John Evans's Morals Not Knowledge

with Mark Harris, "'The People of This Country Have Had Enough of Experts': In Defense of the 'Elites' of the Science-and-Religion Debate"; Fern Elsdon-Baker, "In Defense of Publics: Projection, Bias, and Cultural Narratives in Science and Religion Debates"; Elaine Howard Ecklund, Sharan Kaur Mehta, and Daniel Bolger, "A Way Forward for Sociological Research on Science and Religion: A Review and a Riff"; Nathan Crick, "Morality through Inquiry, Motive through Rhetoric: The Politics of Science and Religion in the Epoch of the Anthropocene"; and John H. Evans, "The Scope and Implications of Morals Not Knowledge*."*

MORALITY THROUGH INQUIRY, MOTIVE THROUGH RHETORIC: THE POLITICS OF SCIENCE AND RELIGION IN THE EPOCH OF THE ANTHROPOCENE

by Nathan Crick

Abstract. In an epoch marked by the threat of global warming, the conflicts between science and religion are no longer simply matters that concern only intellectual elites and armchair philosophers; they are in many ways matters that will determine the degree to which we can meet the challenges of our times. John H. Evans's *Morals Not Knowledge* represents an important provocation for those committed not only to using scientific method as a resource for making moral judgments but also to creating political alliances with religious constituencies. In this important work, Evans argues that most conflicts between science and religion do not concern a clash between two contradictory ways of knowing, but rather a clash over our moral responsibilities and ultimate values. In my response to his work, I suggest that integrating both John Dewey's pragmatic understanding of the moral situation and Kenneth Burke's rhetorical interpretation of motives helps bolster Evans's cause and provides support for a political movement that aims to bridge the divide between science and religion in the epoch of the Anthropocene.

Keywords: Gaia; humanism; moral situation; pragmatism; rhetoric of religion; rhetoric of science; Isabelle Stengers

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Let us admit, for the sake of argument, that due to the onset of the effects of global warming we have entered what Isabelle Stengers calls "the epoch

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of the Anthropocene"—what then? (2015, 9) First, it means giving up our old certainties that human beings are merely inhabitants of a nature that will exist unchanged as a permanent stage for the progress of civilization. Second, this new epoch inaugurates a "new grand narrative in which Man becomes conscious of the fact that his activities transform the Earth at a global scale of geology, and that he must therefore take responsibility for the future of the planet" (Stengers 2015, 9). Third, it means confronting the very real possibility of the collapse of much of our civilization and the realization that what was previously "lived as a rather abstract possibility, the global climactic disorder, has well and truly begun" (Stengers 2015, 20). Consider, for instance, a passage in Jason Stanley's *How Fascism Works*:

> Given the inevitability of increased climate change and its effects, the political and social instability of our times . . . and the tension and conflicts inherent in growing global economic inequality, we will soon find ourselves confronted by movements of disadvantaged people across borders that dwarf those of previous eras. . . . Traumatized, impoverished, and in need of aid, refugees, including legal immigrants, will be recast to fit racist stereotypes by leaders and movements committed to maintaining hierarchical group privilege and using fascist politics. (Stanley 2018, 192)

The rise of this type of fascism, as described by Stanley, is just one example of the type of reactionary response to the crisis of the Anthropocene that Stengers characterizes as the coming barbarism. Thus, her rhetorical purpose in announcing that "the epoch has changed" is to "make us think, feel, imagine, and act" in the face of this impending catastrophe (Stengers 2015, 27). For Stengers, therefore, the achievement of the "Anthropocene" as a symbol is to achieve "*the transformation of a problematic situation into a cause for collective thinking*" (2015, emphasis in original, 137). For that is what rhetoric is, the pragmatic art by which we constitute motives for actions by characterizing the nature of our common problematic situation.

I open my response to *Morals Not Knowledge* by sociologist John H. Evans with this thought experiment first to make explicit the political motivations that clearly animate the book. These motivations might not be immediately evident to those attending only to Evans's proximate aim "to dislodge the myth that there is, in the public, a foundational conflict between religion and science, specifically that there is conflict over 'ways of knowing' about the natural world" (Evans 2018, 1; all subsequent Evans citations refer to this book). As Evans takes the reader through such discussions as epistemology, Galileo's trial, the Protestant Reformation, and Baconian induction, one might easily miss his ultimate aim of achieving a political realignment that brings both science and religion into common cause to prevent events like climate catastrophe. Yet, Evans is quite clear about this ultimate aim. In the opening paragraph, he expresses frustration how false assumptions about the relationship between science and religion

have mislead social and political "liberals into wasting their precious resources chasing dragons that do not exist, when they could be focused on effectively achieving their goals, like combating global warming" (1). Like Stengers and Stanley, therefore, Evans clearly feels the urgency of combatting global warming; indeed he refers to it as "one of the great moral challenges to the world" (2). Evans thus accepts his moral responsibility to do what is in his power to rhetorically intervene in this political impasse by pragmatically redescribing the situation so as to open up the possibility of new alliances based on the realization of common cause.

