

NUANCE AND HONOR

Religion versus Science

PAUL R. GROSS

Opening a recent discussion of science and religion,¹ Susan Haack displays her characteristic commonsense approach to certain issues that often lead, in the writings of other philosophical commentators, to deliquescence: to arguments turning to jelly. Or worse: they generate angry rejoinders that are politics rather than reasoning. Haack is not moved, as Bertrand Russell, *qua* moral philosopher, was moved long ago, to declare boldly (to an audience of tradesmen and laborers in Russell's case²) that she is not, and why she is not, a Christian—and why they should not be, either. The whole subject, she reports, makes her queasy. Her tastes and convictions are far removed from those of the “village-pump atheist” (he who assembles, for speeches or publication, lists of the patent absurdities in the Bible). Yet as between Vaclav Havel's popular literary-intellectual spirituality—a nuanced spirituality to be sure, but with unmistakable hostility to science—and Steven Weinberg's adult and unvarnished renunciation of the ancient religious comforts, she comes down squarely on the latter's side.

A look, then, at how she remains true to her taste for nuance, for clarity in argument, and nevertheless adopts a very strong and highly unpopular position. This allows me to exemplify my appreciation for her contributions to philosophy of science. I can also speak a little about what is in this specific case the relevant science—at least what those scientists who attend to philosophy of science take to be relevant—in the most heated current argument of religion with science: the new wave of creationist attacks on “Darwinism.”

Though statements like that old one of Russell's tend to be rather looked down upon nowadays, I have often heard them dismissed (at the faculty club, for example) as crudely scientific, once even by an erudite scientist who is not himself a religious believer. On these matters, Russell is taken to have been in less than the best scholarly taste. “Nowadays” are those days, after all, when even some self-identified pragmatists take pains to distinguish themselves from all realists (especially *naïve* realists!) and to indicate understanding, if not complete approval, of relativist positions on science and truth-indicativeness.³

For the lay audience he addressed in 1927, Lord Russell enumerated all the standard arguments for the existence of God, and dismissed them, seriatim, as frequently by (appropriate) ridicule as by logic. So he dealt with the best of them, the argument from design. As resurrected, e.g., by Paley, and updated during the past decade, it returns full force as the spearhead of a new and aggressive "intelligent design" movement. Russell simply asked his listeners: "Do you think that, if you were granted omnipotence and omniscience and millions of years in which to perfect your world, you could produce nothing better than the Ku Klux Klan and the Fascists?"¹⁴ (Remember, this was 1927. The world's horrors of human behavior were but a muted overture to those that would follow within the decade.)

The point, of course, is that for Russell and other historically aware free-thinkers, there was a perennial war in progress between religion and science, and no nuance about it. Because it was by no means clear that science could win, even in the long run, it had to be defended with energy and persistence, with no mincing of words, against the persistent attacks of religion. Perhaps the Old Deferentialists were too deferential to science, but they had no doubts about the difference between these two ways of knowing, or that there were large contested territories of human knowledge about which the strong vigilance of honest philosophy was needed.

Still, even if one is convinced that the old conflict continues and that science does yield a picture of reality superior to that of good old religion—because closer to being true—it has been until very recently much more fashionable to offer fine-grained, minimizing accounts of the differences than to emphasize them. All this is, I believe, a consequence of the sociopolitical, relativistic turn in epistemology. Few working scientists read systematically in philosophy of science; but among those who do, that turn has had visible effect, as has the postmodernist turn in history of science. The effect has been to introduce doubts and hesitations about the epistemological virtue of natural science (except, of course, the natural science one practices in one's own work!), about science as an especially effective approach to understanding how things are in the world. It is those doubts and hesitations, among other things, that produce the quite common "queasiness" of addressing the topic of science and religion. Today, Templeton money is being offered in large doses as a remedy for this form of intellectual mal de mer. And, there is a certain increase in the frequency of irenic posturing on this subject among scientists. An example is the late S. J. Gould's rather Olympian assignment of religion and science to "nonoverlapping magisteria," with which Haack deals here respectfully, and devastatingly.

