

including those that touch on gender, gender identity and sexuality.² While readers may differ—even significantly—with Mukherjee’s essentially secular worldview regarding these issues, he remains well balanced and apolitical in his approach to interpreting the role of genetics in complex social behaviors. Absent from the book is any suggestion that the role of biology in behavior allows for abdication of human responsibility regarding the choices we make.

This is a tenuous balance to strike. How is it that we are bound to our genetics, but at the same time responsible for the outcomes in our lives? Mukherjee’s unique answer to this paradox is perhaps the most insightful of his comments regarding the connection between heredity and complex social behavior. Rather than using the somewhat worn-out nature/nurture dichotomy, Mukherjee instead turns to mathematics for an appropriate analogy to explain how genes contribute to who we are or might become. Our inherited genetic makeup, he suggests, is very much like “the first derivative of a point [which] is not its position in space, but its propensity to change its position” (p. 355). Or to put it more succinctly, our genes are directive, not determinative. While our heredity may indeed limit the scope of possible outcomes, both experience and environment—not to mention a stiff dose of providential serendipity—play equally important roles in who we become.

Our understanding of precisely how our inherited genetic composition interacts with the experiences and environment that flavor our life is still in its infancy. Mukherjee touches on these issues throughout the latter third of his book, providing a few prime examples of how our experiences in the world can alter the effect of our genes in ways that early geneticists would never have imagined.³ This field of study, known as epigenetics, offers at least a partial insight into the remarkable flexibility and adaptability of our genome. Mukherjee states this elegantly:

It is a testament to the unsettling beauty of the genome that it can make the real world “stick.” Our genes do not keep spitting out stereotypical responses to idiosyncratic environments: if they did, we too would devolve into windup automatons. (p. 390)

And this conclusion that we are not merely products of our genes offers some degree of hope for individuals who fear their own inheritance. This is certainly the case for Mukherjee, as clarified by the medical history of his own family interposed within the narrative of scientific discovery in *The Gene*. Each section of the book begins with a brief glimpse into the story of mental illness that has plagued his family for two generations, culminating in the lives of two of his

paternal uncles who struggled with schizophrenia. Mukherjee’s personal grief and anxiety regarding the genetic blight on his family is what makes *The Gene* truly “an intimate history” for him. The biography of the gene is his story—and our story.

Notes

¹See especially, the foresight of Bateson, 63; Francis Galton, *Pride & Davenport*, 120; rise of Nazism and its “applied biology” approach to genetics, 119–32.

²See especially, gender determination, 355–69; research on the “gay gene,” 371–79.

³See especially, effects of the Dutch Hongerwinter, 392–413; cellular reprogramming, 404–7.

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PHILOSOPHY

NEUROEXISTENTIALISM: Meaning, Morals, & Purpose in the Age of Neuroscience by Gregg D. Caruso and Owen Flanagan, eds. New York: Oxford University Press, 2018. xviii + 372 pages. Paperback; \$35.00. ISBN: 9780190460730.

Is humankind no more than a “victim of neuronal circumstances,” “just a pack of neurons”? In other words, is humankind naïve in denying epiphenomenalism, the notion that all mental processes can be reduced without remainder to brain-biology? Is existentialism’s “self,” a self-making born of radical commitment with its inescapable risk, finally no self at all, and the anguish pertaining to such risk no more than a neurological twitch? Is the freedom essential to existentialism (the capacity for choice that issues in self-determination) as indefensible—and ridiculous—as a denial of the law of gravity? Despite the prevalence and force of assorted determinisms that bear upon the human, has neuroscience eliminated that self-determination apart from which human agency disappears, guilt is impossible, and the criminal justice system replaced by a social engineering that reprograms those heretofore deemed deviant?

In its exploration of and, for the most part, affinities with the above, the book identifies three kinds of existentialism. In two or three sentences it speaks of first-wave existentialism, found in Kierkegaard, Dostoevsky, and Nietzsche and probing human selfhood in light of God (or, in the case of Nietzsche, of God’s absence). Again, briefly, second-wave existentialism, represented by Sartre, Camus, and de Beauvoir, is said to be a post-Holocaust attempt at creating a human authenticity (contrasted with the inauthenticity of Sartre’s “bad faith” or Heidegger’s “the herd” or even Nietzsche’s “the they”) with

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respect to social transformation. Third-wave existentialism, neuroexistentialism, the book's dominating concern, avers that while neuroscience affords scientific truth concerning the brain and its functioning, it simultaneously disenchantments in that it eliminates that self necessary for self-transcendence, deliberation, assessment, judgment, and uncoerced commitment.