My second motive in capturing the book's political character is to demonstrate the value in placing the discourse of sociology in dialogue with the discourses of rhetoric and pragmatism. For instance, Evans advances three arguments that stand out as absolutely central to our understanding of persuasion and action. First, he rejects the rationalistic assumption, still so prevalent in the public, that our practical, empirical, and moral judgments are merely outcomes of a chain of deductions from "systemic knowledge" hierarchically organized and coherent (9). Second, he argues that most of our conflicts that appear to be over knowledge are in fact over a conflict of values, and that "this moral conflict is more relevant to today's public than is knowledge conflict" (13). Finally, Evans encourages scientists to recognize that facts are never value-neutral and that even the most purportedly objective representation of natural phenomena can and usually does have moral implications. Reflecting his own political commitments, Evans concludes that "science is then inevitably political, and it would be extremely useful for scientists to have accurate information about the source of opposition they actually face" (165). Taken together, these three arguments reinforce not only the pragmatic definition of truth as a form of practice but also the rhetorical insight that any truth must be made persuasive before it can become the basis for collective moral action.

It is to bolster Evans's argument and thereby support his larger political aim of confronting the many crises of the Anthropocene that I read his work alongside that of the pragmatic philosopher John Dewey and rhetorical theorist Kenneth Burke. This is to compensate for what I believe are two absences in the book. First, although Evans wishes to escape, and rightly so, from what he calls the "systemic knowledge conflict narrative," he does not offer a coherent narrative with which to replace it (165). We are often told that certain conflicts are not about knowledge but about moral conflict, but Evans never fully investigates what makes a conflict "moral" or outlines the processes of moral judgment. I believe integrating Dewey's pragmatic conception of morality into Evans's analysis establishes a more productive relationship between knowledge and morals than is implied by the dualistic framing of the title. Second, Evans calls on scientists to develop what amounts to a rhetorical attitude with respect to the public, recommending for instance that "scientists could take components of the

morality expressed by religious leaders, such as concern for the poor, and use this to facilitate the divorce of conservative Protestants from the Republican Party" (166). However, beyond making a few similar tactical suggestions, rhetoric is largely absent from his work. Yet, Kenneth Burke had long argued that science was essentially rhetorical and that social progress was contingent on recognizing and acting on this fact. Burke and Dewey thus provide philosophical and rhetorical perspectives that complement Evans's important sociological study while pointing us toward practical political solutions.

Morality through Inquiry

How do we make sense of Evans's radical claim that global warming is "one of the great moral challenges to the world"? (2). From the text of *Morals Not Knowledge*, it is not altogether clear. Morality, we are told, means "relating to human character or behavior considered as good or bad . . . [or] the distinction between right and wrong, or good and evil, in relation to the actions, desires, or character of responsible human beings" (quoted in Evans 2018, 12). As this definition implies, we typically associate morality with specific choices made by responsible human beings that can be evaluated as right or wrong based on how their intentions or consequences correspond to or contradict specific principles or values one holds. For instance, Evans notes how the decision to become a cancer researcher might be deemed a moral choice based on the "moral value that suffering is bad" and that cancer research has the consequence of reducing suffering (12). Similarly, one might find it morally unacceptable "to engage in embryonic stem cell research" because the potential health benefits are outweighed by the negative consequences of violating the principle that all human life is sacred and begins at conception (12). Or, to use a different type of example, one might reject the teaching of evolution in schools on the belief that "Darwinian theory implicitly teach[es] a moral lesson to children" and thereby undermines a competing religious morality (12). In each of these cases, moral conflict arises over whether or not a specific action by a responsible human actor can be deemed good or bad in relation to an established value system—with the added detail, constantly stressed by Evans, that these moral conflicts are typically not over the nature of scientific knowledge itself but the how that knowledge is applied in practice.

Yet, the case of global warming does not fit this model. Global warming is clearly not *itself* moral or immoral in the way of embryonic stem cell research; it simply represents a threatening state of affairs like the AIDS epidemic or a bad hurricane season. Furthermore, Evans does not present global warming in the manner of Darwinian theory, which is to say a judgment on whether or not the teaching of global warming as a *theory* has

negative impacts of the behavior of children analogous to those imagined by defenders of a literal reading of Genesis. Rather, Evans describes global warming as an empirical event that presents a moral *challenge* to the *world*, implying that this state of affairs predicts dire consequences of such scope and magnitude as to confront the entire population of the planet with difficult moral choices. In one of the most important paragraphs in the entire book, Evans explains his reasoning this way:

> Climate scientists obviously have a moral position on climate change. Yes, it is a highly consensual moral position—that we want to limit the suffering of humans—but it is a moral position nonetheless. I would bet that most climate scientists are also concerned that the poor of the world will disproportionately suffer due to the actions of the wealthy who have created the problem in the first place. The current pope recently made a statement that accepted all of the science on global warming and then turned to morality—for example, that the people most negatively impacted by global warming will be the poorest. Mainline Protestants have long had similar views, and the National Association of Evangelicals takes a very similar stand. The climate science community and the largest religious traditions in the U.S. appear to be in moral agreement. (166)

This paragraph is remarkable not only for the rhetorical clarity of its political purpose—to bring scientists and religious traditions into common cause to fight global warming—but also for the fact that it contradicts the assumption that morality can be divorced from knowledge. Indeed, Evans actually argues that what enabled Pope Francis to turn toward morality was *an acceptance of all the science on global warming*. Reframed in the abstract, *this example demonstrates how the acceptance of one's moral responsibility in any situation is contingent on prior recognition of the facts of that situation*. In this way, to say that global warming represents a great moral challenge to the world is not only to accept a whole assemblage of inconvenient truths and take responsibility for confronting them, but it is also to accuse those who deny those facts of moral irresponsibility. Moral action thus becomes contingent on accepting certain knowledge claims as true.

This reframing is not meant to refute Evans but to clarify his politics and soften the edge of his binary framing. For Evans is clearly not suggesting that knowledge has nothing to do with morality; his aim is rather to refute crass epistemological interpretations that turn conflicts between religion and science into caricature. In effect, he criticizes liberal critics for treating their opponents as if they are medieval scholastics who deduce every particular judgment from a narrow set of *a priori* principles, as exemplified the *Huffington Post* headline: "Rush Limbaugh: 'If You Believe In God . . . You Cannot Believe In Man-Made Global Warming'" (quoted in Evans 2018, 2). But people are not deductive machines; as Walt Whitman famously recognized, each of us lives in contradiction and contains multitudes. The contrast between morality and knowledge, therefore, is meant to direct

our attention away from epistemological wrangling over scientific truth claims and toward the pragmatic consequences of our judgments. Yet these judgments are related to knowledge nonetheless. For instance, although the debate over global warming seems at the surface to deal with a scientific question of causation over the causes of climate change, it is clear that the real "reason that scientific claims about climate change are contested is that conservatives do not want to have to change our society's behavior. They do not want to drive smaller cars, make smaller houses, avoid airplanes, stop mining coal and so on in order to mitigate global warming" (141). But these fears are themselves based on knowledge. Paradoxically, the so-called "science" of climate denial attempts to undermine the legitimacy of climate science for the precise reason that it is so keenly aware of practical consequences that must follow from its inevitable effects on society. The moral conflict over climate change therefore becomes a conflict over which values we must retain and which we must abandon based on the knowledge of what the future will look like in new era of the Anthropocene.

I suggest that the phrase *morality through inquiry* better captures the nuances of Evans's argument, and that this approach can best be articulated through John Dewey's inquiry into the nature of morality. Dewey stresses that moral questions and conflicts only arise within a problematic situation that involves some form of inquiry into the particular nature of the good relative to that situation and the means to attain that good. According to Dewey, "a moral situation is one in which judgment and choice are required antecedently to overt action. The practical meaning of the situation—that is to say the action needed to satisfy it—is not self-evident. It has to be searched for. There are conflicting desires and alternative apparent goods. What is needed is to find the right course of action, the right good. Hence, inquiry is exacted" (1948, 163–64). What Dewey means by inquiry might consist of any of the following: "observation of the detailed makeup of the situation; analysis into its diverse factors; clarification of what is obscure; discounting of the more insistent and vivid traits; tracing the consequences of the various modes of action that suggest themselves" (1948, 164). For instance, Evans briefly mentions the moral debate over genetically modified organisms (GMOs), and concludes that in the United States "the moral issue is settled—if it is determined to be safe, then it is acceptable" (141). Implied in this shorthand summary is a process of reflective morality in which people have determined in this particular case the nature of the good they desire—healthy, safe food that does not damage the environment or cause undue cruelty to animals—and have investigated GMO foods to determine whether or not they achieve that good.

Unfortunately, the reflective characteristic of morality is often overshadowed in public debate by a static conception of morals as if they represent merely a "table of commandments in a catechism" (Dewey and Tufts 1985, 166). This is often the case in matters of customary morality

that govern a society that has adapted to a relatively stable environment and has developed a code of behavior designed to maintain its values. In customary morality, one "places the standard and rules of conduct in ancestral habit" (Dewey and Tufts 1985, 162). It therefore emphasizes "conforming to prevailing modes of action" (Dewey and Tufts 1985, 166). For instance, customary morality is conveyed through children's fables, each of which present a "conflict which takes place when an individual is tempted to do something which he is convinced is wrong" and is "merely permitting his desire to govern his beliefs" (Dewey and Tufts 1985, 164). Because the nature of the situation is taken for granted—typically being a recurring context whose contours and consequences are familiar to a culture—morality in such an environment is thus characterized primarily as an *internal* conflict that pits imagination versus reason, desire versus duty, or ambition versus sacrifice. In direct contrast to reflective morality, "the conventional attitude sees in that situation only a conflict of good and of evil; in such a conflict, it is asserted, there should not be any uncertainty. The moral agent knows good as good and evil as evil and chooses one or the other according to the knowledge he has of it" (Dewey 1984b, 279). In such a case, there is no inquiry or intelligence needed; there is only the strength of will to do what is right or to condemn what is evil.

