

New Atheism and the Scientific Turn in the Atheism Movement

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I

The so-called “New Atheism” is a relatively well-defined, very recent, still unfolding cultural phenomenon with import for public understanding of both science and philosophy. Arguably, the opening salvo of the New Atheists was *The End of Faith* by Sam Harris, published in 2004, followed in rapid succession by a number of other titles penned by Harris himself, Richard Dawkins, Daniel Dennett, Victor Stenger, and Christopher Hitchens.¹

After this initial burst, which was triggered (according to Harris himself) by the terrorist attacks on September 11, 2001, a number of other authors have been associated with the New Atheism, even though their contributions sometimes were in the form of newspapers and magazine articles or blog posts, perhaps most prominent among them evolutionary biologists and bloggers Jerry Coyne and P. Z. Myers. Still others have published and continue to publish books on atheism, some of which have had reasonable success, probably because of the interest generated by the first wave. This second wave, however, often includes authors that explicitly

1. Sam Harris, *The End of Faith: Religion, Terror, and the Future of Reason* (New York: W. W. Norton, 2004); Sam Harris, *Letter to a Christian Nation* (New York: Vintage, 2006); Richard Dawkins, *The God Delusion* (Boston: Houghton Mifflin Harcourt, 2006); Daniel C. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (New York: Viking Press, 2006); Victor J. Stenger, *God: The Failed Hypothesis: How Science Shows That God Does Not Exist* (Amherst, NY: Prometheus, 2007); Christopher Hitchens, *God Is Not Great: How Religion Poisons Everything* (New York: Twelve Books, 2007).

distance themselves from the tone and some of the specific arguments of the New Atheists, most prominently Alain De Botton and A. C. Grayling.² Finally, we have follow up entries in the literature by some of the original New Atheists, especially Harris, but also Hitchens.³

My goal in this paper is to analyze the new Atheist “movement” from a particular angle: what I see as a clear, and truly novel, though not at all positive, “scientific” turn that it marks for atheism in general. To do so, I will begin in the next section with a brief discussion of what I think constitutes New Atheism broadly construed, as well as what counts as scientism. I will then present a brief historical overview of atheism in the Western world (to which the impact of the New Atheism seems to be largely confined), to make clear how classical Atheism differs from the new variety. The following section will then explore some examples of what I term the “scientific turn” that has characterized some (but not all) New Atheist writers (and most of their supporters, from what one can glean from the relevant social networks). The next to the last section will summarize the problems with scientism, and I will then conclude by proposing a new middle way between classical and New Atheism as more sound from both the scientific and philosophical standpoints.

II

Before proceeding, we need to have a clearer idea of what the New Atheism and scientism amount to. I shall therefore provide a brief conceptual outline of both, eschewing the often fallacious demand for clear-cut, precise definitions. With Wittgenstein, I simply do not believe that most interesting concepts are amenable to such definitions anyway.⁴

There has been much discussion about exactly what is “new” in the New Atheism. The novelty is not to be found in public advocacy of atheism, which at the very least dates to some of the figures of the Enlightenment, such as the Baron d’Holbach and Denis Diderot. Nor does there there appear to be anything particularly new from a philosophical standpoint, as the standard arguments advanced by the New Atheists against religion are just about the same that have been put forth by well-known atheist or agnostic philosophers from David Hume to

2. Alain De Botton, *Religion for Atheists: A Non-Believer’s Guide to the Uses of Religion* (New York: Vintage Books, 2012); Anthony C. Grayling, *The God Argument: The Case against Religion and for Humanism* (London: Bloomsbury, 2013).

3. Sam Harris, *The Moral Landscape: How Science Can Determine Human Values* (New York: Free Press, 2010); Sam Harris, *Free Will* (New York: Free Press, 2012); Christopher Hitchens, *The Portable Atheist: Essential Readings for the Nonbeliever* (Cambridge, MA: Da Capo Press, 2009).