This third wave maintains that the good, the true, and the beautiful have no meaning inasmuch as the human entity has no capacity for discerning, accessing, or discussing such: the foregoing is an illusion in that all that remains is a neuroplexiform item whose biological complexity may be greater than that of simpler life-forms, but whose personhood is no more than seeming even as theirs is never suggested.

The book consists of four major divisions: I—Morality, Love and Emotion; II—Autonomy, Consciousness and the Self; III—Free Will, Moral Responsibility and Meaning; and IV—Neuroscience and the Law.

Given the general tenor of the book, the reader is surprised initially at Maureen Sie's chapter, "All You Need Is Love(s): Exploring the Biological Platform of Morality." Here she maintains that our nature as loving beings can explain our nature as moral beings. Throughout she borrows overtly from C. S. Lewis's *The Four Loves*, electing to change his "charity" (*agape*) to "kindness" on account of her unbelief. Departing from Lewis (and from the trajectory of her argument), she introduces a discussion of oxytocin and vasopressin, hormones whose neurochemical properties foster attachment narrowly and sociability broadly. In light of her adducing that oxytocin can be administered through nasal spray, her argument, strong to this point on account of her use of Lewis, is weakened: the thesis she began with, our loving nature as the ground of our moral nature, is now no more than "appealing."

Other chapters invite a profound Christian response. Jesse Prinz explores "Moral Sedimentation," the "phenomenon of experiencing the world and acting in through the filter of the past, without necessarily realizing it." While his proposal that sedimentation may move from mind to brain remains speculative, his chapter calls forth Christian comment on the place of spiritual formation, the place of a faith-facilitated "deposit" in one's unconscious mind that continues to assert itself even when we aren't aware of it. Not least, his discussion of sedimentation should elicit a discussion of tradition, the manner in which the church's tradition can be beneficent teacher or brutal tyrant, and the peril of amnesia on the part of individual, congregation, or denomination; namely, those beset with amnesia (i.e., the absence of

Christian memory) lack an identity; and lacking an identity, they can never be trusted.

Oddly, in a book that largely dismisses everything that existentialism has upheld, and denies self, agency, responsibility, culpability, and desert, the last chapter, "The Neuroscientific Non-Challenge to Meaning, Morals, and Purpose" by jurist Stephen J. Morse, argues compellingly so as to overturn much of the book. Morse maintains that neuroscience has not brought forward scientific grounds for a reductionism that reduces meaning, morals, and purpose to mere chimera. In addition, Morse argues that the denial of self, agency, responsibility, and desert collapses human dignity, undercuts justice, and fuels social coercion. Ironically, the last sentence of the book rebukes much of the book: "As C.S. Lewis recognized long ago (1953: 'The humanitarian theory of punishment'), a system that treats people as responsible agents is ultimately more humane and respectful."

Readers with expertise in existentialist philosophy will be disappointed to find little recognition of, and less exploration of, features essential to this philosophy. While the book purports to be an attempt at relating existentialism's major tenets to neuroscience's discoveries, the book is largely a reductionist dismissal of all that existentialism regards as decisive. It remains puzzling that readers are told repeatedly that self, agency, assessment, and related notions have been rendered groundless because reducible to neurological processes, when readers, on every page, are asked tacitly to assess the evidence presented, weigh the arguments adduced, evaluate the proposals for social restructuring, and articulate consent or disagreement. What are these activities except those of a self, an agent—anything but mere synaptic firings? The title, *Neuroexistentialism*, appears to be a misnomer in that existentialism is mentioned only to be set aside; that is, neurology has rendered existentialism a phantasm.