But matters of scientific controversy are by definition unconventional. From this perspective, the conflict between science and religion becomes better understood as a conflict between reflective and conventional morality. But this conflict, in turn, can be best understood in terms of differing ways of interpreting our environment. Reflective morality admits the fact of change and pursues inquiry precisely because it believes the problematic situations we face are unique and demand new ways of acting, whereas conventional morality is grounded in the belief in and/or desire for the stability and continuity of an environment in which traditional moral principles have value. Consequently, as Evans shows with his discussion of Baconian science, as long as science merely documented natural phenomena and filled cabinets of curiosities, religions were happy to learn more about all of God's creatures. Yet, when science began taking up the mantle of Galileo again and started revealing the deeper and at times disturbing characteristics of a universe in flux, it forced religions wedded to conventional morality into a corner. Even today, Dewey remarks, "pre-scientific ideas and beliefs in morals and politics are . . . so deeply ingrained in tradition and habit and institutions, that the impact of scientific method is feared as something profoundly hostile to mankind's dearest and deepest interests and values" (1986, 83). Notably, he does not say prescientific knowledge about the natural world; Dewey means fixed ideas of morality and politics grounded in the assumption that we live, in effect, in a "block universe, either something ended and admitting of no change, or else a predestined march of events" (1984a, 195). For the fundamentalist, science represents a threat

not because it investigates natural phenomena and draws conclusions based on evidence, but because so many of its conclusions reveal the workings of a changing and evolving world that challenge the legitimacy and value of moral principles built upon the assumption of a block universe.

Replacing the opposition narrative between morality and knowledge with the methodological dictum "morality through inquiry" I believe captures the spirit of Evans's work and connects it with the tradition of pragmatic moral philosophy. Importantly, this does not restrict the meaning of the word "inquiry" to that of science; inquiry for Dewey simply means a concerted looking-into-things that combines an investigation into the nature of the situation, a comparative analysis of possible actions, and a reflection upon values and aims appropriate to that situation. Nothing guarantees agreement between different parties. However, the stress on inquiry makes knowledge, in the general sense of justified belief, absolutely central to understanding moral conflicts not only in their negotiation but even more importantly in their origin. This is because actions only *become* matters of moral controversy when their consequences are seen to impact a larger whole of social behavior. For instance, Evans notes that "the scientific issues in the public sphere from the 1950s through the 1970s were nuclear energy, pollution, weapons, and the genetic modification of microorganisms," but that these issues "were not generally thought of as 'religious'" and hence did not become sites of moral conflict (146). But that is precisely because the public had not fully become habituated to processing the chain of consequences that would connect these technical issues with our responsibility to other human beings. It is due to the sustained inquiry largely carried on with and in front of the public, primarily through the news and entertainment media, that has transformed each of these scientific issues into matters of religious and moral concern; undoubtedly, it will be based partly on our subsequent inquiries that these issues will be resolved.

Motives through Rhetoric

I say "partly" based on inquiry because most of the work of persuasion—for good or for ill—will be accomplished through rhetoric. Evans rightly recognizes this fact in both his diagnosis of the problem and his call for a solution. On the one hand, much of the conflict with respect to global warming derives, in his view, not from competing forms of systemic knowledge, but from "the energy industry that funds skepticism of climate change" (4). In other words, it is rhetoric in the form of propaganda that intentionally stokes doubt and division within religious communities, meaning that "there is not a religious basis for global warming denial, but rather the basis is other characteristics of evangelicals—probably that they watch too much Fox News" (4). On the other hand, Evans calls for scientists to become better rhetoricians themselves in order to create

identification where there had been division. Instead of polarizing scientific and religious communities by reproducing the myth of different ways of knowing, scientists could find ways to create common cause and therefore transcend their differences. He explains:

> Like it or not, most Americans probably view issues of intergenerational responsibility and the future of the species through a religious lens. Scientists could take components of the morality expressed by religious leaders, such as concern for the poor, and use this to facilitate the divorce of conservative Protestants from the Republican Party—at least on this issue. Groups like the Evangelical Environmental Network are working on exactly this project. But scientists will not be able to help facilitate this divorce if they imply that conservative Protestant religion somehow precludes believing scientific claims about global warming, or if scientists cannot be explicit about their own moral values. (166)

Evans discusses these possibilities only in terms of making one's moral values explicit, but the actions he recommends are self-consciously rhetorical strategies of persuasion intended to have direct political consequences. Scientists in Evans's vision must therefore admit that they are not only moral but political and rhetorical actors; only then will they have the real opportunity to create new alliances capable of confronting our enormous challenges in a way that upholds common values.