One who does not know Haack or her work well would be justified, reading the opening paragraphs of "Point of Honor," in expecting just one more fatally *nuanced* contemporary exposition, sensitive to the feelings of people in power, of civilized theologians, of professors of religious studies (who may even be colleagues), and very careful of the much deeper feelings of ordinary people and of "The Other." That does not happen in Haack's book. It is a measure of her skill that the argument of "Point of Honor" is indeed nuanced; that it employs not a single blanket denunciation or leading question or point of ridicule of the kind Russell offered his students *or* his Battersea

workingmen; but she comes down at the end precisely on his strong, simple position of 1927. She does so with the added weight of experience and literature in epistemology, in history and philosophy of science, in the natural sciences themselves, of the last three quarters of a century. That interval, because of the rate of change in science and its exponential growth in the century just past, is effectively an eon.

The argument of "Point of Honor" begins with a conscientious effort to identify the significant differences between religion (here, Christianity; but that is typical enough) and science, so as to avoid the facile "one-dimensional" comparisons of which Haack disapproves. Now, religion and science are both, first and foremost, bodies of believable (i.e., plausible) explanation. There is a difference even here, however, between religion and science. As Haack notes, *faith*, which is central to the religious notion of any believable explanation, is explicitly foreign to the scientific notion. As to theology, which is different from religious belief, it, like science, is indeed a form of inquiry. But, as she observes, it searches actively for supernatural phenomena as elements of explanation, and therefore "... [I]t calls on evidential resources beyond sensory experience and reasoning." I think she should have added here that it is fundamentally limited, *qua* inquiry, by its need to leave unstated and unanswered what is nevertheless its most fundamental question: whether or not the existence of *anything like* the traditional but still-worshiped God or gods is any longer a serious subject for inquiry. Religion and science are therefore, "at odds" on the epistemological dimensions being considered: there really is a conflict. And she concludes that of the two, science is "the more admirable" enterprise. This is a prototype Haack nuance: she avoids "true" or "better-warranted"; she uses the gentler and more plastic comparative: "more admirable." Which implies, without her having explicitly to concede it, that admiration for the alternative, too, is clearly in order.

But "admirable" is of course an opinion: epistemology is a product of the human experience of inquiry, but it is not a demonstration of anything. The now dominant form of creationism, so-called intelligent design (henceforth ID) theory (which Haack treats accurately and at length in this chapter), carries in its custom-made epistemological rulebook the adamant denial that such an adjective as "admirable" can in any way be better justified for science than for religion. Phillip Johnson, founder of the current ID movement, whom Haack quotes, insists that the admitted *methodological* naturalism of science is really a *philosophical* or *metaphysical* naturalism, thus a rigid commitment to ignore, in explanation-seeking, supernatural, and extrasensory phenomena, not simply for practical reasons, *but as a denial that they exist*. Such a commitment is, he crows, a faith, indistinguishable from any religious faith. Therefore, in his view and that of all creationist doctors, its results are a self-imposed blindness to vast domains of reality. Supernatural and extrasensory phenomena do—must—exist, and therefore to ignore them in describing the world cannot lead to anything "admirable" by way of explanation of the world.

Haack gives Johnson his due; he is right, she notes, at least "in a way" about naturalism. But that is a nuance. *There has never been an objective, repeatable*

demonstration that supernatural and extrasensory phenomena exist. But you would have a very hard time trying to convince, not only Mr. Johnson, but the majority of humans alive at this moment that such is the case. Hence for those who are already religious believers, the comforting alternative to Haack's award to science of the distinction "more [epistemologically] admirable," nuanced as that may be, is to deny flatly that she has considered all the variables needed for making such a judgment. Here is a very small sample of the style in which that oversight of hers is expressed by the leadership of ID theory when they speak to their friends and supporters—rather than the larger public they want to convince that they are just disinterested scientists (doing disinterested research on "design"):

My thesis is that the disciplines [natural science of course among them] find their completion in Christ and cannot be properly understood apart from Christ. . . . The point to understand here is that Christ is never an addendum to a scientific theory but always a completion.

