The Making of the Adamic Bomb

Adam’s Ancestors: Race, Religion, and the Politics of Human Origins

Darwin’s Sacred Cause: How a Hatred of Slavery Shaped Darwin’s Views on Human Evolution

Why Evolution is True

Owen’s Ape and Darwin’s Bulldog: Beyond Darwinism and Creationism

These four books center on making sense of evolution, which we, as anthropologists, or at least as people who read a journal with the word “anthropology” in its title, ought to be interested in. All four seek to temporarize, relativize, or extend, in one way or another, the “one long argument” at the heart of Darwinism: that species are genealogically linked and, consequently, that the diversity of life is to be understood as history rather than as miracle.

David Livingstone traces the development of the idea that there were people before Adam – a radical view for its time – in the early modern world. He begins with the imposition of the three sons of Noah on the three continents known by early Medieval scholars, and alights on the life and literary career of one Isaac de la Peyrère, who published a book in 1655 suggesting that perhaps the diverse peoples of the world were the products of separate creative acts, of which the Biblical account of Adam and Eve is but the final one. Many refutations of his work quickly appeared, and he ended his days unexpectedly in the care of the Inquisition, who used their familiar tactics of fear, surprise, ruthless efficiency, and an almost fanatical devotion to the Pope (and nice red uniforms), to derive a retraction from Peyrère.

By the late 1700s, Biblical monogenesis had pretty much routed Peyrérien polygenism in scholarly circles. To people of that age, and all others, history and politics were enmeshed: “the adamic narrative not only had laid out some foundations of civil society – marriage, family, agriculture, ritual, urban life – but it also delivered a universal anthropology that knit together, in one way or another, every human being regardless of racial, religious, ethnic, or national identity. Tampering with that received story was itself a political intervention…” (p. 54).

This is certainly the most comprehensive account of premodern thought on human origins since John C. Greene’s 1959 classic, The Death of Adam. The most significant lesson is that the potted histories of evolutionary theory, centered on the scientific wonderment stimulated by dinosaurs, giraffes’ necks, finches, tortoises, and the like, are all rubbish. Theorizing the origin of the differences among human populations was simply crucial to the development of evolutionary ideas in the century before Darwin. If Adam and Eve were white, you had to account for black people, and any way that you accounted for them necessarily implied some model of biological instability, of physical mutability away from the original form, whatever that form may have been. If you are looking for evolution, you need look no further. The alternative, that people are as they always have been, was polygenism. The eighteenth-century advocates claimed Isaac de la Peyrère as ancestor, and transiently achieved a measure of scholarly popularity when linked to the slavery issue in the nineteenth century.

Moreover, a separate but related question is: What is the relationship of living people to near-human monsters or apes? Are they equidistant from all people, as both a modern account and a Biblical literalist account would have it, or are they especially related to certain people such as, say, Africans, as many nineteenth-century accounts, both pre- and post-Darwinian, had it?

Livingstone’s book is consequently important for centralizing bio-anthropological questions in the emerging evolutionary world view of nineteenth-century scholarship. To Livingstone, Darwin’s singularly relevant contribution was to harmonize the unity of the human species and its single origin (monogenesis) with the existence of a world before Adam.

The first was the morally superior alternative; the latter was the empirically superior alternative. And paramount to all higher thought in the nineteenth century was the question of the natural place of different groups of people: classes, races, primitives, nobilities, entrepreneurs and, of course, slaves. Darwin’s Sacred Cause by Desmond and Moore makes the case that this question inspired Darwin’s own thinking.

Darwin, it seems, was an abolitionist and came from a pedigreed family of abolitionists; two of them, in fact. At the same time that Darwin was reading Lyell at sea, the British were outlawing slavery throughout their empire. Charles, however, wasn’t as active as his family members were in such things, so he didn’t leave an obvious paper trail for future historians. The argument, then, is that the anti-slavery movement diffused into the impressionable young naturalist and remained in the background of his scientific work. There is a weak version of the thesis (that monogenesis implies evolution, and that a commitment to the former eventually leads to the latter) and a strong version of the thesis (that Darwin himself was motivated by political sentiment, and that The Origin of Species is a culmination of his political...
thought, and scrubbed clean of any evidence for it).

This book provides an interesting look into Darwin’s mind as he formulated his scientific ideas, but fails to demonstrate the deterministic link it sets out to identify, the strong version. If Darwin arrived at evolution via an a priori abolitionist commitment to monogenism, what about Wallace? (The authors devote two pages to Wallace coming up with adaptive divergence in New Guinea, noting that slavery existed there too.)