It is to help advance this agenda that I now turn to Kenneth Burke in order to provide more explicit rhetorical insight into Evans's analysis and recommendations. Burke provides a vocabulary by which morality, science, and religion can all be understood through the common language of the rhetoric of motives, thus helping to break down divisions that often separate these issues in incommensurable compartments. For Burke, no speech act, no metaphysical pronouncement, no scientific fact, no profession of faith, no statement of moral principle, is free of rhetorical considerations:

> If you would praise God, and in terms that happen also to sanction one system of material property rather than another, you have forced Rhetorical considerations upon us. If you would praise science, however exaltedly, when that same science is at the service of imperialist-militarist expansion, here again you would bring things within the orbit of Rhetoric. For just as God has been identified with a certain worldly structure of ownership, so science may be identified with the interests of certain groups or classes quite *unscientific* in their purposes. Hence, however "pure" one's motives may be actually, the impurities of identification lurking around the edges of such situations introduce a typical Rhetorical wrangle of the sort that can never be settled once and for all, but belongs in the field of moral controversy where men properly seek to "prove opposites." (Burke 1969, 26, emphasis in original)

We see in this paragraph many of the issues raised by Evans. When Rush Limbaugh praises God, he does so in a way that justifies one system of material property over another. When the textbook *Civic Biology* praises

the science of eugenics as a means of purifying the population, it implicitly places that science in the service of racial imperialism. And, when modern climate scientists predict that rising sea levels will flood many coastal cities, they insert themselves into a rhetorical wrangle over resources and priorities that has direct moral implications.

Burke clearly uses "rhetoric" here in the widest sense possible. In contrast to the common use of rhetoric as an epithet for manipulation and empty words, Burke defines rhetoric as "the use of words by human agents to form attitudes or to induce actions in other human agents" (1969, 41). More specifically, rhetoric "deals with the possibilities of classification in its partisan aspects; it considers the ways in which individuals are at odds with one another, or become identified with groups more or less at odds with one another" (Burke 1969, 22). This definition, in turn, touches on the foundational assumption of Burke's understanding of rhetoric, which is that persuasion happens primarily through the processes of identification and division, meaning that even our calculations of interest or declarations of principle *follow* from these prior identifications. In other words, Burke believes that we act based on how we identify (and separate ourselves from) other people, events, and things, based on what we believe to be our shared substances, meaning our "common sensations, concepts, images, ideas, attitudes that make them *consubstantial*" (Burke 1969, 21, emphasis in original). We see numerous examples of this in Evans. For instance, he frequently notes that when conservative Protestants are asked about their resistance to scientific beliefs, they give "essentially identity-based reasons for beliefs rather than reasons based upon higher-level beliefs" (135). In this way, their defense of Biblical literalism becomes a form of "identity boundary-drawing" and thereby serves "as an identity symbol in creating a collective identity against liberal Protestants and the broader society" (135–36). For Burke, these effects are nothing more than rhetorical consequences of identification and division grounded in the way in which our preferred vocabularies map our own world.

Rhetoric similarly influences our vocabularies of motive. Continuous with Dewey's understanding of morality as a situated affair, Burke argues that motives are shorthand terms for situations. What he means is that motives are not desires or principles or values cooped up in our inner consciousness and separate from our understanding of our environment; rather, "our introspective words for motives are rough, shorthand descriptions for certain typical patterns of discrepant and conflicting stimuli" (Burke 1965, 30). For instance, when we are in a situation of perfect equilibrium, we might profess commitment to the values of both duty and love equally because they have no bearing on judgment or action; yet, in other situations, we might find ourselves motivated by one or the other based on how we interpret the situation before us: "We act out of duty as against love when we finally responded in a way which gives us less immediate

satisfaction (we do not throw up our jobs and elope) though promising more of the eventual satisfactions that may come of retaining the goodwill of irate parents or censorious neighbors" (Burke 1965, 30). What is important here is that our choice to describe our motive as one of duty over love implies that we are within a certain type of situation that presents a specific type of conflict and whose resolution clearly favors one over the other action based on the anticipated consequences that follow from our action. Our interpretation might be wrong; that is not the point. What Burke is saying is that, like Dewey, our motive structures are determined by how we interpret our situation, and that our interpretation of our situations are formed in large part through our "vocabulary of motives" that we use to interpret signs and sum up the nature of our situation (1965, 31).