So says William Dembski, currently the most active theorist of the Center for Science and Culture, Discovery Institute, Seattle, WA—the think-tank home of ID.⁵

How does Susan Haack deal with this? Not with logic-chopping, not with imperatives, appeals to emotion à la Johnson and other, sympathetic religious (not just Christian!) apologists. She provides, instead, a well-considered but submicro-history of relevant religious belief. Central to the upheavals of the most recent era of this history, as she encapsulates it, is Darwinism (more exactly, the emergence of modern evolutionary science). She is in fact concerned with the whole "diachronic story of humankind as it has worked for millennia on that gigantic crossword puzzle"—the way the world is and how it works (2003.b, 268). Thereupon, early attempts to explain the way the world is were "prematurely inked in," primarily via theology in its successive incarnations. She invokes, in other words, the evolution of human cognitive competence and, not least, the evolution of epistemology, and places as a bookmark therein the abrupt triumph of Darwinism after 1860. This makes sense to those of us who know something of the science and who are old enough to know something more than casually or at a distance from its recent history. It is important for two different but connected reasons.

First, the active creationists, unlike adherents of most mainline forms of Christianity, Judaism, and Islam, do *not* try to accommodate their beliefs, one way or another, to the steadily growing body of well-established scientific fact. They challenge not only those (for them putative) facts, but also and more importantly the choice and styling of questions asked by contemporary natural science. There is an alternate kind of science, they insist, "theistic science." That form of science, since it is open-mindedly dualist, since it admits and encompasses spirit as well as matter, is the more complete, the *more admirable* science. Their claim about the role of "Darwinism" is far stronger than Haack's. For currently influential voices of fundamentalist Christian (and Judaic, and Islamic) apologetics, Darwinism and evolution are not only far too influential, and not only false but damnable, because by leading

humanity away from revealed truth about the miracles of creation, as opposed to the pitifully limited “truths” of materialist science and theory building, evolutionism has secularized society and brought evil into the modern world.

There is a second reason why Haack’s answer to the likely religionist argument that her “more admirable” is mere opinion is important. She anticipates in it the newest application of evolutionary science itself. This is the descendant of what in 1975 was named “sociobiology,” and is now called by most of its practitioners “evolutionary psychology” (EP). One of the central tenets of EP is that many cognitive tricks and styles, many tastes, preferences, belief patterns, and behaviors of contemporary humanity evolved during the immensely long interval of hunter-gatherer existence of the species, especially some fifty thousand years toward the end of the two million year Pleistocene Epoch.⁶ Of course, if you are a biblical literalist, you will not agree that we were here fifty thousand years ago, or even, for that matter, ten thousand. But if you care about evidence, then it is overwhelmingly clear that we have been here for far *longer* than fifty thousand years, that we were already sculptors, painters, and storytellers *during* the last fifty thousand, and that the world changed for human beings with awful abruptness just about ten thousand years ago, at the beginning Holocene, with the discovery of agriculture and the consequent establishment of villages and then towns.

Up to that moment—it was effectively a moment—in our history, we had evolved cognitive devices suited to our lives as members of small (twenty to a hundred members) but nevertheless already complexly social assemblages, and as frequent victims of a cruelly capricious environment. Our evolution, in short, took place in what in EP is dubbed the “environment of evolutionary adaptation,” the EEA. Abruptly, on the geological time scale, we were in a new situation: for the first time, some of the capriciousness of the physical environment could be managed; but now the social environment—that in which structures of belief, of kinship, of loyalty, of dominance and submission, are quite as urgent as were hunting skills in the EEA—became newly and dangerously capricious. It was surely in the first few millennia of the Holocene that modified cognitive adaptations emerged, building to be sure on those inherited from the EEA, but accommodating to the new forms of social dominance and group control necessary for and implicit in the emergence of technology.