4. “I can give the concept ‘number’ rigid limits . . . that is, use the word ‘number’ for a rigidly limited concept, but I can also use it so that the extension of the concept is not closed by a frontier. And this is how we do use the word ‘game’. For how is the concept of a game bounded? What still counts as a game and what no longer does? Can you give the boundary? No. You can draw one; for none has so far been drawn. (But that never troubled you before when you used the word ‘game’.)” (Ludwig Wittgenstein, *Philosophical Investigations*, §68)

Bertrand Russell.⁵ Indeed, not even the noticeably more aggressive than usual tone often adopted by the New Atheists, and for which they are often criticized even by other secularists, is actually new. Just think of the legendary abrasiveness of American Atheists founder Madalyn Murray O’Hair.

Rather, it seems to me that two characteristics stand out as defining New Atheism apart from what I refer to as classical Atheism, one extrinsic, the other intrinsic. The extrinsic character of the New Atheism is to be found in the indisputably popular character of the movement. All books produced by the chief New Atheists mentioned above have been worldwide best sellers, in the case of Dawkins’s *God Delusion*, for instance, remaining for a whopping 51 weeks on the *New York Times* best-seller list. While previous volumes criticizing religion had received wide popular reception (especially the classic critique of Christianity by Bertrand Russell), nothing like that had happened before in the annals of Western literature. The search for the reasons explaining such an unprecedented level of popularity is best left to sociologists, and at any rate is not really relevant to my aims here. It is likely, though, that the New Atheism qua popular movement is a direct result of the complex effects of the 9/11 terrorist attacks. We have seen that the first book in the series, by Sam Harris, was written explicitly in reaction to those events, and I suspect that careful sociological analysis will reveal that that is also what accounts for Harris et al.’s success.

The second reason is intrinsic, and close to the core of my argument in this paper: the New Atheism approach to criticizing religion relies much more forcefully on science than on philosophy. Indeed, a good number of New Atheists (the notable exception being, of course, Daniel Dennett) is on record explicitly belittling philosophy as a source of knowledge or insight. Dawkins says that the “God hypothesis” should be treated as a falsifiable scientific hypothesis; Stenger explicitly—in the very subtitle of his book—states that “Science shows that God does *not* exist” (my emphasis); and Harris later on writes a whole book in which he pointedly ignores two and a half millennia of moral philosophy in an attempt to convince his readers that moral questions are best answered by science (more on this below). All of these are, to my way of seeing things, standard examples of scientism. Scientism here is defined as a totalizing attitude that regards science as the ultimate standard and arbiter of all interesting questions; or alternatively that seeks to expand the very definition and scope of science to encompass all aspects of human knowledge and understanding.

Interestingly, it used to be that the term “scientistic” was meant only and explicitly as derogatory, as indicating a simplistic and indefensible view of science itself. But after the success of the New Atheism, even some philosophers have come to embrace the label in a defiantly positive fashion,⁶ perhaps in an attempt to complete the process of relinquishing their own field to the natural sciences, something that arguably began with W. V. O. Quine during the middle part of the

5. See, for instance: David Hume, *Dialogues Concerning Natural Religion* (1779), <<http://www.gutenberg.org/ebooks/4583>>; Bertrand Russell, *Why I Am Not a Christian and Other Essays on Religion and Related Subjects* (New York: Touchstone, 1967).

6. For example, Alex Rosenberg, *The Atheist’s Guide to Reality: Enjoying Life without Illusions* (New York: W. W. Norton, 2011).

twentieth century.⁷ As I hope it will become clear during the rest of this paper, however, this isn't a simple issue of turf wars between science and philosophy, but rather an attempt to clarify the differences—as well as overlap and mutual reinforcement—between the two fields, broadly construed.

III

After having developed a clearer conception of both the New Atheism and of scientism, we need to briefly consider, in very broad strokes, the history of classical Atheism within Western culture,⁸ to prepare the terrain for a more thorough examination of how classical and New Atheism differ from each other, and why that difference hinges on the resurgence of scientism.

