Mankind undone: the evolutionary identity crisis

The Human Instinct: How we evolved to have reason, consciousness, and free will

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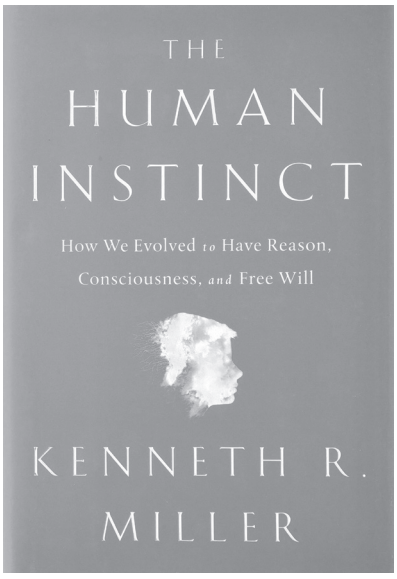
Is evolution bad news for mankind? Even some evolutionists answer, 'yes.' Along with creationists, they recognize that evolution is derived from a naturalistic worldview, which ends up subverting vital elements of the human experience. In particular, the evolutionary perspective threatens our significance, purpose, religion, morality, reason, consciousness, and power of voluntary choice. Yet, evolution popularizer and textbook author Kenneth Miller aims to challenge this negative outlook, insisting that evolution can, in fact, endow us with these human distinctives. He goes so far as to claim that evolution is "the best news we have ever received about the world and our place in it" (p. 26). However, Miller's attempts to rescue humanity from the repercussions of his own evolutionary framework simply do not succeed.

Miller's materialism

The fundamental problem with Miller's approach is that he leaves God out of the discussion. His argument is that human exceptionalism can be derived from nature alone. Though he claims to be Roman Catholic,[1] in this book Miller studiously avoids invoking God as the explanation for anything, and indeed contradicts Catholic teaching on many points.



Instead, Miller personifies nature as a God-substitute, attributing goals to "the universe" (p. 80) and plans to "life" (p. 52).

He is quite dismissive of the Bible as well, and says it is of no consequence if parts of the Bible are untrustworthy (p. 203). Indeed, Miller claims that the Bible is wrong when it implies a recent origin of mankind (p. 53). This at least makes a refreshing change from many in the church who go to great lengths to argue that Genesis does not actually mean what it so plainly says.

Miller also insists that humans are composed of matter alone (pp. 216–217), ignoring the Bible's teaching about an immaterial part of us that survives physical death. Despite his cavalier attitude, however, God and the truths revealed in His Word (e.g. the *imago dei*) are the very foundation for the human attributes Miller is attempting to defend. Thus, Miller's project cannot succeed as long as he ignores God and the spiritual realm.

Evidence

Before pursuing his primary thesis, Miller could not resist devoting a chapter to defending evolution itself. In characteristic fashion, though, Miller's overconfidence and rhetoric run far ahead of the strength of his arguments.

He begins with hominin fossils, and his approach is two-pronged. First, he attempts to document a progressive growth in cranial capacity through time. Second, he cites conflicting interpretations of hominin bones by creationists. But, as Miller's expertise is in cell biology, it feels as if he is a bit out of his element when dealing with fossils, and he handles the evidence less rigorously. For example, given the range of brain sizes and skull morphologies within the genus *Homo*, and even within living humans, Miller is wrong to assume that creationists would predict a clear 'gap'—with no overlap—between apes and humans based on a mere handful of morphological characters (p. 36–38). The tidy picture he presents relies on limited data sets and non-diagnostic criteria. It also ignores the messier reality of additional variables such as the brain's organization and postcranial bones, as well as the evolutionary bias in reconstructing skeletons and assigning dates.

As for conflicting creationist claims, why should this prove anything more than the immense difficulty of piecing together the distant past based on fragmentary remains to which creationists have no direct access? Frankly, if disagreement among researchers brings down the entire paradigm, then evolution doesn't stand a chance either.

