

# Book Reviews

The author says little about the supernatural aspect of religion. Instead, he is concerned about the political, social, psychological, and geographical influences on belief. He is convinced that religious behavior, at least in part, is the result of natural selection. The title, like the blurb quoted above, implies that the book will show that diet, blood pressure, and the like also influence religious belief and practice. They probably do, but the author's case is not strong. He dwells on emotions and sets considerable store on their influence. "Distinct emotions have distinct biological functions ..." (p. 39) but "identifying specific emotions, however, is neither easy nor precise" (p. 39). That is an understatement.

The discussion of the history of the Mormons was fascinating. As Fuller says, "The Latter-Day Saints were bold and adventurous," and had "little ... concern for conformity ..." (p. 66). But that does not describe them now. Why? Fuller does not have a solid biological explanation for this. But he does say that Joseph Smith, the founder, inspired awe, an emotion, and that there may have been selection for conformity among Mormons as time passed.

Fuller also discusses the history of the Great Awakening and the Second Great Awakening. He mentions African-American religious practice. He realizes that more women than men are involved in religious bodies, and suggests that the reason has to do with the desire for stability, which is stronger in women than in men. Religious practice is usually comforting and provides a sense of security.

Fuller writes about the decline of liberal church attendance and the increase in attendance in more-conservative churches, attempting to explain this by our need to be bonded into social units. He considers the relatively high level of participation in religion in the US, compared to Europe, and concludes that people in the US are under more stress than they are in the Old World. This seems highly speculative.

The book has an appropriate scholarly apparatus with lots of notes. But the author does not always treat his sources well. On page 49, the author quotes Charles Grandison Finney, noted revival preacher, as saying that a conversion "is not a miracle or dependent on a miracle in any sense ... it consists entirely in the right exercise of the powers of nature." Yes, Finney said that, but, in the original, Finney was not discussing conversion, but revival. In the same lecture, Finney also said,

Religion is the work of man. It is something for man to do. It consists in obeying God with and from the heart. It is man's duty. It is true, God in-

duces him to do it. He influences him by his Spirit, because of his great wickedness and reluctance to obey. If it were not necessary for God to influence men—if men were disposed to obey God, there would be no occasion to pray, "O Lord, revive thy work." (Finney, *Lectures on Revivals of Religion*, Lecture I; Public Domain, <http://www.ccel.org/ccel/finney/revivals.iii.i.html>)

The author's statement indicates that Finney believed that all that was necessary for conversion was to manipulate the emotions. However, Finney clearly believed in the necessity of God's supernatural work, based on the second quotation from the same work. Finney's point was that the church should not sit back and expect God to revive it, but that the church should do those things that lead to revival, so that God can work. Fuller took a few words out of context to support his thesis, when the original source does not.

As another brief example, on page 90, Fuller says that the book of Revelation portrays the Antichrist. Not by name, it does not.

The book is a decent enough history of religion in the US. The author's idea that our emotions, and even our genetic history, may influence our religious practice is probably valid, at least to some degree. It is also true that the rituals of religious practice (whether formal or informal) are important. Movements and utterances by participants and the sense impressions accompanying various activities within a church probably influence us to become part of a religious body and to stay within it. Fuller is to be commended for pointing all of this out. But that should not be the whole story of Christianity, and the book almost leaves the impression that Fuller believes that it is. In closing, Fuller does admit that there may be real and supernatural influences on us: "Our experience of life thus hints at the possible—even probable—existence of some metaphysical reality." Indeed.

*Body of Faith* is not essential reading for most, but scholars and collections specializing in the history of religion in North America should consider it.

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**A TROUBLESOME INHERITANCE: Genes, Race and Human History** by Nicholas Wade. New York: Penguin Press, 2014. 288 pages. Hardcover; \$27.95. ISBN: 1594204462.

Christians who work in science, especially in the biological sciences, are often at pains to explain to

other scientists and many of their Christian brethren how they reconcile their faith with their scientific worldview. When popular science writing conveys a distorted picture of science, it does not help the overarching issue of reconciliation of God's Book of Words with God's Book of Works. We are all familiar with the abuses of scientism in this regard, such as the fallacy of genetic determinism and the misuse of evolutionary science.