It is in this way that we can understand the intrinsically moral and political significance of science, even in the most detached, objective, and fact-ridden report. Burke notes: "As the logical positivist Rudolph Carnap has pointed out, many expressions that look like statements of fact are really commands" (2018, 95). Or at the very least, they can easily be *interpreted* as commands. For example, Evans notes that "inventing a test to see whether a fetus or embryo has Down syndrome presumes that people should avoid having children with Down syndrome. Of course, people can refuse the test, but the existence of this test, and the fact that doctors are supposed to discuss it with pregnant women, expresses the moral message" (12). A scientist or medical practitioner protesting that one is merely giving neutral facts does not resolve the issue; all language is moral insofar as it has a bearing on how we understand the situations from which we derive our motives. It must be clear, however, that there is usually not a direct line between statement and command. The neutral fact is left open to interpretation. There is nothing in a test for Down syndrome that directly commands a mother to have an abortion, and for some it might even have the opposite effect. *Yet, it does have the direct function of transforming a routine visit into a moral situation that frames a choice*. Similarly, climate science does not command us to reduce fossil fuels or change our behavior in any way; indeed, many climate deniers, when faced with overwhelming proof, simply flip over into climate change proponents who view global warming as a net positive to be embraced. Yet, climate science nonetheless alters how we understand our moral situation and forces upon everyone a set of rhetorical alternatives that realigns our political landscape. The conclusions of science do not tell us what to do; but they have a significant rhetorical function in reframing our situation by defining our constraints and possibilities. Burke stresses this point with respect to how science and journalism hide commands behind the veneer of statements:

> Repeatedly, through this route, a rhetorical ingredient is smuggled into writing that pretends to be purely scientific. For in every statement of

> conditions, there are directives more or less clearly implied. Whenever a reporter describes the scene, insofar as we believe him, we are inclined toward attitudes and acts in keeping with his description. Hence any statement as to how things are, ranging in scope from the news dispatch to metaphysical theories on the nature of God and the Absolute, functions somewhat as *inducement*. A belief that a certain state of affairs prevails can lead to an act or attitude in keeping with it. The scenic description or report thus had a certain essence or spirit that serves rhetorically to induce an act or attitude of corresponding spirit. That is why we believe that even the most positivistic of terminologies possesses a measure of rhetoric. (Burke 2018, 95, emphasis in original)

It is this power of science to redefine our moral situations that I believe is the source of much of the conflict between science and religion. For although our vocabulary of motives is formed as a net result of our total rhetorical interactions in society, the rhetoric of religion plays an extraordinarily large part in the formation of this vocabulary, especially for the young, with the statements of science always following afterwards to complicate its stable vision of order. The rhetorical aspect of religion, assuring us that we live in an ordered cosmos, would be included in what Evans refers to as a functional definition of religion which represents "a combination of understanding the social world and telling us what we should do in the social world" (65). Evans draws from Clifford Geertz to provide a definition of religion which supports Burke's rhetorical interpretation. Geertz argues that religion is "(1) a system of symbols (2) which acts to establish powerful, pervasive, and long-lasting moods and motivations in men (3) by formulating conceptions of a general order of existence and (4) clothing these conceptions with such an aura of factuality that (5) the moods and motivations seem uniquely realistic" (quoted in Evans, 65). Important about this quotation is how it describes moods and motivations as seeming uniquely *realistic*. For Burke, this means that religion provides a description of our environment and a vocabulary for recurrent situations whose properties, objects, relations, and causal attributes we are to take as actually existing and hence determinant of our moral judgments—a vocabulary that often finds itself at odds with the subsequent statements of science.

Curiously, however, Evans seems to draw back from the consequences of this analysis, concluding that Geertz and others have shown that "religion is not about knowledge of the natural world" (65). Yet, this conclusion does not follow. Religions which provide moods and motivations that seem uniquely realistic cannot help but make knowledge claims about the natural world. Pro-life activists argue life begins at conception, creationists take for granted the actual existence of Original Sin, and climate deniers appeal to the fact that the Earth is God's creation. To be sure, this knowledge of the natural world does not come in the form of systematic pyramids of the type Evans rightly rejects. He posits instead that most people in the

new generations tend to be "bricoleurs" who construct their faith out of multiple sources, many of which might be contradictory. He thus concludes that "if Americans are seekers, bricoleurs, or religious individualists, taking pieces from different religious traditions without regard for how they would be embedded in a larger logical structure, it is hard to imagine that they have the logical structures about religion and science that elites assume they have" (108). This is most certainly true; but it does not mean that their bricolages are not about knowledge of the natural world. A bricolage might not be systematic, but it nonetheless is still constituted in part by propositional claims of fact that directly bear on how individuals construct the contours of their moral situations.