The word atheist comes, of course, from the Greek *atheos*, meaning “denying the gods, or ungodly,” and the philosophical concept of atheism traces its roots to at least the fifth century BCE. Despite this, it is often not easy to discern exactly what the ancient Greek philosophers thought of the matter. Socrates was put to death for “impiety,” but it is clear from various Platonic dialogues that he was not an atheist. Epicurus—often portrayed as a kindred spirit by modern-day atheists—was explicit about his belief in god, although it was a god with no contact whatsoever with the human, or indeed, physical universe; and it is of course important to remember that Epicureans were vehemently against organized religion, which they identified as a major source of unhappiness among fellow humans, and a chief obstacle to the goal of ataraxia.⁹ The first materialistic philosophers were atomists like Democritus and Leucippus, and we can find explicitly atheistic pronouncements in the works of playwrights such as Aristophanes and Euripides. Diagoras of Melos (fifth century BCE) is sometimes referred to as “the first atheist,” and we can probably count the later Theodorus of Cyrene in the same group.

Be that as it may, explicit atheism took a philosophical nose dive during the Middle Ages, for obvious reasons. It reemerged during the Renaissance, with the term appearing for the first time in the English language in 1566, courtesy of John Martiall (who did not use it in a complimentary fashion). The first well-characterized public defense of atheism was published (posthumously) by Jean Meslier in 1729. As far as the Enlightenment goes, Denis Diderot was accused of

7. This is obviously not the place for an extensive consideration of Quine's work and its impact on contemporary philosophy (but see <<http://plato.stanford.edu/entries/quine/%20for%20an%20overview>>). It is clear, however, that Quine's reaction to the excesses of logical positivism led him to an arguably equally excessive scientific position famously stating, among other things, that epistemology is just a branch of psychology (although see Robert T. Fogelin, “Quine's Limited Naturalism,” *The Journal of Philosophy* 94 (1997): 543–63, for a view of how Quine's naturalism may turn out to be less scientific than Quine himself might have realized).

8. I will limit my discussion to the Western philosophical tradition for a couple of reasons. First, it is significantly more difficult to trace explicitly atheistic or strongly agnostic positions within Eastern and Middle Eastern philosophies; second, and more importantly, the New Atheism is a quintessential Western—indeed mostly Anglo-Saxon—phenomenon.

9. See *The Philosophy of Epicurus: Letters, Doctrines, and Parallel Passages from Lucretius*, translated with an introduction and commentary by George K. Strodach (Evanston, IL: Northwestern University Press, 1963).

atheism, and the Baron D'Holbach was openly atheist, a position that his friend David Hume did not quite embrace, despite the latter's scathing writings on miracles and religion. Notwithstanding his popularity among modern-day atheists, Voltaire was a deist (and thought that atheism is actually pernicious for society). Things changed remarkably at the onset of the following century, when Percy Bysshe Shelley published (anonymously) *The Necessity of Atheism* in 1811. The door was open for some of the most remarkable—philosophically based—rejections of religion, from Marx to Nietzsche, just to mention two of the most prominent examples.

Even in the twentieth century, that is, before the early twenty-first century advent of New Atheism, the ball was still firmly in the philosophical park when it came to defense of or apologia for atheism: just consider the writings of A. J. Ayer, John Dewey, and, naturally, Bertrand Russell. Atheism had certainly been informed by science, arguably as far back as the materialistic take of the pre-Socratic atomists, but the recognizable arguments, both against the existence of specific kinds of gods (mostly the Abrahamic one) and in favor of secular materialism, were philosophical in nature. This, of course, changed dramatically—and, I would add, controversially—with the New Atheist authors, particularly Dawkins, Harris, and Stenger.

