate with the third-person, objective view of physical science. The one is a "view from here"—whatever *here* is for an experiencing subject—while the other aspires to be so free from the biases of subjectivity that it becomes a "view from nowhere."

Nagel explored this theme in the 1986 book that made his international reputation. *The View from Nowhere* argues not only that the subjective view of our perception cannot be reduced to the objective view of the universe, but more importantly that, contrary to what so much modern scientific thought attempts to show, the objective view cannot replace or do away with the subjective view. The fact that there is no "me" or "here" or "now" in the scientific perspective does not show that these things are unreal, but rather that physical science is, and may always remain, incomplete. Likewise, though physics aims to reduce and marginalize so-called "secondary" qualities, like color and brightness, to what it (presumptuously) calls "primary" qualities, like light wavelength and amplitude, this does not prove that colors are less real than electromagnetic waves; it only shows that purely objective science has limitations. Since secondary qualities are the very stuff of consciousness, experience will always remain out of science's total grasp. Objective science, in short, cannot capture what it is like to be a subject who inescapably experiences the world from a certain viewpoint.

Nagel's latest book is yet another critique of the claim of objective science to give a satisfactory account of consciousness and the place of mind in the universe. But *Mind and Cosmos* is much more ambitious than Nagel's previous books, and more radically critical of the assumptions of modern science. The target of his critique, he says,

> is a comprehensive, speculative world picture that is reached by

> extrapolation from some of the discoveries of biology, chemistry, and physics—a particular naturalistic *Weltanschauung* that postulates a hierarchical relation among the subjects of those sciences, and the completeness in principle of an explanation of everything in the universe through their unification.

But none of the main features of minds—which Nagel identifies as consciousness, cognition, and value—can be accommodated by this worldview's identification of the mind with physical events in the brain, or by its assumption that human beings are no more than animal organisms whose behavior is fully explicable by evolutionary processes.

Because these gaps are found in the very starting principles of physical science, Nagel argues that the traditional mind-body problem "is not just a local problem, having to do with the relation between mind, brain, and behavior in living animal organisms, but...it invades our understanding of the entire cosmos and its history." It is not, in other words, a problem simply of how to account for the presence of minds within bodies, but of minds within the fabric of inert physical existence itself: the mind-body problem must be recast as the mind-universe problem.

It is hardly surprising that the mind seems to elude physical explanation because, as Nagel points out, "the great advances in the physical and biological sciences were made possible by excluding the mind from the physical world." Anyone who still imagines that there is life to the theory that the mind can be understood in purely physical terms will be cured of this delusion by reading the philosophical literature. While there are some who stick stubbornly to the assumption that consciousness is identical with neural events in certain parts of the brain, their views do not withstand close examination by even the most open-minded philosophers, like Australian professor David Chalmers.

With *Mind and Cosmos*, Nagel wisely stands on the shoulders of these giants, and asks the readers to stand with him: where many philosophers of mind are so exactingly detailed that they can expend the word count of a Russian novel to refine the edges of error, Nagel, rather than exhaustively explore the arguments against reducing the mind to the brain, simply reiterates them quickly and authoritatively. The result is a compact barnburner of a book. Nagel aims less to check the vital signs of psychophysical reductionism than to note that the patient has long since expired. He then moves along to explore the implications, for if reductionism truly is dead, "this infects our entire naturalistic understanding of the universe, not only our understanding of consciousness"; it has revolutionary implications not only for evolutionary biology, but for our whole metaphysical picture.

Under a true materialist view of biology and the universe, "consciousness would have to be regarded as a tremendous and inexplicable extra brute fact about the world." The most radical way of coping with this brute fact—which, by the way, involves "not just the lacing of organic life with a tincture of qualia" but the formation and existence of multiple first-person selves to experience those qualia—is to argue that, far from failing to fit into the material world, consciousness, or some proto- form of it, has been present from the beginning. By this theory, we human beings are instances of "something both objectively physical from outside and subjectively mental from inside." Nagel muses, "Perhaps the basis for this identity pervades the world."

