NOURISHING THE SPIRIT, REFLECTION AND DIALOGUE WITH OUR STUDENTS ON THE QUESTION OF INTELLIGENT DESIGN: WHAT ARE WE LIKELY TO ENCOUNTER AND HOW MIGHT WE PROCEED?

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INTRODUCTION

In her 1993 text *Educating For Intelligent Belief and Unbelief*, Nel Noddings advocated an ambitious plan to challenge our students; she wished to engage them in a dialogue on the religious issues that define those questions, which "matter deeply to us."[1] This was seen as a dialogue that can take place at all levels of education, but was initially aimed at helping teachers learn to explore links between traditional subject matter and profound existential and religious questions. More recently there has been a chorus of citizens who have called for just this: the linking of thoughts on intelligent design and the origin of humankind with traditional school subject matter: namely biology. Intelligent design theory is an attempt to address what a minority of theorists believe to be a weakness in evolutionary theory. According to this theory, many life processes are inexplicable without an appeal to the presence of an intelligence designing these processes. While the question of a "designer" is often left open, it has become clear that the designer is for many the Creator: the moving force behind the Biblical, creationist account of the origin of life. In many respects, the emergence of intelligent design theory represents an attempt by some citizens to infuse the science curriculum with profound existential and religious questions: precisely what Noddings had called for. The emergence of this controversy constitutes an educable moment for all concerned citizens whether or not they are directly involved in our public schools. Unfortunately, the controversy often generates more heat than light when it comes to school policy or classroom practice.

This paper's aim is to contribute to the process of transforming this controversy into an educable moment. It does so in the spirit of both Noddings and John Dewey who encouraged both dialogue as well as scientific inquiry into those matters of supreme significance. Furthermore, since as Dewey observed, the problematic situations that educators encounter should become the stimulus for research, I have launched an inquiry to better understand the terrain on which we may deliberate with our students about the controversy over intelligent design. To that end, I initiated an assessment of the students themselves and the ideological perspectives that they bring to the classroom. Indeed, as Paul Farber pointed out in his 1995 *Educational Theory* essay on Noddings' text, Noddings largely ignored students, inadvertently portraying them as an "undifferentiated, though inquisitive, mass."[2] Thus the first step

toward clarifying the nature of this potentially educable moment is to find out what our students think. To this end, 186 undergraduate students have been surveyed to find out where they stand on a number of questions pertinent to religion, religious scripture, spirituality and the question of whether or not there even should be a dialogue on the controversy over intelligent design in a public school classroom. A brief summary of the results of this research will be presented. Finally recommendations will be advanced on how we might proceed should we wish to foster a dialogue on these issues.

A Profile of Our (Perhaps Just My) Students

Part of the inspiration for my survey was the assertion made by President George W. Bush in the midst of the intelligent design lawsuit in the Dover Area School District in Pennsylvania, that we should "teach the controversy." Yet more recently, in her essay that appeared this summer in the *Harvard Educational Review*, Noddings appears to agree. As she writes, in her estimate "we should add frank, critical discussion of evolution and intelligent design" into our classroom "wherever the topic arises—in science, history, mathematics, or English."[3] However, it appeared to me that a question is being begged: before we can think about "teaching the controversy" we must determine the degree to which a significant controversy worthy of classroom time truly exists. This is not to suggest that our students are the final arbiters of the significance of a controversy; nonetheless to ignore them would undermine any attempt at capitalizing on a potentially educable moment. Furthermore, we must also be prepared to distinguish between three different terms under which this controversy can be said to exist: 1) as a scientific controversy, 2) as a philosophical controversy, and 3) as a public policy controversy. Since the overwhelming majority of scientists and science educators maintain that there is no controversy, it is clear that what we have is a philosophical and public policy debate, which may be legitimately addressed in a classroom. One measure of how this is not a scientific controversy, but rather a philosophical issue was illustrated by the Dover school district court case in which it was revealed that, by the school boards "standards," we might just as well introduce the "controversy" over the use of astrology as opposed to psychology for the purpose of counseling people.

My primary goal in conducting a survey was thus to determine the point at which a controversial issue might be deemed significant enough to be included in a classroom discussion. My questionnaire was designed to gradually introduce students to increasingly contentious and significant discrepancies over a controversial matter, beginning with the question of the quality of a bicycle and proceeding through a question of the validity of astrology, the appropriateness of tobacco warnings, the validity of global warming and finally intelligent design. In each instance, students were asked to estimate the point at which the percentage of dissenting voices created a genuine controversy worthy of our closer inspection. After all, if 90% of

experts agree, then the 10% of dissenters may not constitute as serious of a controversy as say a 60/40 split. This of course, is the point that many scientists make with regards to intelligent design: there is no controversy. Rather, as the Discovery Institute, which promotes intelligent design theory, will also concede, the issue need not be framed as a scientific controversy; rather, the controversy is being launched for social and political policy purposes. This makes it critical that the philosophical underpinnings of the controversy become the true focus.