IV

When considering New Atheism's scientific turn, we need to distinguish among a gradation of attitudes characterizing the various major proponents of New Atheism (and, of course, also a number of secondary authors that I do not have space to explicitly consider here). I will therefore focus on Christopher Hitchens, Daniel Dennett, Richard Dawkins, Victor Stenger, and Sam Harris as an ensemble that has both played a major role in the New Atheism movement and that is well representative of the spectrum of attitudes toward science among the New Atheists themselves.

Beginning with Hitchens, there is actually relatively little to say. His *God is Not Great* is a straightforward anti-religious polemic, something at which the author notoriously excelled throughout his career, whether in defense of Trotskyism or of the Bush administration's invasion of Iraq. The book is simply not about science per se, focusing mostly on philosophical (if not original) and historical arguments against both the general idea of the existence of god and the specific scriptures of the Judeo-Christian-Islamic tradition.

Things become more complex with Daniel Dennett's *Breaking the Spell*, which is very much about science, but in a distinctive (and, I argue, more sophisticated) sense than that shared by the majority of the New Atheists. The major thrust of the book is to turn the table on the standard take concerning the science-religion controversies, putting forth in some detail the idea that religion itself can (and should) be the target of scientific investigation. Religion, as Dennett puts it, not only cannot make a coherent case for the supernatural, but is itself a natural phenomenon, something that a particular species of large-brained social primates invented for a variety of reasons (it helps with prosocial behavior, it validates

structural hierarchies of power, it plays on human beings' innate tendency to overinterpret patterns in the world and to project agency onto the world). Although I disagree with some of Dennett's specific ideas (e.g., I am still baffled by why he takes the concept of "memes" seriously), this is no exercise in scientism. Indeed, whether there is a supernatural realm or not, much of what Dennett says about scientific investigations into the human cultural phenomenon of religion still applies.

Things change dramatically, for the purposes of this paper, when we consider the Dawkins–Stenger–Harris trio, in whose books the scientific turn of New Atheism is particularly evident and problematic.¹⁰ The most impactful of this subset of New Atheist works is surely Dawkins's *The God Delusion*, which has been criticized on different grounds, ranging from a failure to engage with serious theology (assuming there is such thing) or at least philosophy of religion, to caricaturing its target into a hardly recognizable straw man, to eschewing counter-criticism aimed at highlighting the carnage that has historically been brought about by secular-atheistic regimes during the twentieth century.

While *The God Delusion* is all over the map, covering for instance material common to both Hitchens (critique of Judeo-Christian-Islamic scriptures) and Dennett (sketching hypotheses about the cultural evolution of religion), the topics that are most germane to our discussions are: (1) Dawkins's revisitiation of the standard arguments for the existence of god; (2) his discussion about the possibility of morality without gods; and of course (3) the centerpiece of his book: the idea that "the god hypothesis" is sufficiently akin to a scientific hypothesis so that science-based evidence becomes the major reason to reject it.

Concerning (1), Dawkins here is simply rehashing a number of well-known philosophical objections to a particular idea of god (again, the Judeo-Christian-Islamic one). Not only do several such objections not apply to a number of other concepts of gods (especially the more rarefied, deistic, flavor), but they are neither new nor do they have much to do with science per se. In (2), Dawkins discusses the possible naturalistic origins of gods and religions and then addresses the question of why being moral without gods. Besides the fact that his treatment of various hypotheses for the cultural evolution of religion is somewhat superficial (and slanted: Dawkins really dislikes even the possibility of group selective explanations), that part of the discussion is of course irrelevant to the main purpose of the book: it may very well turn out that human beings have evolved religions and their concepts of gods because of their biological–cultural makeup, and yet that gods or a supernatural realm actually do exist, in some form or another. When it comes to the issue of why being moral, however, Dawkins shows most clearly his limitations. For instance, he seems to be unaware of what many philosophers consider by far the most powerful argument in favor of the idea that gods and morality are entirely logically independent issues: the so-called Euthyphro dilemma posed by Plato in