The contemporary systems of explanation and belief that give rise to religion surely arose then, offspring of the simpler animisms of the EEA, and their purpose was specifically to fill up empty spaces on Haack’s great crossword puzzle of how-the-world-is, including the world of other people. The trouble was, and is, that many or most these entries were uncertain at best and prematurely fixed. There is unshakable evidence for that prematurity: the evidence is natural science. With the discovery of science some eight thousand years after the opening of the Holocene, first by the Greeks but most importantly in seventeenth-century Europe, many of those old entries became untenable and were soon replaced by obviously better fits.

EP is more an interpretive technique, still, than a typical body of scientific results and agreements. But its broad picture of why and how the human belief

engine came to be as it makes sense. It the best such picture we have. The religious alternatives simply do not fit any longer on the crossword. Human knowing, in short, and the evaluation thereof, have changed throughout human existence, whereas our patterns of *belief*, stabilized by selection over fifty or a hundred millennia, have not changed nearly as much as that in the last ten. Our best device for the evaluation of knowing is epistemology: it has gotten better as other cognitive achievements have accumulated. The epistemological judgment that one form of explanation is, on the whole, more admirable than another—in fact, more *reliable*, for that is what has always been the most desirable feature of “knowledge”—is justified by our long experience of judging among competing explanations and systems of belief. But epistemological judgment is not something that comes easily, especially with it conflicts with belief or desire.

Two points remain to be made on the issues of religion and the evolutionary sciences as touched upon in Haack’s chapter. First, Michael Behe’s (and the main ID) claim that “irreducible complexity” is a property of subcellular chemistry and structures (“Darwin’s Black Box”), and that systems with such a property cannot have arisen stepwise by some such blind, algorithmic process as evolution via natural selection, is simply false. Entirely plausible mechanisms for the stepwise evolution of complex and *apparently* irreducibly complex subcellular systems are known. Behe simply failed to know about or to understand them (he is not an evolutionary biologist or geneticist). Among the most important are (1) gene duplication and subsequent, independent evolution, leading to increasingly complex but better-adapted systems, and (2) the cooptation of genes and their protein products, via natural selection, for functions entirely different from their original ones. The literature of evolutionary biology is full of examples. Behe’s glaring error was the unjustified assumption that the parts of a biological process or structure have always had the same function.⁷

Second, the origin of life is not and should not be at issue in any religion-evolution debate. Evolutionary biology is concerned with the history of life on Earth after it began (at least 3,500 million years ago—the age of the earliest authentic fossils). The origin question is important and fascinating; but the validity of modern evolutionary theory does not depend upon it. Were it to be proven that God made or planted the first cells on Earth, that would have no direct effect on “Darwinism,” although it might cause enthusiasts to look even more closely than they do now (to no avail) for evidence of *continuing* divine intervention.

How Earth life began is thus a separate question; and the state of the young but vigorous science exploring it is far more promising than is usually conveyed, not only in creationist tracts but even in friendly accounts by science writers not au courant with the ongoing work, which is widely scattered in several literatures. It was once thought—as recently as when I was a college student—that organic (carbon-containing) molecules beyond a certain very small size are unique products of life; that only “protoplasm”—“the living substance”—can make organic molecules; that they cannot arise spontaneously in an inorganic chemical environment.

But this is no longer the belief of any chemist, even less of any astronomer. Space, including extrasolar space, is now known to be full of organic compounds accumulated in gas clouds and on various solid objects, carbon-containing molecules including precursors of the characteristic molecules of Earth life. A range of physical conditions favorable for the assembly of such molecules has now been discovered: some of those conditions have been shown to have existed in earliest Earth history and are likely to exist in the vicinity of other stars like the sun. So there is nothing implausible about an origin of life via ordinary chemistry.⁸ As Haack explains, there is just much work yet to be done.

Nothing that I have added here on current creationist arguments against natural science negates any conclusion reached by Susan Haack in her admirably succinct account of the state of play. But the ID movement is well funded, very aggressive, and manned by some people with respectable degrees in philosophy and science. It is therefore very influential in the United States, more so than any of its predecessors. It now manages a very large public relations campaign and wields considerable political influence, not only locally but in the halls of the Congress and the Executive. It has spawned satellite movements abroad. It should not be dismissed as anachronistic or trivial.

