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The Drama of Human Exceptionalism

Review of ‘The human instinct:

How we evolved to have reason, consciousness, and free will’

by Kenneth R. Miller

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(excluding references)

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When asked about the big questions of the human condition, some clichés come to mind: Where do we come from? Where are we going? Are we unique (or alone) in this world? What does it all mean? Are we in control of our own minds and behavior? These questions are clichés in the sense that they are worn from wear. These questions are too big to have crisp, consensus-forcing answers. In that sense, these questions are ill-suited for scholarly inquiry. Instead, they may be better suited for the arousal of political or moral(istic) debate. Yet, these questions won't go away, and scholars cannot ignore them for long. The challenge is to break these questions down into tractable parts and then search for answers.

Ken Miller has done just that in *The Human Instinct*. Miller made his mark as cell biologist, and then proceeded to tackle broader issues of public interest. Concerned about creationist attempts to penetrate public school curricula, Miller served as an expert witness in court trials. This, and some TV appearances, gave him fame and notoriety, depending on whom you ask. At any rate, Miller is an eminent biologist; when he reaches beyond the traditional confines of his discipline, we should take note.

The title of his book deflects from Miller's mission, but the byline reveals it: *How we have evolved to have reason, consciousness, and free will*, is a Darwinist's way of entering psychological territory. The reader is now primed to learn how the human animal graduated from instinctual life to a refined existence with everything that makes us unique, with the arts and the sciences holding center stage.

Miller takes his time to let the drama unfold. He sets himself up as a middleman between two camps of partisan warriors of mind. To one side [one must resist the temptation to call it left or right], there are the creationists and other dualists. These folks insist on the exceptionality of *homo sapiens*, and they locate this exceptionality in the mind and soul. Mind (and soul), they claim, cannot be grounded in biological processes. Creationists add that the mind cannot be the product of evolution, and go on to question the very reality of evolution. To the other side, there are exuberant evolutionary psychologists and biologists, who adhere to a narrow adaptationist view. Having accepted as axiomatic that everything in

the natural world has emerged in response to adaptive pressures, these writers generate stories to explain, and thereby justify, behavioral patterns that are rather multi-determined and highly variable over time and space, that is, over cultures. While the creationists are dualists, the adaptationists, by fully reducing mind to brain matter, strip away much of what the creationists find interesting and sovereign about the mind. The mind becomes *demented*. At their most radical, the creationists see reason, consciousness, and free will as divine gifts dissociated from the body, whereas the adaptationists see these same capacities as byproducts of the brain's wet work, and thus, ultimately, as illusions.

Enter middleman Miller. For the most part of his book, he sees to it that the creationists and the adaptationists get their reckoning. Always polite and clear in prose, Miller exposes the poverty of these extremist doctrines. One is tempted to say it is almost too easy to refute such claims. It is important to note, however, that Miller does not erect straw men to be knocked down. The partisan views he describes can be traced in the literature, and each type of view has a sizeable following in the general population. Miller steers clear of hyperbole and rapid inference; he honors the scholarly ethos of laying out the findings and the limitations of contemporary science – well, to a point.

Before turning to that point, consider two of Miller's thrusts. The creationists take the first blow by having their missing-link canard punctured. Graphing data from Buckner and Krienen (2013), Miller plots *hominin* cranium size over seven million years. Cranial growth has been geometrical, with both means and variances going up over time, just as evolutionary theory predicts. Moreover, the function is dense enough to refute the gap (missing link) hypothesis by visual inspection. The 243 data points (skulls) are indeed an "embarrassment of riches" (p. 30). This is not a particularly psychological point. Closer to home, the adaptationists are called to task for making rash inferences from sparse data. To conclude from the existence of rape that a rape gene has flourished because it has been able to reproduce, though rape, is to ignore that rape is not a casual no-cost affair to the perpetrator. Citing data collected among the Ache in Paraguay (Smith, Mulder, & Hill, 2001), Miller

estimates that rape is risky business, with the potential cost (being killed, beaten, or ostracized) outweighing the benefits (having surviving offspring) “by at least a factor of 10” (p. 105). If adaptationism gets it wrong here, we can consider the possibility that human accomplishments such as the arts and the sciences are not so easily reduced.

Moving beyond the creationists and the adaptationists, Miller takes on a more formidable target when confronting Thomas Nagel’s recent views on consciousness. Nagel’s (1974) famous question of *What is it like to be a bat?* treated human exceptionalism to a thought experiment, which succeeded through failure. We cannot simulate a bat’s mind using ours. Nagel (2012) now asserts more boldly that “evolution as we know it could not have produced consciousness” (Miller’s words, p. 151). From that, like the creationists, Nagel infers that “evolution is very much in doubt” (Miller, p. 151). Miller grants that subjectivity, by its very nature, is a problem for science, which is predicated on objective observation. Yet, he points out that the transition from nonconsciousness to consciousness resembles earlier transitions, such as the transition from nonlife to life. With each transition, added complexity gives rise to emergent properties that require a new language and new level of analysis. This is normal business in science, and it is therefore not a compelling argument against the principles of evolution. Offering an evolution-based view of consciousness, Miller (p. 168) proposes that “certain groupings of matter are capable of generating a tangled complexity of a self-sustaining process we call life. Consciousness, similarly, is not a property of matter or even a property of individual cells. In a way analogous to life itself, consciousness is a process generated by the hugely complex interactions of highly active cells within the brain and associated nervous tissue. Consciousness, therefore, is something that matter *does*, not something that matter *is*” (*italics* in the original). Nagel’s skepticism, Miller suspects, comes down to an “argument from personal incredulity” (p. 162). The great philosopher simply can’t imagine consciousness emerging from evolutionary processes.