10. Interestingly, and I do not think at all coincidentally, these three authors are the chief New Atheists with science backgrounds (and to this list we could easily add evolutionary biologist Jerry Coyne and developmental biologist P. Z. Myers, as mentioned previously), though Stenger has long since retired from physics, Dawkins has not put out technical works in decades, and Harris has turned to a career as a full-time author after completing his PhD in neuroscience.

the homonymous dialogue from 24 centuries ago.¹¹ Moreover, of course, the positive argument in favor of secular morality has been made forcefully and comprehensively by a number of philosophers throughout the past two millennia, from Socrates in *The Republic* to Immanuel Kant and John Stuart Mill. Science here is simply not needed, and its role is largely confined to the—again completely distinct—question of how a sense of morality may have evolved biologically, as opposed to how morality itself is justified logically.

Finally, let us turn to point (3), the part of the book devoted to a scientific examination of “the god hypothesis.” Here Dawkins does manage to reasonably bring up scientific notions that, for instance, make ideas like a young earth, or the slightly more sophisticated concept of “irreducible complexity” championed by Intelligent Design proponents, clearly untenable. Nonetheless, in the end he has to resort to philosophical aid, what he refers to as his “argument from improbability,” which is essentially an invocation of Occam’s razor. That is not a problem in and of itself, since after all Occam’s razor—as much as it is clearly an extra-empirical criterion—is routinely invoked within scientific practice. The real issue is that Dawkins (and most if not all of the New Atheists) does not seem to appreciate the fact that there is no coherent or sensible way in which the idea of god can possibly be considered a “hypothesis” in any sense remotely resembling the scientific sense of the term. The problem is that the supernatural, by its own (human) nature, is simply too swishy to be pinpointed precisely enough. For instance, while of course the notion of a planet earth that is only a few thousand years old is scientifically laughable and contradicts much that we think we know about how the universe works, young earth creationists are largely unfazed by what should be an insurmountable obstacle. That’s because they (think they) have a plethora of options at their disposal, ranging from rejecting “materialistic” science altogether to my favorite, a doctrine sometimes referred to as “Last Thursdaysm,” according to which it simply looks like the universe is billions of years old and the geological column abundant with fossils, but in reality the whole thing was created *ex nihilo* last Thursday to make it look that way and test our faith. It is germane to note that Last Thursdaysm is both ridiculous on the face of it and absolutely impregnable by scientific analysis. It does, however, have nasty theological consequences that any graduate student in the philosophy of religion would quickly be able to point out.

To recap, then, what is considered to be perhaps the quintessential text of the New Atheism is an odd mishmash of scientific speculation (on the origins of religion), historically badly informed polemic, and rehashing of philosophical arguments. Yet Dawkins and his followers present *The God Delusion* as a shining example of how science has dealt a fatal blow to the idea of gods.

My treatment of Victor Stenger’s contributions will be shorter insofar as this author makes the same mistake as Dawkins, only in the realm of physics rather than biology. Stenger’s primary contribution in this area came out in 2007, the year after *The God Delusion*, and the title pretty much summarizes the author’s intent and approach: *God: The Failed Hypothesis; How Science Shows That God Does Not Exist*. Just like Dawkin’s volume, Stenger’s is an odd mix of standard arguments

11. See <<http://classics.mit.edu/Plato/euthyfro.html>>

against the existence of god, comments on how morality is possible without gods, and actual treatment of the relevant scientific evidence for the alleged “hypothesis.” Besides the obvious fact that one can genuinely be puzzled by what exactly qualifies Stenger (or Dawkins) to authoritatively comment on the straightforward philosophical matters that make up most of their books, the basic problem with Stenger is precisely the same as Dawkins: he treats the “god hypothesis” as if it were formulated precisely and coherently enough to qualify as a scientific hypothesis, which it manifestly isn’t, for the reasons already explained. It is, of course, this very insistence on the part of Dawkins, Stenger, and others that provides the bulk of the evidence for the conclusion that the New Atheism movement has a markedly scientific flavor which was missing from its historical predecessors.