Only at the end of my survey did I ask students some general questions about their spiritual or religious orientation. Of 186 subjects, the students could be divided into four distinct groups with regards to religious/spiritual orientation: the conventionally religious/spiritual (35%), the unconventionally religious/spiritual (27%), students who were uncertain (23%), and committed materialists (15%). In addition to questions about their experience with religious services and education, the students were asked about the degree to which they took a literal interpretation of scripture, or whether they thought it held any value toward understanding life—even if only symbolically. The key question for my survey, however was this: how many dissenting scientists would it take before the controversy over intelligent design would be deemed worthy of classroom debate in a public school? In multiple-choice fashion, students could choose from the following percentages of dissenting scientists sympathetic to intelligent design: 10%, 25%, 40%, 50% or 60%. Overall, only 6% of the surveyed students thought that if as few as 10% of scientists were sympathetic to intelligent design, then it should be discussed in a public school science class. The overwhelming majority of students maintained a threshold of 40% or more dissenting scientists. I hasten to add, that nowhere near such a large percentage of dissenting scientists supporting intelligent design actually exists. Nonetheless, it was perhaps not surprising that of all of the students surveyed, the one group that had the lowest threshold of dissenting scientists was that group most inclined to endorse a literal interpretation of scriptural authority; while they were a minority of the "conventionally religious" they had the greatest sympathy to the smallest group of scientists who were deemed "dissenters" from Darwin and believed in intelligent design. One fourth of this group dropped the threshold for dissenting scientists to 10% and a little over a third more held the threshold at 25%, meaning more than half of this group was more eager to see intelligent design discussed in a public school classroom. No other group was marked by such percentages. It should be emphasized that a majority of students (62%) nonetheless identified themselves as having a religious or spiritual orientation—regardless of whether this was determined to be conventional or unconventional. What, we may ask, could this all signify, philosophically and practically for classroom policy? In the remainder of this paper, I will venture my best guess.

Understanding Science Understanding Metaphysics

In their 2004 essay, Rosenblith and Priestman, nicely summarize the rationales advanced by both Warren Nord and Nel Noddings for a curriculum that addresses religious literacy in public schools. Religious literacy merely reflects an understanding of religious vocabulary and religious doctrine, something that is well within the Supreme Court guidelines which otherwise banned prayer and devotional Bible study. At another level, this is also an issue of respect for diversity in a pluralistic society.[4] In a country where such a large majority of the citizens profess religious beliefs (and my survey bears this out), it would appear insensitive and disrespectful to ignore the religious voice in our culture. Rosenblith and Priestman, however, carry this discussion one step further. They advance a discussion over whether it is possible to show respect for religion without entertaining the possibility that there are valid truth-claims to be found in religion. Indeed, to this end it is suggested by coauthor Rosenblith: "to demonstrate true respect, we must submit religious claims, beliefs, and experiences to some shared process of evaluation."[5] Yet, the problem is not so simple. As coauthor Priestman contends, since religions often make claims about "metaphysical Truths" that are not found on reason, they are beyond the scope of our evaluation.[6] It would appear then very difficult if not impossible to establish a widely accepted standard to evaluate the truth claims of religion. I would like to propose an alternate route that would offer students the opportunity to examine, compare and contrast alternate metaphysical paradigms—paradigms that may be said to underlie not only religious traditions, but science as well. This would be the preferable way of examining the nature of the conflict perceived by some between Darwin's theory of evolution and intelligent design.

In many respects, this conflict is not between science and religion. It is between different metaphysical paradigms. After all, there are scientists deeply committed to their religious traditions who do not perceive a conflict between their religion and evolutionary theory. For this reason I believe it is misguided to juxtapose evolution and intelligent design in a public school debate—and my students would appear to agree overwhelmingly. Rather, we need to introduce students to a basic discussion of underlying assumptions. It is true that such an approach as I am advocating would not necessarily establish the claims of particular religious truths per se; but it would provide a context in which we could perhaps, as Aldous Huxley recommended, distinguish a good metaphysic from a bad metaphysic. A good metaphysic, Huxley suggests, is simply one that corresponds reasonably closely with observed and inferred reality. That is, it does what Rosenblith suggests: it provides a shared process of evaluation; a bad metaphysic does not.[7]