The drama of human exceptionalism has now reached a first climax. By refuting the dualists and the adaptationists, Miller has staked out a sensible and science-based middle

ground, showing that humans are the children of evolution and at the same time its exceptional offspring. Though we can't know what it is like to be a bat, or an elephant, or a dolphin, we can say that our brains are larger and our neural networks more complex, and we can say that as a species we are engaged in the broadest range of innovative and dynamical activities. No other species can lay claim to this sort of dynamism. Is this sort of exceptionalism enough? Why not stop here? If one stopped here, one might not be able to shed the nagging doubt that the differences between us and other species are differences of degree rather than differences of kind. Other species may engage in creative pursuits or attain some self-awareness, if only of a more modest scale. What categorical exceptionalism demands is a qualitatively unique capacity. This is where the search for free will comes in.

Miller begins by introducing some familiar ideas against free will. If we can model nature's workings with the principles of necessity (causality) and chance (randomness), what is left? How can there be an uncaused cause, a will with a future but no past? Young Ken easily refuted his classmates in debate when assigned the determinist position. Young Charles (Miller refers to the 29-year old Darwin's notebook) felt much the same. Later, in the *Descent of Man*, Darwin asserted that "at the moment of action, man will no doubt be apt to follow the stronger impulse" (cited in Miller, p. 176). This is precisely the Hobbes-Schopenhauer view of the will. There may be more than one inclination to act, and, by definition, the strongest will will win. This may be tautologically true, but it has to be true nonetheless. A free will argument would have to explain how it is that a weaker will can vanquish a stronger one.

The view that nature's workings can be modeled by necessity and chance is what makes science possible, which Miller appears to grant when concluding that "the case *against* free will [is] essentially a case *for* science" (p. 181, *italics* his). Miller's master argument comes in the next section, entitled "Why did I write this?" He concludes that when making the argument for determinism, he could have been neither serious nor coherent. He could not be "a person who had just rejected free will on scientific grounds asking all of us to

make a conscious choice to persuade others, who presumably also lack free will, to accept a scientific consensus” on any issue of importance (p. 182). Therefore, how could he try to persuade others to accept a reasoned argument for the non-existence of free will? Having convinced himself that he could not, Miller concludes that “acceptance of behavioral determinism not only undermines itself, but all of science and perhaps the arts and humanities as well.” This he holds to be critical insight, for “it is stunning how few critics of free will seem to realize this and to appreciate the grim nihilism that flows from such ideas” (p. 185).

Miller falls victim to his own argument from personal incredulity. He cannot imagine science without free will. At least the scientist would have to be free; otherwise, the unveiling of nature’s secrets would be baked into nature itself. Miller (p. 185) quotes Steven Hawking as saying that “the theory itself would determine the outcome of our search for it.” This is heavy, and it reveals Miller’s fallacy. Miller regresses to a view of human exceptionalism that places man outside of nature. But man is both an observer of nature and part of nature. Miller knows this very well when exploring the questions of life and consciousness; but he can’t hold onto this truth when seeking free will. Not having free will is neither grim nor nihilistic; it is naturalistic. The other, minor, fallacy of Miller’s thinking is that he fails to appreciate that the social psychology of persuasion and attitude change is a causality-grounded science. We seek to make strong arguments precisely because we credit them with the causal force to change minds. If we took the doctrine of free will literally, we would not bother to attempt any attitude change, thinking that since others are free to make up their minds, they will believe what they want to believe, freely and unpredictably. Now *that* is nihilism.

The denouement covers some more familiar ground. There is the usual flirtation with quantum physics, which Miller himself can’t invest with much hope, and some criticism of the famous Libet experiments, which also fail to contribute much to the big question. In the end, Miller follows Roy Baumeister’s strategy of simply claiming free will by assertion.

Baumeister writes that “the evolution of free will began when living things began to make choices” (Miller, p. 197) and Miller adds that we are able to “overcome evolutionary drives and instincts by conscious acts of the will” (Miller, p. 197). Evolution, then, has both created free will, and has created it in such a way that it can overcome evolutionary wills. Isn’t that something?

At Passover, Jewish people sing “Dayenu” (it would have been enough) to give thanks. Humans are exceptional, as Miller so richly demonstrates, and consciousness, creativity, curiosity, and love would have been enough. There is no need for a truly free will in the libertarian sense; and if someone like Ken Miller can’t find it, I am more convinced than ever that we would be better off if we stopped looking.

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