One issue of the relationship between religion and (evolutionary) science, and Haack's treatment of it, remains to be mentioned. It is frequently observed, by evolutionary psychologists among others, that the universality of religious behaviors and belief-patterns (not of beliefs themselves) means that religion has been strongly adaptive in human history; therefore that its study is very important; and therefore that it and its substantive proposals must be accorded utmost respect. Now it is certainly possible, indeed it seems very likely, that religious behaviors *have* been adaptive in the past, for otherwise they would not have persisted. For example they are by their fundamental character strong promoters of group cohesion and exclusivism; those social qualities were unquestionably survival tools in the EEA.

This is why the ever-accreting body of tales and rituals still at the heart of religion must have been inked in early and with enthusiasm on the great, corporate human crossword puzzle of How-Things-Are. It follows that understanding the origins and contents of religion is indeed very important. But it does not follow that, absent other reasons, the tales and rituals themselves deserve utmost, or even any, respect. Haack's point is always that the ongoing enterprise of epistemology affects, and properly so, our judgment of which claims about reality deserve respect and which ones don't. And epistemology is evidently like natural science to the extent that while it is always in ferment at the borderlands, the solid core of what is very likely to be true has been expanding for at least two millennia. The same cannot be said, *pace* its apologists, for theology.

Philosopher Bertrand Russell, determined to put his case absolutely without complication, with no nuance at all, to a truly lay audience, made the statement that so horrified his detractors and political enemies at the time: "I say quite deliberately that the Christian religion, as organized in its churches, has been and still is the prin-

cial enemy of moral progress in the world.”⁹ Susan Haack, an epistemologist benefiting from three-quarters of a century of progress in her discipline and in the natural science of How-The-World-Is, and an altogether gentler and more accommodating analyst, decides nevertheless, after touching the main nuances, that

Even those of us who, like myself, find the idea that there is moral merit in faith epistemologically repugnant may feel a twinge of something like envy when we read the touching story of little Eva [in *Uncle Tom's Cabin*], dying of consumption, telling her Papa not to be too sad: 'I had rather be in heaven; though, only for my friends' sake. I would be willing to live.' (2003.b. 293. emphasis added)

NOTES

1. Susan Haack. "Point of Honor." 2003.b. ch. 10.
2. Bertrand Russell. "Why I Am Not A Christian." in *Bertrand Russell: Why I Am Not A Christian and Other Essays on Religion and Related Subjects*, Paul Edwards, ed. (New York: Simon and Schuster, 1957), 1–23.
3. See, for a charming example of such demarcations. Larry Laudan. *Science and Relativism: Some Key Controversies in the Philosophy of Science* (Chicago: The University of Chicago Press. 1990).
4. Russell, op. cit., 10.
5. My source for this, and all other reference to and quotation from ID theory, is Barbara Forrest and Paul R. Gross. *Creationism's Trojan Horse: The Wedge of Intelligent Design*. (New York: Oxford University Press. 2004). See especially Chapter 9, pp. 258–315.
6. See, for an introductory compilation of its principles and arguments, Jerome H. Barkow, Leda Cosmides, and John Tooby, eds., *The Adapted Mind: Evolutionary Psychology and the Generation of Culture* (Oxford: Oxford University Press, 1992).
7. See, for one of many possible examples, Richard H. Thornhill and David W. Ussery, "A Classification of Possible Routes of Darwinian Evolution," *Journal of Theoretical Biology* 203 (2000): 111–16.
8. Please see *Reports of the National Center for Science Education*, vol. 23, Nos. 3–4, May–August 2003. This issue contains four good, readable reviews of current research in astrobiology and origin of life (papers of Morrison, Deamer, Ellington, and Levy), plus my review of the most recent book-length survey of origin of life research: Iris Fry. *The Emergence of Life on Earth: A Historical and Scientific Overview* (New Brunswick, NJ: Rutgers University press, 2000). An Internet query will produce a flood of material.
9. Russell, op. cit. 21.