I would like to propose four different metaphysics, each of which can be examined in terms of the kind of truth claims they make: smaller truths or larger absolute "Truths" with a capital "T." Furthermore, these truth claims can

be examined in terms of their foundational claims to the source of their validity. That is, the validity of the truth claims are anchored in one or more of three arenas: these arenas are composed of *internally* valid truth claims, *externally* valid truth claims, and those claims on truth that rest solely on *traditional* sources of validity—such as scripture. We may now summarize these four metaphysics, but I wish to emphasize that these paradigms constitute a tentative proposal that is aimed at fostering a new direction for our dialogue.[8]

Supernatural Metaphysics

A Supernatural Metaphysic is what most people may think of when they hear the term "metaphysic," in so far as metaphysics is deemed to stand for a reality beyond the physical world in which we normally live. This metaphysical paradigm advances a strict dualism between the natural world of sense experience, and a supernatural world beyond sense and ordinary human experience. It is the same dualistic approach, which distinguishes the soul from the body and identifies a Supreme Being of supernatural qualities. The validity of Supernatural Metaphysics rests primarily with tradition. Such claims to traditional validity uniformly rest with an established authority that is not questioned but is accepted as a foundation of "faith"—it is not found on reason and is beyond the scope of rational evaluation. Many traditions are linked to either scripture or a particular individual personality or both. Belief in the validity of the scripture or religious leader—the traditional source of validity—does not extend beyond those that can accept these sources as authoritative. For this reason, there is little or no external validity inherent in a Supernatural Metaphysic, in so far as non-believers cannot publicly verify the claims to Truth in this paradigm. With regard to internally valid claims, which are based upon personal, subjective experience, they are nice but not necessary. Indeed, if we are to believe the scriptural story of the doubting Thomas, then merely believing through faith without the verification of personal experience is deemed much more laudable.

Philosophical or Metaphysical Naturalism

Philosophical or Metaphysical Naturalism advances the metaphysics of materialism. While this may seem an oxymoron to some, it is not since Philosophical Naturalism, like Supernatural Metaphysics makes a claim to Truth with a capital "T." Indeed, this is its one absolute claim: the material world is the *only* reality. Some, especially religious thinkers, consider Philosophical Naturalism as the official metaphysics of science. Its principal focus is on publically observable, publically verifiable truth with a small "t." For this reason, while its claim to small truth is high on external validity, its claim to a valid position on "Truth" is no more secure than that of Supernatural Metaphysics. This point is similarly made by Bertrand Russell who suggested that dogmatic religious claims and the assertions of the skeptical materialist are both absolute philosophies: one is certain of knowing, the other of not knowing. For Russell, and our educational purposes, philosophy should

dissipate undo, arrogant certainty, whether of knowledge or ignorance.[9] Indeed, whenever dealing with absolutes, Russell's statement offers a caution to epistemological arrogance: something that sometimes affects both religious dogmatists and scientific skeptics. What is called for is something quite rare: epistemological modesty and humility.

In Philosophical Naturalism, no authority is allowed to be sacred—except, perhaps its materialistic assumption. All other truth claims are open for further testing, verification or rejection. Public, consensual validation is the hallmark of external validity and the central path toward establishing truth. In an extreme form of Philosophical Naturalism, sometimes termed scientism, there is no room for internally valid truth claims that are subjective and remain unverifiable.

Methodological Naturalism

Methodological Naturalism differs most significantly from Philosophical Naturalism in that it makes no Truth (capital T) claims regarding the ultimate materialistic nature of reality. Rather, it assumes that the tools of scientific inquiry are limited to those features of reality that lend themselves to scientific study. Whether or not there are other realities or Truths (capital T) is outside the domain of study for Methodological Naturalism. In other ways, it is similar to Philosophical Naturalism in that it emphasizes truth that is externally valid and open to public inspection and consensual agreement. Likewise, there are no sacred authorities, personal or textual.