This musing opens the door to panpsychism, the theory that every physical thing has not just physical but mental qualities. Nagel has previously discussed this view, and several otherwise quite orthodox philosophers, including Chalmers and the British philosopher Galen Strawson, have seriously entertained it. Unfortunately, the theory has a rather high explanatory cost just to preserve a naturalistic account of consciousness. And that cost doesn't even buy very much: for example, if mind is everywhere, that still leaves the problem of explaining why some organisms are more sentient than others, and why human beings, say, are thoughtful and pebbles aren't. Moreover, as Nagel points out, if all matter is mental, how do we account for the fact that consciousness seems to require a certain kind of organism—complex, and with a complex nervous system—to become apparent? While brain activity is not *identical* with consciousness, it does seem to be *necessary*: it is not possible to envisage the latter without the former. Panpsychism does not make clear what it is about such complex organisms that cause all their little bits of mind to combine into the kind of conscious whole that *has* experiences, and about which we can say it is like something to *be* it.

Perhaps even harder than this question of what kind of stuff could become conscious, and therefore what kind of stuff the universe is made of, is the historical question: in the unfolding story of the universe, even if conscious organisms were possible all along, why is it that they actually *did* arise? Even if consciousness could give an organism an edge over the competition—a hypothesis that is far from proven—this would only explain why consciousness stuck around once it arose, and not why it came into being in the first place. It would offer no truly satisfactory explanation for why natural selection should cause material processes to become organisms sufficiently self-aware to *know* which behavior is to their advantage. After all, it would be

of great advantage for a beast, faced with a predator, to be able to dematerialize and rematerialize at some considerable distance, but this advantage would not be sufficient to explain the emergence of this property.

The nature of cognition—thinking, reasoning, and so forth—presents an even greater challenge than subjective experience. Notwithstanding the claims of those who ascribe knowledge and thinking to unconscious objects such as computers, Nagel argues that these features are available only to conscious beings. Found most fully in human beings but present in less developed forms in other species, these higher functions of the mind "have enabled us to transcend the perspective of the immediate life-world given to us by our senses and instincts, and to explore the larger objective reality of nature and value." This makes obvious sense: without a ground-floor subjective viewpoint, there cannot be progression to higher-level viewpoints such as that which underpins the objective knowledge of science.

If the nature and existence of basic subjective consciousness cannot be fully explained through evolutionary theory, then neither can the higher cognitive functions, regardless of any putative survival advantage they may ultimately confer. There is, moreover, a problem in trying to envisage a process of natural selection generating creatures like ourselves that have the capacity, as Nagel puts it, "to discover by reason the truth about a reality that extends vastly beyond the initial appearances." It is strange that such a capacity should have been produced by natural selection, given that the advantages it has brought have been fully realized only in theoretical pursuits which are relatively new. Just how strange this is becomes evident if we accept—as many evolutionary psychologists do—the "truths" in question do not correspond to anything constitutive of the natural world. If reason, knowledge, and thought are merely devices to improve our chances of survival, then it is appropriate to adopt an anti-realistic view of what they tell us about the world. Scientists, like the rest of us, would have to define "truth" as whatever set of beliefs happen to be of adaptive value—regardless of whether they are, well, true. This makes it difficult to understand how they could gradually build up to the great theoretical edifices of natural science that have huge scope and immense explanatory, predictive, and practical power.

Consider, for example, the words of British political philosopher and celebrity misanthrope John Gray. In his diatribe against humanism, *Straw Dogs* (2003), Gray argued that the belief that "through science humankind can know the truth" is a mere article of faith—and one that is ill-founded, as Darwin has taught us that "the human mind serves evolutionary success, not truth. To think otherwise

is to resurrect the pre-Darwinian error that humans are different from all other animals." Unlike Gray, Nagel is able to see the self-contradiction in this claim: The theory put forward by the bearded, upright primate Charles Darwin would have demonstrated itself to be groundless—a consequence that could be considered ironic were it not logically impossible.

This part of Nagel's case is closely connected with his discussion of the final defining feature of consciousness that cannot be accommodated by scientific naturalism: value—our sense of what is good and what is bad, and our judgment of right and wrong. He critiques a different type of subjectivism, the one which holds that moral and value judgments of all kinds can be traced to natural, adaptive responses of attraction and aversion to pleasurable and painful experiences. Against this view, Nagel upholds a kind of moral realism which views our value judgments as attempts, however error-prone, to apprehend real truths about the world, just as mathematics attempts to discern real logical truths and science aims to uncover real empirical truths. Even if one does not accept the notion that value judgments have "truth," there remains the awkward fact that they are explicit, argued over, and associated with the idea of unassailable validity—not characteristics one associates with the material world as described by the laws of physics, chemistry, and biology.