But this issue speaks to the larger problem of how Evans frames his inquiry by relying on the binary between morality and knowledge. For the fact is that we are *all* bricoleurs at some level, always constructing and reconstructing a version of reality from a hodgepodge of symbol systems that care little for such classifications when it comes to making moral judgments. Moreover, we would be hard-pressed to reflect on our beliefs to identify something called "knowledge about the natural world" that exists independent of our symbolic universe. Burke asks us to consider, for instance, "just how overwhelmingly much of what we mean by 'reality' has been built up for us through nothing but our symbol systems? Take away our books, and what little did we know about history, biography, even something so 'down to earth' as the relative position of seas and continents?" (1989, 58). Consequently, when we talk about things like knowledge of the natural world, what we are really talking about are some "clutter of symbols about the past combined with whatever things we know mainly through maps, magazines, newspapers, and the like about the present" (Burke 1989, 58). There are no clear distinctions in our lives between what counts as knowledge and what doesn't, about what can be classified as science and what cannot, about what we take to be myth and what we take to be fact. And there are no gatekeepers in our minds that make certain symbols always irrelevant to moral judgments and others primary. As Dewey stressed, every moral situation is unique and out of it we construct our own version of the good.

Arguably a better way to talk about conflict between religion and science is to abandon discussions of knowledge, belief, and fact altogether and speak rather of primary interpretations and secondary interpretations. Few things are more common in these conflicts than to have a scientific advocate vigorously defend facts by banging on tables, kicking rocks, or asking people if they care to jump out a window if they doubt the laws of nature. The problem is, Burke suggests, that "'facts' suggest too much of the idea that they presented themselves, and even wrote themselves. Yet words about 'facts' (literally, *things done*) cannot themselves be the facts, but can only be interpretations of those facts" (2018, 171). Burke does not deny that we

can take certain facts with great confidence when they are connected with specific actions that guarantee specific outcomes; he only wishes to emphasize that these facts are nonetheless symbolic representations that require active translation, communication, and interpretation. Consequently, "a more critically admonitory word for 'facts' that would still leave them with a certain priority would be 'primary interpretations'—and the arrangement of such 'facts' in a meaningful order might then be called 'secondary interpretations'" (Burke 2018, 171). These secondary interpretations would represent any number of sociological categories—philosophies, ideologies, attitudes, myths, stereotypes, theories, dogmas, or fantasies. Whatever their character, these secondary interpretations share the same function of embedding primary interpretations within a larger narrative understanding that places the facts in a dramatic relationship to action.

Using this more rhetorical language of interpretation helps clarify what is really at stake in *Morality Not Knowledge*. For instance, Evans brings up the example of the development and use of reproductive genetic technologies that shows the relationship between primary and secondary interpretations. He notes that most religious people "view scientific technologies like most people view guns. It is not that they should not exist; it all depends upon what they are used for and who controls them. Most religious people think reproductive genetic technologies are great—as long as they are used to further God's wishes, such as the elimination of disease" (158). Here, we see genetic technologies accepted at face value in terms of primary interpretations, which is to say they accept that these technologies exist and have the capability of altering the genetic makeup of human embryos. Any conflict would involve secondary interpretations in which individuals draw from their respective symbols systems to construct competing moral situations that dramatize the larger scene, the character of the actors involved, their purposes, the agencies they use, and the acts they perform. As Evans explains, "what would be in conflict are subtle moral differences, such as scientists and the religious having different notions of what a disease is, with the scientists relying upon contemporary conceptions of disease and the religious on their interpretation of religious views" (158). From this narrative, we can see that the moral judgment is a result of the interaction between primary and secondary interpretations, each drawing from different symbolic resources but coming together to create a single moral situation.

Yet, Evans confuses the matter by insisting on using the language of "knowledge" as opposed to some vaguely defined *not*-knowledge. In between the two passages quoted above, he writes: "Again, none of this is about knowledge, as the religious people are willing to conclude that scientists have their facts right about genetics and reproduction" (158). This is simply not true. None of this may be about primary interpretations in the way that fossil ages are debated by creationists, but to say that

none of it is about "knowledge" is highly misleading. For instance, Evans summarizes the views of one religious respondent who favored research into genetic technologies by reasoning "not so much that God's plan should be in control, but that we humans are on our own to select good and evil. We have free will. There is still good, and the respondent seems to know what it is, but this choice is part of the human condition. God is not a micro-manager" (158). How do these assertions about the nature of God, morality, free will, and the natural world not represent "knowledge"? One can, of course, wheel in a scientific epistemology to make hairsplitting distinctions between what counts and does not count as knowledge, but then one would be reproducing the very binary thinking from which Evans is trying to liberate scientists. Rhetorically speaking, knowledge is simply what people think they know, just as persuasion requires respecting that knowledge in order to appeal to it and direct it toward an imagined good.

Conclusion

The greatest challenge that scientists face is therefore not one of primary interpretation but of secondary interpretation. There will be, of course, those who resist even primary interpretations of science because of their desire to maintain their block universe, but as Evans has shown these tend to be in the minority. The majority of those skeptical or resistant to science are of three types. First, there are those whose secondary interpretations are based on a largely conservative suspicion of how the technological innovations based on science will be used by governments and corporations to exploit human populations. This involves suspicion not of the science itself but of what Evans refers to as the "Frankenstein-type figures" who will pervert technologies for material gain or power (171). Second, there are those who are suspicious of the content of scientific theories themselves based on the belief that "scientists really do teach the public a certain morality, as social scientists and humanists have long claimed" (171). In these cases, most visibly in debate over the teaching of evolution, people see science as corroding the integrity of our moral environment in which actions prohibited by religious worldviews suddenly become acceptable and natural. Lastly, there are those who deny scientific conclusions as a rationalization for maintaining their current lifestyle in the face of inconvenient truths. In these cases, such as global warming, corporate and political propaganda exploits anxieties and uses religious justifications to advance material interests.