The last example I will consider here is somewhat different: Sam Harris’s *The Moral Landscape: How Science Can Determine Human Values*. This book is not part of the early “canon” of New Atheism, and in fact it is not directly about atheism at all. But it is by one of the major proponents of the movement, has been well received, and is another spectacular example of scientism on the part of the New Atheists. Harris’s project is as ambitious as it is misguided: he doesn’t just make the (rather uncontroversial) claim that empirical evidence (“science,” very broadly construed) is relevant to moral reasoning. No serious philosopher, I hope, would disagree with that. His project, rather, as clearly stated in the subtitle of the book, is to bypass philosophy altogether and provide a scientific determination of moral values.

Harris is motivated here by the same basic goals shared by all New Atheists: to wrestle a significant sphere of human concern—in this case morality—from the nefarious grips of religion. Harris, like Dawkins, is also worried about postmodern moral relativism, which he sees as prevalent within the academic left, and considers to be just as pernicious as religion’s claim to be the source of morality. It is this second worry that seems to motivate much of Harris’s acrimony toward (and dismissal of) philosophy. The irony, I think, is that the best answers to both of those concerns come from serious philosophy, not from science.

But let us consider Harris’s approach in some more detail.¹² Harris undermines his own project right off the bat, in two notes that appear in the opening pages, but are conveniently tucked in at the back of his book. In the second note to the Introduction, he acknowledges that he “do[es] not intend to make a hard distinction between ‘science’ and other intellectual contexts in which we discuss ‘facts.’” If that is the case, if we get to define “science” as any type of rational–empirical inquiry into “facts” (the scare quotes are his), then we are talking about something that is not at all what most readers are likely to understand when they pick up a book with a subtitle that says *How Science Can Determine Human Values* (my emphasis). One can reasonably smell a bait and switch here. Second, in the first footnote to chapter 1, Harris says: “Many of my critics fault me for not engaging more directly with the academic literature on moral philosophy . . . [but] I am convinced that every appearance of terms like ‘metaethics,’ ‘deontology,’ . . .

12. Part of what follows is adapted from a book review of Harris’s volume that appeared in *Skeptic* magazine.

directly increases the amount of boredom in the universe.” This is so mind-boggling that I had to reread it several times: Harris is saying that the whole of the only field other than religion that has ever dealt with ethics is to be dismissed because he personally finds it boring. Is that a fact or a value judgment, I wonder?

As I said, Harris wants to deliver moral decision making to science because he wants to defeat the evil (if oddly paired) twins of religious fanaticism and leftist moral relativism. Despite the fact that I think he grossly overestimates the pervasiveness of the latter, we are together on this. Except of course that the best arguments against both positions are philosophical, not scientific. The most convincing reason why gods cannot possibly have anything to do with morality was presented 24 centuries ago by Plato, in the already mentioned (in the context of Dawkins’s book) *Euthyphro* dialogue, and which goes, predictably, entirely unmentioned in *The Moral Landscape*. Needless to say, moral relativism, too, has been the focus of sustained and devastating attack in philosophy, for instance by thinkers such as Peter Singer and Simon Blackburn, and this is all to be found in the large ethical and metaethical literature that Harris finds so increases the degree of boredom in the universe.

Harris’s chief claim throughout the book is that moral judgments are a kind of fact, and that as such they are amenable to scientific inquiry. First of all, the second statement does not at all follow from the first. Surely we can agree that the properties of triangles in Euclidean geometry are “facts,” in the sense that nobody who understands Euclidean geometry can opine that the sum of the angles in a triangle is not 180° and get away with it. But we do not use science, or any kind of empirical evidence at all, to arrive at agreement about such facts. At the very least, and without wanting to push an argument for moral realism, this makes the point that “facts” is too heterogeneous a category, and that Harris needs to be much more careful on how to handle it.