Desmond and Moore do illuminate some little-known aspects of Darwiniana. In the first place, as noted earlier, the problem of human diversity was a central, if not the central obstacle to confronting the mutability of species. Second, Darwin was going to give humans place of pride in his big book, *Natural Selection*, but decided against it in the summer of 1857, so that by the time he lifted his quill to start on *The Origin of Species*, *Homo sapiens* was a moot point. Third, sexual selection as a means of reinforcing between-group diversity was in Darwin’s mind from the beginning.

I come away with little more than an appreciation for the fact that slavery was a significant issue to intellectuals of that era, much as, I suspect, the Israel-Palestine issue is for intellectuals today. But it is one thing to observe that someone cares about, or is active for, one side or the other, and quite another thing to say that their scientific work is rooted in it, especially when there is no reference at all to the political issue at hand in the work in question. Granted that there is a line stretching from Louis Agassiz through Carleton Coon, but Agassiz’s scientific support for the slavers and Coon’s scientific support for the segregationists were present in their works about people. *The Origin of Species* isn’t in the least bit about people, and the only way to make it so is to treat it as if it were “The Darwin Code.”

Jerry Coyne’s book is somewhat different from the others under consideration here in having biology, rather than intellectual history, as its ostensible focus. But regardless of whether the history is that of our own as a species, or our own as an academic specialization, stories of origin are invariably bound up in larger cultural and political narratives. Evolution happens to be a restricted set of answers to questions about who we are and where we came from, produced from a certain set of rules and evidentiary standards that emerged in the late 1600s. These are tools for observing and for making sense of observations. The problem is that if you don’t agree on the rules for making sense – that is to say, on the epistemic assumptions – then “cultural” or “philosophical” differences will invariably render any observations inconclusive.

Presumably, this book is intended to convince someone who is, shall we say, open-minded on the subject of evolution, by brandishing the evidence that ought to satisfy anyone but an ideologue or an idiot. It is a fine primer of the recent data, but Coyne’s tone never really transcends condescension, which is to some extent self-defeating.

Coyne wants his readers to learn “Why Evolution is True,” but is not inclined to parse the idea of truth and distinguish it from truthiness. If you maintain, as Coyne does, that “All scientific truths are provisional, subject to modification in light of new evidence” (p. 16) and that “Scientific truth is decided by scientists” (p. xiii), then you have to acknowledge that your truths may be untrue. Your problem, consequently, is to convince a skeptic to believe them anyway. Coyne does not want to open the scary door marked “Relativism.” Evolution, after all, led earlier generations of scientists to rather ugly truths, such as Karl Pearson’s finding “human satisfaction in the replacement of the aborigines throughout America and Australia by white races of far higher civilization.” As best as I can tell, Coyne wants to use the word in the sense of “probably empirically accurate.” But Thomas Jefferson held it to be a self-evident truth “that all men are created equal, [and] are endowed by their Creator with certain unalienable rights,” which hardly seems to be empirically accurate. *Quod est veritas* (John 18:38), indeed!

Coyne tells the reader that it is an “indisputable fact” that “we are apes” (p. 192). That is nevertheless hard to square with George Gaylord Simpson’s monosyllabic 1949 assertion: “It is not a fact that man is an ape.” How did we become apes in the decades separating Simpson’s classic from Coyne’s book? The answer is epistemic, not evidentiary: Coyne reduces evolution to ancestry, while Simpson regarded adaptive divergence as paramount. If you are your ancestors, then we are apes; if you are different from your ancestors, then we are not apes, we are ex-apes. In other words, it may be a fact, but it is a very disputable one.

Ultimately, I found myself playing a game while reading Coyne’s book, responding as I imagine a skeptic would to the evidence Coyne presents. After all, if I want to know whether I came from monkeys, what is reading about antibiotic resistance in bacteria going to convince me of? And if this is “about the best example we have of selection in action” (p. 131), then why on earth should I accept the business about apes standing up and chipping rocks and slaking their ravenous thirst with the hot blood of victims and greedily devouring livid writhing flesh? (That last bit is neither from Coyne nor me, but from Raymond Dart.)

Coyne, I suspect, will always be a step behind the creationists. He is at great pains to show that natural forces can explain the patterns in the diversity of life. But he never actually argues that they ought to; he takes that for granted. Yet that is precisely the barrier that divides the scientist from the creationist. That is why Coyne stumbles over intelligent design. Merely posing a question doesn’t answer it: “If animals were specially created, why would the creator produce on different continents fundamentally different animals that nevertheless look and act so much alike?” (p. 92).