For all these reasons, Nagel rejects not only theories of consciousness that reduce it to the brain, but ones that reduce it to the sum of purely accidental physical processes played out across a grand time scale. This claim leads him into dangerous territory; he questions whether we have any theoretical framework from which we can understand how life arose out of chemical elements by purely physical processes, and (even more dangerous) whether the emergence of complex, not to mention conscious, organisms can be accounted for by natural selection.

This willingness to court danger, and execration by the materialist mainstream, is made more admirable by the fact that Nagel has no hidden agenda: Although he seems to be flirting with Intelligent Design and (God help us) theism, he is careful to note both his own atheism and the failings of design theory.

Instead, Nagel toys with a non-theistic, non-intentional, yet teleological hypothesis for the existence of life, mind, and value. A truly complete theory of mind, he suggests, would have to account for how the proto-mental character of the basic stuff of the universe played a role in the generation of the full-scale minds we see today—how, in a sense, mind created its own higher manifestations. Similarly, the existence of value ought to be explored not just as an accidental side effect of life, but as the thing that life was brought

about in order to realize or apprehend: "there is life because life is a necessary condition of value."

This hypothesis, of course, is at odds with the Darwinian picture and the naturalism it seems to license. Indeed, this notion that life, consciousness, and value are determined not merely by value-free chemistry and physics but by a cosmic disposition to form them, is a radical break with the predominant mindset of the entire scientific establishment. According to this orthodoxy, consciousness is a definite *parvenu*, and value a precarious new kid on the block. It will take some overturning—and so it should. After all, the Darwinian view seems to be supported by some fundamental truths: that matter must have preceded living matter, that living matter seemingly must have preceded conscious living matter, and that likewise conscious living matter preceded morally fastidious conscious living matter. And the assumptions with which this view begins have of course contributed to many of the great scientific advances of the last few centuries.

Nagel is aware that in the present intellectual climate any discussion of a teleological hypothesis is unlikely to be taken seriously, notwithstanding the fact that we are far from having any idea of the kind of processes that could possibly have given rise to life out of nonliving matter, conscious life out of living matter, or conscientious life out of conscious life. Even so, the fact that even a respected naturalistic luminary like Francis Crick asserted that life seems miraculous—so much so that he was willing to entertain the theory (also taken seriously by many other famous scientists) that life on earth was seeded by showers of unicellular organisms deliberately sent by an advanced civilization from elsewhere—does not help Nagel's case as much as he seems to think. Even Homer nods.

The standard belief that we are unimportant events generated by an entirely absentminded universe commands wide, if insincere, acceptance. Stephen Hawking's declaration that "the human race is just a chemical scum on a moderate-sized planet, orbiting around a very average star in the outer suburb of one among a hundred billion galaxies" is more often quoted than challenged. Just the same, Nagel concludes with a confident prediction "that the present right-thinking consensus will come to seem laughable in a generation or two."

This short book is packed like a neutron star. I found myself underlining so much that I had to highlight some underlining with further underlining and flag up this underlining in turn. *Mind and Cosmos* is a brave intervention, and the book has been the object of considerable scorn and vituperation from reviewers and academics shocked by its author's apparent apostasy. Nagel, of course, raises more questions than he answers, but this is a virtue rather than a defect.

His critique of the assumption that natural science has shown us, or is about to show us, or has the tools and concepts to show us, what we human beings are, is particularly valuable because he does not make the case for a return to a supernatural account of our place in the cosmos. What is more, as he says, pointing out the limits of the best developed and most successful forms of contemporary scientific knowledge "may eventually lead to the discovery of new forms of scientific understanding." If nothing else, one hopes it will at least widen the sense of possibility for the unprejudiced reader. Isn't that what philosophy should do?

***Raymond Tallis**, a* New Atlantis *contributing editor, is emeritus professor of geriatric medicine at the University of Manchester, United Kingdom, and the author, most recently, of* Reflections of a Metaphysical Flaneur *(Acumen, 2013).*