The new book by Nicholas Wade, *A Troublesome Inheritance*, is a troubling example of nonsense being used to bolster a bad idea. In particular, the book is a good illustration of the dangers of certain widespread misunderstandings about the science of evolution and genetics. Wade concludes that human evolution proceeded recently and divergently among "the three major races" and that such "genetic evolution" explains many behavioral differences, including, among other things, why Jews are smart and why western cultures are more technologically advanced than others.

In his review of human history, Wade claims that genetic changes were involved in major transitions. We are told, for example, that within the few centuries just prior to the Industrial Revolution, people in England genetically evolved to be less violent, more hardworking, and more trusting of government and strangers, while people in the Middle East remained largely tribal in their behaviors and Islamic civilization declined as a consequence. The proposed reason for this difference is that, in the Middle East, modern-state-compatible behaviors were not selected for because people lived under "largely predatory" regimes that "extract[ed] taxes from their citizens but provide[d] few services." How this circumstance was not true for medieval England is not clear, and of course the actual genes supposedly responsible for these changes are not identified.

In many parts of the book, what Wade claims to be a central concept is nicely refuted by his own writing. When it comes to the question of how many races there are, Wade usually refers to three or five "major races," and admits that it is possible to think of seven races. He even says, "the more DNA markers that are used ... the more subdivisions can be established in the human population." It is not clear why Wade does not see this as a fatal error in his overall thesis. He is absolutely correct that the number of races defined by genetics is indeterminate and that fact renders the concept of racial biology meaningless. Furthermore, if one *were* inclined to divide the human population into three groupings according to genetic distances ( $F_{st}$ ), they would not be Africans, Asians, and

Europeans (as Wade says), but Africans, Australians, and everyone else, including everyone from Asia, the Americas, and Europe.

In his discussion of the genetics of populations, Wade follows a minimalist definition of evolution as an inherited change in allele frequencies in populations. Allele frequencies differ to various degrees among all populations, defined in any way one likes. Most people think of evolution as the mechanism by which new species arise from common ancestors (descent with modification), but this is emphatically not what Wade is talking about.

The fact that there is some extent of allelic frequency variation in the human population (though actually very little compared to other primates) does not in any way imply evolutionary changes leading to permanent divergence, which requires fixation of alleles in defined and usually isolated populations. For example, we know that chimpanzees and humans evolved from a common ancestor and that the differences between chimp and human behavior are understood to be genetically fixed and a result of evolution. From this, it follows—Wade tells us—that the differences in social behaviors between different human cultures are the result of genetic evolution too. But even Wade admits that none of the human allelic changes found between populations have become fixed; all of them are reversible, and they do not lead to permanent or significant alterations in the critical phenotype of any human population. The analogy to human/chimp evolution is scientifically absurd.

While it is true that Africans have some unique genetic polymorphisms (one of which was discovered by one of us<sup>1</sup>) and that the mutations allowing for malaria resistance and lactose tolerance in adults began as regional changes under strong selection, these examples of population-specific genetic alterations actually refute rather than support Wade's racially based evolutionary claims. Lactose tolerance began as local variants, but has spread over the globe, and is still spreading.

Among the most telling cases of self-refutation of Wade's hypothesis is the example he gives of African Americans losing the sickle cell trait SNP because malaria is no longer providing a strong selection pressure on this population. His example refutes the idea that Africans have undergone any sort of actual evolution, since within a very brief time span the proposed phenotypic segregation of Africans due to selection for the S allele in hemoglobin is being *reversed*. The same kind of malleability is true of

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many so-called racial features such as skin color and body shape.

Human populations have been on the move and intermixing for the past 50,000 years. While some human genetic isolates exist, they are rare and represent a tiny fraction of the total human population. Wade does admit that there exist some populations that he calls “admixed,” such as the modern residents of Ethiopia who are genetically more European than African. But what he does not seem to understand is that all human populations are mixed—there are no genetically “pure” populations. The idea of a pure race is pure myth.