Next, Miller triumphantly highlights shared pseudogenes as undeniable proof of common ancestry. Of course, he neglects to inform readers of his equally certain yet *failed* prediction in exactly this area, regarding the now known-to-be-functional beta-globin pseudogene.[2] So, why should we trust that Miller's latest examples—the egg

yolk pseudogenes (pp. 40–43) and NANOG pseudogenes (pp. 44–47)—are truly functionless genetic junk? In a subsequent chapter, Miller chides evolutionary psychologists for frequently leaping to conclusions before the science is fully understood (pp. 113–114). It's a pity he doesn't apply that same caution to his claims about 'junk DNA', because the scientific momentum is not working in his favour.

Miller also doubles down on his earlier claim that human chromosome 2 was derived from the fusion of two ape chromosomes (pp. 47–50, 231–239).[3,4] However, he fails to appreciate that, even if true, this fact would merely show that the *human* lineage experienced a fusion event since no apes possess the fused chromosome.[5] Granted, this would add one more similarity to the many already documented between humans and apes, and hence it would qualify as a fulfilled, though weak, prediction of evolution—that apes and humans once had even more in common. But similarities may be best explained by common design, so it would still be a huge leap to demand ape ancestry as the correct implication of a fusion. Still, despite Miller's tenacity, strong evidence is mounting that there was no fusion event at all—including the fact that the alleged cryptic centromere is, like the alleged fusion site, located within an active gene.[6]

Significance

As Miller returns to his main thesis in chapter 3, he tries to show that humans can have value, meaning, and significance despite our evolutionary heritage. Miller's argument is as follows. Yes, evolution refuted the traditional, biblical understanding of a recent, supernatural origin of humanity. Yes, evolution tells us that we belong to the animal kingdom and not to a *sui generis*. Yes, evolution says that we are not biologically privileged above other species. Yes, evolution demonstrates that chance played a major role in bringing about our existence, and thus we were not designed or predetermined with any high degree of specificity (p. 75). Nevertheless, because evolution works by endlessly exploring the options permitted by natural laws, the possibility of an intelligent, social, self-aware organism eventually turning up could have been 'baked in' from the beginning (p. 77). Plus, our ability to explore and comprehend the universe is remarkable whether or not this was the goal, so these facts should lead us to view ourselves as significant and assign our own meaning to life (p. 226).

However, this reasoning faces serious problems at just about every step. Without space to address all the issues here, it is important to touch on just a few. First, one mistake that Miller makes repeatedly in this book is to assume that evolution gave us the world as we know it without recourse to any supernatural causes, and to build his argument from that faulty premise. Since, in the world as we know it, humans do have significance, from these two premises it would follow that naturalistic evolution gave us a world with significance. But that begs the question. The real question is not, 'Do we have significance assuming naturalistic evolution produced this world?' but, '*Would* we have significance in any world produced by naturalistic evolution?' Miller fails to address the latter.

Second, Miller equivocates between objective and subjective truth when discussing value, meaning, and purpose. He spends many pages trying to convince us that we are significant, which implies an objective truth, not just his personal preference. Yet, in the end, he tells us, "we … define the meaning of our lives" (p. 228). But if the meaning of our existence is only in the mind of Miller, there is no reason we must adopt his arbitrary perspective. By turning our significance into a private affair, Miller has undercut his own project.

Third, our metaphysical status hinges on the question of teleology, but Miller says that we were not preordained (p. 69). Worse, he is noncommittal on the question of whether God even intended to bring about something *like* human beings. He says: "Whether the consciousness, reason, and awareness displayed by human beings are the *telos*, the goal of the universe, I cannot say" (p. 80). Logically, if we were unintended byproducts of a blind process, our lives would not have objective purpose or meaning. And no amount of self-assigned meaning would rescue us from that disturbing fact. Of course, this is contrary to the biblical teaching that God's handiwork is obvious in nature (Romans 1) and that human beings were foreordained in specific detail from the foundation of the world.[7] But Miller simply ignores the heart of the issue by sidestepping questions about God's involvement.

Morality and religion

In chapter 4, which deals with evolutionary explanations for human behaviour in general, Miller argues that it is not possible to reduce all behaviour to explanations involving evolutionary psychology and sociobiology. Though he claims evolution has definitely given us certain behavioural instincts, he says it has also given us the ability to transcend those instincts. Thus, our moral and religious activities "rise above" our evolutionary past (p. 114).