Harris wants science—and particularly neuroscience (which just happens to be his own specialty)—to help us out of our moral quandaries. But the reader will await in vain throughout the book to find a single example of new moral insights that science provides us with. Harris, for instance, tells us that genital mutilation of young girls is wrong. I agree, but certainly we have no need of fMRI scans to tell us why: the fact that certain regions of the brain are involved in pain and suffering, and that we might be able to measure exactly the degree of those emotions doesn’t add anything at all to the conclusion that genital mutilation is wrong because it violates an individual’s right to physical integrity and to avoid pain unless absolutely necessary (e.g., during a surgical operation to save one’s life, if no anesthetic is available).

Indeed, at some point Harris’ argument becomes puzzling to the point of absurdity: on page 121 and the immediately following text Harris observes that the medial prefrontal cortex of the brain shows a similar pattern of activity when people are asked about their mathematical beliefs and when they were queried about their ethical beliefs. From this, he concludes: “This suggests that the physiology of belief may be the same regardless of a proposition’s intent. It also suggests that the division between facts and values does not make much sense in terms of underlying brain function. . . . This finding of content-independence challenges the

fact/value distinction very directly: for if, from the point of view of the brain, believing ‘the sun is a star’ is importantly similar to believing ‘cruelty is wrong,’ how can we say that scientific and ethical judgments have nothing in common?” I will leave it to the reader to work out why this is a colossal nonsequitur, and arguably the silliest thing written by any of the New Atheists to date.

V

I have argued throughout this paper that what really characterizes the New Atheism, as distinct from previous versions of atheism, is its marked turn toward scientism. This move has been accompanied—almost by definition—by an overt hostility to philosophy, even by philosophers like Daniel Dennett and especially Alex Rosenberg. My position is not just descriptive, however, but prescriptive: I maintain—as a scientist and philosopher—that such a move has been a bad one for public atheism, for three reasons:

1. *Scientism is philosophically unsound.* This is because a scientistic attitude is one of unduly expanding the reach of science into areas where either it does not belong (e.g., determining human values, *à la* Harris) or it can only play a supportive role (e.g., providing empirical evidence against supernaturalistic claims, *à la* Dawkins and Stenger). I am not here engaging in a parochial defense of philosophical turf, as I see both science and philosophy as crucial to atheism in particular, and to human understanding in general. Nor am I endorsing a simple demarcation criterion between science and philosophy (or science and anything else, for that matter).¹³ Science is best conceived as a family, in the Wittgensteinian sense, of activities having a variety of threads in common, including but not limited to the systematic carrying out of observations and/or experiments, the testing of hypotheses, the construction of general theories about the functioning of the world, the operation of a system of pre- and postpublication peer review, and the existence of a variety of public and private funding sources for projects deemed to be worthwhile.

What I do object to is the tendency, found among many New Atheists, to expand the definition of science to pretty much encompassing anything that deals with “facts,” loosely conceived. So broadened, the concept of science loses meaning and it becomes indistinguishable from just about any other human activity. One might as well define “philosophy” as the discipline that deals with thinking and then claim that everything we do, including of course science itself, properly belongs to philosophy. It would be a puerile and useless exercise, and yet it is not far from the attitude prevalent among the New Atheists.

13. Indeed, I coedited an entire collection on the demarcation problem which is meant to provide a nuanced approach to this difficult epistemological issue: *Philosophy of Pseudoscience: Reconsidering the Demarcation Problem*, ed. Massimo Pigliucci and Maarten Boudry (Chicago: University of Chicago Press, 2013).

Moreover, it seems clear to me that most of the New Atheists (except for the professional philosophers among them) pontificate about philosophy very likely without having read a single professional paper in that field. If they had, they would have no trouble recognizing philosophy as a distinct (and, I maintain, useful) academic discipline from science: read side by side, science and philosophy papers have precious little to do with each other, in terms not just of style, but of structure, scope, and range of concerns. I would actually go so far as to charge many of the leaders of the New Atheism movement (and, by implication, a good number of their followers) with anti-intellectualism, one mark of which is a lack of respect for the proper significance, value, and methods of another field of intellectual endeavor.