Related to the above is the book's omission of the distinction between consciousness and self-consciousness. While it is indubitable that increasingly complex neural structures and mechanisms support increasing levels of consciousness, it is also recognized that increasingly complex neural structures are quantitative, while the shift from consciousness to self-consciousness is qualitative. There is no acknowledgment of this crucial matter on the part of those contributors who are most adamant about neurodeterminism (or near neurodeterminism). There is no suggestion of any acquaintance with, for instance, Roger Penrose's insistence that his book, *The Emperor's New Mind: Concerning Computers,*

Minds, and the Laws of Physics, cried out to be followed by his *Shadows of the Mind: A Search for the Missing Science of Consciousness* (by which he meant “self-consciousness”), which search remains “missing” for reasons that frustrate those wedded to naturalism but not those possessed of biblical faith. The latter are aware that human beings are human, ultimately, in that they are the recipients of God’s address. According to scripture, the characteristic of God is that God speaks. Humans, then, are characteristically those who hear (and from whom God both invites and mandates a response). God is person par excellence; humans are person inasmuch as they are “personned” by the Person. Finite human self-consciousness, on this understanding, is an aspect of the image of that God who is possessed of infinite self-transcendence, and who therein allows us to know him truly and adequately yet never exhaustively.

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SCIENCE AND RELIGION

PARANOID SCIENCE: The Christian Right’s War on Reality by Antony Alumkal. New York: New York University Press, 2017. 256 pages. Hardcover; \$35.00. ISBN: 9781479827138.

I was visiting Harvard University and could not resist the temptation to peruse the Harvard bookstore. After an hour or so of browsing science titles, I picked up some classic books on science, and this one caught my attention. Now that I have finished reading it, I have mixed feelings. First, I feel bad for this group of siblings in Christ (called here the Christian right) who are claiming to do apologetics by misusing science. Second, I am worried that several “normal” Christians are now paranoid.

Alumkal, Associate Professor of Sociology of Religion at the Iliff School of Theology in Denver, Colorado, writes with a strongly critical tone (as the book subtitle suggests) against the Christian right. But several of his critical affirmations could also be applied to mainstream Christianity. The book’s thesis is that the Christian right in the United States, which he defines as a political movement of conservative evangelicals, uses a manipulative technique to influence society. This technique is defined as “Paranoid science.” As a sociologist, the author describes how the Christian right misuses, fabricates, and misrepresents current science concerning origins, sexuality, bioethics, and environmentalism to fit its agenda, which is political control based in conservative Christianity. The Christian right’s main point is to keep the Bible, or

their interpretation of the Bible, as the rule for these topics. Any scientific affirmation against their view is considered a product of conspiracy, fraud, or an attack on moral values. Herein lies the paranoia.

The book is divided into four chapters, each one describing and criticizing the groups affiliated with the Christian right and concluding that they are paranoid and seek to spread their paranoia to the public to maintain political control. In the introduction, the author explains his approach and analysis. In chapter one, he critiques the intelligent design (ID) movement, particularly the views of Phillip Johnson. According to Alumkal, this movement considers its members to be loyal supporters of the truth and its critics to be biased due to their hatred of God. He concludes that ID is not just a pseudoscientific movement, it is a paranoid movement of neo-creationists.

In the second chapter, the discussion is on human sexuality and about the ex-gay movement, which considers homosexuality not only a sin, but an aberration of human nature. They want to justify that affirmation not with the Bible alone, but also with science. After explaining the origin of this movement, he provides data that describes their wrongdoing by misusing the results of psychological studies. For Alumkal, it is impossible to change sexual orientations, and the movement’s arguments to the contrary cause much damage to the LGBT community. Alumkal points out that some former leaders of the ex-gay movement are now detractors.

The third chapter is about bioethics. Alumkal muses on the discussion concerning the humanity of the embryo and the ethics of euthanasia. He argues that the claim that human life starts at conception, and the opposition to stem cell research, are based upon inaccurate data. While well-known evangelicals Charles Colson and Joni Eareckson Tada have argued that allowing abortion and euthanasia would collapse American society, Alumkal dismisses their beliefs as unfounded, just paranoia.

The fourth chapter deals with anti-environmentalism. Here Alumkal’s focus is on the Cornwall Alliance and its leader, Calvin Beisner, with their aggressive campaign of “resisting the green dragon.” For Alumkal, the efforts of moderate evangelicals, such as those in the Evangelical Environmental Network, to convince their fellows to become conservationist, have failed. He portrays Beisner and his association as hypocritical for accepting money from big industries to push a Christian right agenda on the environment. The opposition to climate change is not really scientific in nature, so they incited paranoia by calling on evangelicals to oppose those who put nature above God.