Yes, that is an interesting theological question. Why indeed would He (or She, or It, or Them)? What is odd is that Coyne doesn’t pause to try and answer the theological question he has posed. Yet this is critical,
for it exposes the difference not so much between the actual answers conjured, but between the manners by which answers can be produced. To the person approaching the diversity of life from a set of naturalistic premises, the creator is simply unparsimonious. As Laplace reputedly said to Napoleon, "God? I have no need of that hypothesis." (Or maybe it was Spock to Bones McCoy.) The answers will ultimately come from the collection of carefully chosen sets of data and insightful analyses of them. On the other hand, the creationist cannot rely on data, for the question the creationist has posed is about the mind of God. That answer can only come from a burning bush.

We all have our favorite pieces of evidence for evolution. Coyne discusses Tiktaalik, vestigial organs, ants, biogeography, and pseudogenes with brio. I use the DNA coding sequences of homologous genes from two species and call my students' attention to the excess of observable differences in the third codon position. I have a good explanation for the pattern: Those differences are generally synonymous and don't have a significant phenotypic effect because they don't alter the amino acid sequence of the protein, and consequently aren't weeded out by selection.

And I ask my class: Suppose you didn't believe in common ancestry and didn't believe in selection, how would you interpret those data? But I don't ask it to ridicule creationists; I ask it because, as an anthropologist, I really want to know what "the native's point of view" is. The answer that eventually always comes up is a version of Philip Henry Gosse's (1857) Omphalos argument: that God made Adam to look human (with a belly button), made the world to look old, and made DNA sequences to look as if they had diverged from one another and had incorporated the filtering action of selection.

And that is precisely the point at which we should not back away from theology; we should engage it. There is, after all, absolutely nothing even remotely Scriptural about that view. (Indeed, pretty much the only set of ideas in the history of Christianity that would be compatible with such an interpretation was the Anglophone natural theology of the early modern age.) This places our creationist interlocutors in the position of defending the admiration — much less the worship! — of a God whom they imagine could act so perversely. Gosse thought his work was profound for reconciling the science of his day to the natural theology of his day, but it was pilloried for being not only bad science, but bad theology, as well.

The central issues, consequently, are epistemological rather than empirical. Why don’t we rely on burning bushes to do science? What are the rules of reliable knowledge production? How do we come to think we know stuff?

Coyne is skeptical about evolutionary psychology, which he properly dismisses as mostly useless. Coyne, however, misses a crucial point: It’s not that the nonsense of evolutionary psychology consists of “speculations that come unaccompanied by hard evidence” (p. 230). Lord knows, evolutionary psychologists brandish data aplenty. It’s that the data they brandish are often poorly controlled and are usually subject to better alternative explanations. The linkage between data and conclusions that would not pass muster in the Drosophila literature becomes a centerpiece in human evolutionary psychology. It isn’t, and has never been, about the evolutionary data per se, whether genetic, anatomical, or behavioral. Rather, it’s about how to make sense of an unceasing stream of information produced by scientists with diverse, conflicted ideological, personal, and intellectual interests. That is what the historians seem to get at far more insightfully.

In Owen’s Ape and Darwin’s Bulldog, Christopher Cosans develops precisely that theme: that the available evidence in the 1860s did not settle the issue of the relationship of humans to apes, regardless of how later biologists mythologized it. Cosans revisits the argument between Richard Owen and Thomas Huxley about whether humans had a brain part that apes lacked.

Cosans takes justifiable pains to distinguish Darwin in his own context from the revisionist uses to which he is put today, indeed notes a couple of interesting paradoxes. The infamous creationist Owen was, to an extent, more materialistic than Darwin himself. Where Darwin was willing to concede in The Origin of Species that life itself had a supernatural origin, Owen believed resolutely in spontaneous generation, which effectively removes the production of life from the domain of the miraculous. Moreover, when Huxley routed Owen on the linkage of the human brain to the ape brain, part of his argument rested on asserting the transitional nature of the African brain in relation to the European brain and the ape brain. I’d hate to have to defend that to a creationist today.

At about 150 pages of very transparent prose, Owen’s Ape and Darwin’s Bulldog is the book that I recommend most enthusiastically of the lot. Not only does Cosans successfully relativize the debate between Huxley and Owen, but he concludes with discussions of epistemology in comparative anatomy and morality in science. His only lapse, I think, lies in failing to explore the brain as a fetish object in anthropology. Huxley and Owen could have had exactly the same argument over the foot, which in a human and ape is made up of more or less the same parts in more or less the same relations, but is signally different in function. And yet Huxley and Owen battled over the brains, not the feet, for some basic reasons that remain unarticulated. Maybe they’re worth articulating.

REFERENCES