2. *Scientism does a disservice to science.* Despite representing a strong attempt to expand the intellectual territory, as well as prestige, of science, I think that scientism is detrimental to science in at least two ways: internally to the discipline itself, because it represents a misunderstanding of what science is and how it works, which is unlikely to serve well either practicing scientists or graduate students as scientists-in-training; externally because it has the potential of undermining public understanding and damaging the reputation of science.

Take the United States as a quintessential example of the culture wars within Western countries. Scientists enjoy a very high degree of respect among the American public,¹⁴ and yet certain scientific notions, like evolution¹⁵ and climate change,¹⁶ are under constant attack and are rejected by about half of the population. Scientists in the United States, therefore, have been threading for a while in a cultural environment that displays a somewhat disjointed attitude toward their profession. The last thing they need is to project an aura of arrogance where they pretend to single-handedly settle delicate issues such as the existence of gods or the foundations of morality—especially when science is not, in fact, well equipped to do so anyway.

3. *Scientism does a disservice to atheism.* Finally, I maintain that a scientific turn does not do much good to atheism as a serious philosophical position to begin with, contra the obvious explicit belief of many if not all of the New Atheists. This—it should be clear by now, but perhaps bears repetition—is most certainly not because science is irrelevant to atheism. On the contrary, atheism makes increasingly more sense the more science succeeds in explaining the nature of the world in naturalistic terms. After all, Hume's arguments against intelligent design were devastating, but he lacked an alternative explanation for the appearance of design in nature, and it was Darwin that provided it. Indeed, I think the Hume–Darwin

14. <<http://www.people-press.org/2009/07/09/public-praises-science-scientists-fault-public-media/>>

15. <<http://www.pewforum.org/science-and-bioethics/public-opinion-on-religion-and-science-in-the-united-states.aspx>>

16. <<http://www.usclimatenetwork.org/hot-topics/climate-polling>>

joint dispatching of ID is an excellent example of how naturalism—qua philosophical position—is the result of the inextricable link between sound philosophy and good science.

But what the New Atheists seem to be aiming at is a replacement of philosophy by science, or at the very least a significant demotion of the former with respect to the latter. And this appears to be the case even among the philosophers who count themselves as New Atheists, Dennett and Rosenberg chief among them. This ends up diminishing the case for atheism and allied positions about gods, as they lose some of the the strong intellectual ground that has been their hallmark since the Greek atomists.

VI

Assuming my critique of what is actually new about the New Atheism hits the mark, one can still pose the reasonable question of what might be the most constructive way for atheists of the new generations to look upon their metaphysical position, and in particular upon how it relates to both sound philosophical and scientific notions. I think that atheists need to seriously reconsider how they think of human knowledge in general, perhaps arching back to the classic concept of “scientia,” the Latin word from which “science” derives, but that has a broader connotation of (rationally arrived at) knowledge. Scientia includes science *sensu stricto*, philosophy, mathematics, and logic—that is, all the reliable sources of third-person knowledge that humanity has successfully experimented with so far. In turn, when scientia is combined with input from other humanistic disciplines, the arts, and first-person experience it yields understanding.¹⁷

What the atheist movement needs, therefore, is not a brute force turn toward science at the expense of everything else, but rather a more nuanced, comprehensive embracing of all the varied ways—intellectual as well as experiential—in which human beings acquire knowledge and develop understanding of their world. A healthy respect for, and cooperation with, other disciplines should be the hallmark of the twenty-first century atheist, and this is precisely the direction toward which some post–New Atheism writers, such as De Botton and Grayling (not at all coincidentally, both philosophers) have been pushing most recently. That path, rather than the one attempted by the New Atheists, is the one that I think has the most potential to lead to a long-standing rational and persuasive case for atheism.

17. I expand on this idea here: <<http://www.aeonmagazine.com/world-views/massimo-pigliucci-on-consilience/>>