The problem here is that, again, Miller refers to what *is* rather than asking what *would be* if his metaphysical commitments were true. Miller may be a theist, but he never met a feature of human beings that he thought was incapable of being explained by naturalism. As he himself admitted: "In this book I bring up religious faith very little. I'm trying to

make a purely scientific argument."[1] But how can Miller derive a moral 'ought' from a scientific 'is'? If humans have an exclusively physical origin and physical inner workings, how is it possible to "rise above" our physical nature in order to reach the spiritual and deontological?

As Miller correctly points out, it is self-refuting to say that science shows all behaviour to be just the mechanistic outworking of impersonal forces. If we were mere automatons, Miller says, science would not even be possible. True, but Miller does not explain how we escape from the naturalistic cage he has imposed on us. All he has done is to show that a naturalistic evolutionary account of human beings leads to absurdities. The right course of action, then, is to abandon naturalistic evolution, not to assume that it can give rise to objective morality and knowledge of the true God after all. These theological concepts are inconsistent with Miller's starting point.

Reason

Miller's next chapter discusses whether evolution could endow humans with minds reliable enough to reason properly and do science. Miller says that although our rational faculties are rooted in our physical brains alone (with no immaterial component), and although our brains are kludgey and prone to error thanks to their evolutionary origin, rational thinking must arise from the complexity of the organization in our brains. After all, Miller says, to reason our way to a denial of reason would be a self-contradiction.

Once again, however, Miller begs the question and avoids the central issue. Nobody who argues, as I have, that evolution cannot account for our rational faculties is suggesting that we should therefore doubt those faculties. Rather, it is because we are confident of those faculties that we should doubt evolution.[8,9] So, for all Miller's posturing, he has made no headway toward explaining how blind physical processes could endow material brains with the capacity to reason. He just takes it for granted, employing the classic question-begging argument: 'Evolution must have made it because it's here.'

A variety of other problems plague this chapter as well. For example, Miller wrestles with Alfred Russel Wallace's argument that evolution cannot explain the exceptional powers of the human mind. The problem is that our minds are capable of feats far beyond those that should have been sufficient for our ancestors to pass on their DNA. Miller responds that not all products of evolution are necessarily the result of direct selective pressure. Rather, using Gould and Lewontin's analogy of architectural spandrels (triangular spaces formed as byproducts of connected arches), Miller insists our astonishing mental capabilities could be mere spin-offs of adaptive forces. Yet, this essentially means that Miller is invoking pure luck to explain our most remarkable abilities. Is this really an explanatory advance on the idea that our intellectual endowments were favoured by selective pressure? By invoking spandrels, Miller has actually abandoned what is most persuasive about neo-Darwinism—its non-purely-random character.

Figure 1. Architectural spandrels are roughly triangular spaces between arches. In a famous 1979 paper, Stephen Jay Gould and Richard Lewontin applied the term 'spandrel' to evolutionary biology. Thus, a biological spandrel refers to a characteristic that arose not through direct selection, but as a byproduct of selection for some other adaptive characteristic. Miller argues that the most impressive abilities of the human mind are spandrels (byproducts), rather than adaptive features.

Consciousness

Next, Miller maintains that consciousness need not be grounded in anything more than matter, and somehow emerges from higher levels of physical complexity. He says: "Let's assume the obvious, which is that human consciousness is a product of the workings of our nervous system as it interacts with the rest of the body and with the outside world" (p. 150). But this is far from obvious! Again, Miller offers blind faith in place of evidence for his physicalist viewpoint.

He makes several other serious mistakes in this chapter as well. First, after elaborating on how blind children can produce a sensation of light (phosphene) by putting pressure on their eyes, Miller concludes: "Sensations are physical events" (p. 157). This does not follow. Dependence, causation, and even necessary correlation are not the same as identity.

For instance, the property of being triangular (three-angled) is always conjoined with being trilateral (three-sided), yet these properties are not the same. Similarly, sensations may be produced by and constantly conjoined with physical events, yet they themselves are not physical events.