Wade speculates that Jews have undergone some kind of selection for genes conferring higher intelligence because some of them (actually the wrong ones) were bankers during the middle ages. Wade bases this absurd idea on a misunderstanding of the scientific literature. What the key paper actually showed was that by principal component analysis of 550,000 genetic markers, European Jews can be identified and differentiated from non-Jewish Europeans.<sup>2</sup> This does not mean that Jews differ in any allelic frequencies from other Europeans, only that familial relationships can be detected. It would be quite surprising if the results presented in the paper were not obtained, and they have nothing whatever to do with “evolution.”

Despite being a respected science journalist, the author frequently fails to distinguish between scientific arguments based on data and conjectures that are not. Two examples illustrate this serious deficiency. Wade mentions and does not dispute the work of Richard Lewontin showing that there is less genetic variation between populations than between individuals regardless of what population they belong to. To counter this, Wade cites Sewall Wright, as quoted in a famous textbook.<sup>3</sup> The very same textbook clearly indicates that the total average human  $F_{st}$  is less than that of different villages within the Amazon tribe of the Yanomamö, confirming Lewontin’s point. Neither the textbook’s authors nor Wright disagreed with Lewontin’s conclusions on the relative importance of genetic diversity within compared to between populations.

The use of pseudo-scientific arguments to advance philosophical and political agendas is quite familiar to most readers. From eugenics to social Darwinism to some of the antitheistic arguments of the new atheists, the name of science has been misused to cloak questionable ideas in a mantle of unassailable truth.

The Christian belief that all human beings are created equal in the image of God is a matter of faith and not a scientific statement; there is no scientific evidence to refute it.

## Notes

<sup>1</sup>F. Crofts, G. N. Cosma, D. Currie, E. Taioli, P. Toniolo, S. J. Garte, “A Novel CYP1A1 Gene Polymorphism in African-Americans,” *Carcinogenesis* 14, no. 9 (1993): 1729–31.

<sup>2</sup>A. C. Need, D. Kasperaviciute, E. T. Cirulli, D. B. Goldstein, “A Genome-Wide Genetic Signature of Jewish Ancestry Perfectly Separates Individuals with and without Full Jewish Ancestry in a Large Random Sample of European Americans,” *Genome Biology* 10, no. 1 (2009): R7, doi:10.1186/gb-2009-10-1-r7.

<sup>3</sup>Daniel L. Hartl and Andrew G. Clark, *Principles of Population Genetics*, 3rd ed. (Sunderland, MA: Sinauer Associates, 1997).

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## TECHNOLOGY

**THE GLASS CAGE: Automation and Us** by Nicholas Carr. New York: W. W. Norton, 2014. 288 pages, notes, index. Hardcover; \$26.95. ISBN: 9780393240764.

Nicholas Carr, author of popular technology books including *The Shallows*, *The Big Switch*, and *Is Google Making Us Stupid?* preaches another sermon in *The Glass Cage*, his newest book about technology. He echoes millennia of concerns about the detrimental effects of technology on humans if we continue to lunge full steam ahead toward a future of unintended consequences. Carr’s sermon ends with a poem. That reminded me of classical Chinese thinkers who valued harmony with nature as more important than conquest of nature, and therefore elevated poetry over technology and mathematics.<sup>1</sup>

Only recently have Western philosophers criticized technology. Aristotle “argued that slaves and tools are essentially equivalent” (p. 224). But he was in favor of both. Adam Smith in 1776 claimed that because of industrial machines, laborers would lose “the habit of ... exertion, and generally become as stupid and ignorant as it is possible for human creatures to become” (p. 106), but he also claimed that the machines would bring workers “convenience and luxury” (p. 22). Alfred North Whitehead a century ago encouraged the use of “technological aids” (p. 65) to free hands for greater dexterity, to free minds for richer intelligence and decision making, and to free souls for a broader perspective (p. 66). But today the