Against the recalcitrance of these secondary interpretations, science is virtually helpless if it relies simply on the power of its "facts" to transform public opinion. To pursue such a strategy is simply to provide more fuel to the machinery of secondary interpretations, particularly those like

Fox News that turn a profit from mocking scientific "facts." However, neither is it sufficient to simply discuss morality as if it was somehow separate from knowledge. The moral values professed by scientists are undoubtedly no different than those professed by ordinary citizens (as outside of their professed specialization they *are* ordinary citizens). The gap between science and the public (religious or otherwise) has nothing to do with moral value in the abstract and everything to do with the scope and complexity by which we symbolically interpret our common situation in the world and construct a new vocabulary of motives consistent with that situation. Certainly closing this gap requires clear and engaging communication of primary interpretations of the type we see in popular scientific journalism; but today it also requires an obligation to construct secondary interpretations capable of making sense of these new "facts" and placing them in relationship to one another that satisfies not only our practical demands but also our emotional, social, economic, religious, and moral ones.

In her book, *In Catastrophic Times: Resisting the Coming Barbarism*, Isabelle Stengers puts forward a name to "mark the unprecedented character" of the situation in which we find ourselves in the wake of the global warming event; she calls it the "intrusion of Gaia" (2015, 42). Drawing from Greek mythology, Stengers finds in Gaia, the ancestral mother of all life who represents both new life and violent death, a powerful symbol to help us come to terms with the magnitude of our problematic situation. That her aim is explicitly rhetorical is quite clear. Stengers writes that "naming Gaia and characterizing the looming disasters as an intrusion arises from a pragmatic operation. *To name is not to say what is true but to confer on what is named the power to make us feel and think in the mode that the name calls fo*r" (2015, 43, emphasis in original). Specifically, Gaia replaces the old notion of a fixed Earth or separate nature that somehow stands apart from us or is simply "given" to us as an object. For Stengers, invoking the symbol of Gaia as something that *intrudes* upon us is a matter of "provoking a sense of belonging where separation had been predominant, and of drawing resources for living, struggling, feeling, and thinking from this belonging" (2015, 42–43). To think through Gaia is thus to interpret what had previously been inert scientific facts about climate, the seas, the air, the forests, polar bears, methane, bees, and droughts as suddenly active and potentially threatening agents in a profoundly challenging moral situation that demands our urgent and collective response. In other words, Stengers offers to the public a profoundly original secondary interpretation capable of translating the results of science into a meaningful situation that helps reveal our moral responsibilities. Anything less than a comparable effort on the part of all of us who care for our common world will fall short of the rhetorical commitment required to prevent the coming barbarism.

References

Burke, Kenneth. 1965. *Permanence and Change: An Anatomy of Purpose*. Berkeley: University of California Press.
———. 1969. *The Rhetoric of Motives*. Berkeley: University of California Press.
———. 1989. *On Symbols and Society*, edited by Joseph Gusfield. Chicago, IL: University of Chicago Press.
———. 2018. *The War of Words*. Oakland: University of California Press.
Dewey, John. 1948. *Reconstruction in Philosophy*. Boston, MA: The Beacon Press.
———. 1984a. *The Quest for Certainty: A Study of the Relation of Knowledge and Action*. In *John Dewey: The Later Works*, vol. 4, edited by Jo Ann Boydston. Carbondale: Southern Illinois University Press.
———. 1984b. "Three Independent Factors in Morals." In *The Later Works of John Dewey*, vol. 5, edited by Jo Ann Boydston, 279–88. Carbondale: Southern Illinois University Press.
———. 1986. *Logic: The Theory of Inquiry*. In *The Later Works of John Dewey*, vol. 12, edited by Jo Ann Boydston. Carbondale: Southern Illinois University Press.
Dewey, John, and James Tufts. 1985. *Ethics*. In *John Dewey: The Later Works*, vol. 7, edited by Jo Ann Boydston. Carbondale: Southern Illinois University Press.
Evans, John H. 2018. *Morals Not Knowledge: Recasting the Contemporary U.S. Conflict between Religion and Science*. Oakland: University of California Press.
Stanley, Jason. 2018. *How Fascism Works: The Politics of Us and Them*. New York, NY: Random House.
Stengers, Isabelle. 2015. *In Catastrophic Times: Resisting the Coming Barbarism*. Paris, France: Open Humanities Press.