Second, Miller says that nowhere in the body's operation is there room for any non-physical cause to act. The brain and body are known to operate according to the laws of physics, and therefore nothing immaterial can be exercising any causal power (p. 165). But this conclusion is too hasty. Defenders of mind/body dualism have argued, first, that there are possible ways for a soul to influence a body without necessarily adding energy.[10,11] Second, much neuroscientific work actually presupposes the causal closure of the physical rather than openly investigating the question. Third, if souls do add energy to the system, they could do so in subtle ways very difficult to detect.[12] So, once again, Miller's argument really amounts to little more than the presumption of materialism.

Miller's next claim is that the marvel of biological life presents an apt analogy for consciousness. Looking at the building blocks of life—physical laws and particles—Miller says that none of these raw materials are themselves alive, and it would be hard to predict that such simple parts could produce the phenomenon of life, starting from the ground up. And yet, he says, they do. Life needs no ghost in the machine. Rather, being alive is something that matter does when in suitably complex arrangements. So Miller insists that consciousness could likewise be achieved by the appropriate kind of material complexity.

While I agree that the existence of biological life is a function of properly arranged matter, why think this is analogous to consciousness? By contemplating the gap between a random pile of atoms and the constitution of a biological organism, one can intuit that the difference is a matter of arrangement and thus one of degree. Consciousness, on the other hand, exhibits a difference in kind. There are good reasons to think it is a new category of thing that can never arise by rearrangements of matter, no matter how complex. Unfortunately, Miller does not address the philosophical reasons why consciousness must be irreducibly non-physical. He does raise one such issue—from Thomas Nagel's famous essay, "What is it like to be a bat?"[13]—but never offers an answer! Nagel's point is that physicalist approaches have made no inroads toward explaining a key feature of consciousness—that of subjective, felt experiences. I would go further and say that no physical arrangement of mere matter could, in principle, have felt experiences. A felt experience is the sort of thing that can only be had by a non-physical subject.

In addition, many conscious states are intentional (*of* or *about* things) while material states are not.[14] Physicalism cannot account for the unity of a personal self or the sameness of a self over time.[15] And physicalism cannot account for libertarian free will[16]—a problem with which Miller does at least attempt to wrestle, in his penultimate chapter.

Free will

On this subject, Miller displays confusion. He is ambivalent about whether humans truly have free will or are merely deluded into thinking that we do. Nevertheless, he is certain that "you will find evolution right at the center of any explanation of free will, whether genuine or illusory" (p. 199). But his arguments fail to demonstrate this conclusion.

When presenting a case *against* free will, Miller says: "every action has to have a cause, and if our own actions do have such causes, then our will cannot possibly be free" (p. 178). But this gratuitously assumes that *event* causation is the only kind of causation in existence, ignoring the reality of *agent* causation.

On the other hand, when arguing *for* free will, Miller says that quantum physics refutes determinism, and this opens up space for human freedom to emerge from higher levels of physical complexity in our brains. I will overlook the question of whether quantum indeterminacy is truly ontic or merely epistemic. Assuming that contingency is objectively real, it still doesn't settle the question. Miller even acknowledges that contingency is only a necessary condition for libertarian free will, not a sufficient condition (p. 188). But why then should we accept Miller's claim that true freedom can arise from some combination of chance and necessity? Free agents act for teleological reasons, so their free acts are a *third category*. We have no reason to expect they will turn out to be reducible to a mixture of randomness and determinism.

Miller goes on to describe scientific research that attempts to make progress toward grounding free will in the physical realm. But these projects inevitably either deny true freedom or smuggle the notion of 'choice' in the back door. In the end, the evidence indicates that we have freedom, but Miller has failed to identify a physical basis for it.

Conclusion

Although Miller is to be commended for his desire to shield humanity from despair, he is unable to do so because he is leaning on a broken reed. Evolution cannot offer us dignity. It fails to ground our significance, purpose, religion, morality, reason, consciousness, and free will. For each of these sublime traits we must look not to nature, but to our all-wise Creator.

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