Naturalistic Metaphysics

The guiding principle underlying a Naturalistic Metaphysic is that articulated by Aldous Huxley. Huxley assumes, as many do that it is impossible to live without a metaphysic. Hence for him, the choice given us is not between some kind of metaphysic and no metaphysic; rather, it is between a good metaphysic and a bad metaphysic.[10] For Huxley, a "good" metaphysic is, as indicated, that which corresponds reasonably closely with observed and inferred reality. For this reason, a Naturalistic Metaphysic is firmly committed to scientific method and inquiry as a means of building external validity and a consensual measure of truth—small "t" or capital "T" Truth. While traditional sources of validity (authorities and scripture) may be respected, the question that must be asked is not whether custom and traditional authority will be respected and followed, but rather our choice is as Dewey suggests, between adopting more or less intelligent and significant customs from a competing range of traditions.[11]

Perhaps the most distinctive feature of a Naturalistic Metaphysic is its approach to that category of truth, which may be said to hold *internal validity*—personal subjective experience. As John Dewey also understood, "knowledge" –meaning scientific understanding—is not our only *mode* of

understanding.[12] There is much that we learn from personal private experience that is not yet open to public inspection and verification. This does not render such understanding invalid. Rather, it underscores the idea that not everything we learn in life can be readily subjected to public inquiry—it may remain internally or personally valid. There is thus a limit to our claims to the validity of such truths: we cannot expect others to find the understandings we reach through personal experience to be persuasive, unless they have had similar experiences. A case in point would be a personal encounter with an extraterrestrial life form or a religious experience. But even here, with regard to religious experience, Dewey was confident that it was only a matter of time before scientific method would be applied toward its study. Research over the past 40 years has begun to fulfill Dewey's prediction.

While a Naturalistic Metaphysic is willing to advance a conception of "Truth" with a capital "T" it does so in the manner advocated by Huxley: as a "minimum working hypothesis" which is open to revision and/or rejection.[13]

A Concluding Discussion

As already considered, several authors make a persuasive case for our public schools to treat religion in their curriculum. Religious literacy is a compelling goal, in so far as it helps students understand the vocabulary of religious dialogue and the diversity of religious tradition. However, if schools are willing to engage students in the kind of existential exchange that Noddings would recommend, I believe they would be better served by focusing their discussions on the underlying metaphysical assumptions that appear to be at the heart of the most intense disagreements. There are two reasons why this recommendation is made; they each have to do with the equally incommensurable nature of religious ideologies, within the religious domain, and the often mutually exclusive status of certain religious ideologies and the principles of scientific inquiry. For this reason the examination of the underlying metaphysics of these alternate visions helps to expose and clarify the incommensurable nature of these ideological conflicts.

This is not to suggest that students could not also learn about the arguments that have been advanced for the existence of God as Noddings suggests. However, I suspect that the critical impediment to such a discussion is more psychological than philosophical. What philosophers like Noddings and authors such as Warren Nord seem to overlook is the impact of what social psychologists refer to as the "confirmation bias." The application of this widespread phenomenon can be stated in a simple assertion: *believing is seeing*.[14] As social psychologists point out, we are much more likely to hear, attend to and remember arguments that support our beliefs and biases than we are those statements, testimonials and other bits of evidence that contradict them. For this reason, students should spend more time examining the fundamental, underlying metaphysical assumptions to their beliefs rather than

engage in an extensive review of competing religious doctrines and how they conflict with each other and with science.

I will concede that the terms under which I have described the aforementioned metaphysical paradigms may betray my own bias and sympathy for a Naturalistic Metaphysic. It is the model advanced by both John Dewey and Aldous Huxley. In addition to the reasons stated above for preferring this model, I believe it provides an appropriate means of addressing the most recent attack on the theory of evolution. This most recent attack on the teaching of evolution in public schools is one that urges schools to "teach (the) strengths and weaknesses of evolution." This call is accompanied by the slogan "open minds teach both sides."[15] In this instance, we are not being asked to teach intelligent design, just the *weaknesses* in the theory of evolution. This is a fair request. However, it does not go far enough. Indeed, it provides a more compelling rationale for why students need an elementary understanding of the philosophy of science and competing metaphysical paradigms. In effect, what students need to learn is something about the nature and range of scientific inquiry and how it differs from religious inquiry: both approaches to religious inquiry that see themselves compatible with evolutionary theory and those approaches which view scientific assumptions and religious doctrine as mutually exclusive.

I think it is clear that the central problem in the debate over evolutionary theory and religion in our public schools comes down to the inherent conflict between a supernatural approach to metaphysics and the alternate metaphysical paradigms. In some respects, unless the metaphysical underpinnings are first laid bare, discussions over God's existence and/or intelligent design may be the 21st century equivalent of discussing the question of how many angels can stand on the head of a pin. The strengths and weaknesses we should be discussing are those of the competing metaphysical assumptions.

Yet, having said this, I think it is time to acknowledge that honest reasoning and debate is not necessarily going to be welcomed by Darwin's critics. I do not suspect that they want a discussion on the strengths and weaknesses of a Supernatural Metaphysic. Indeed, as suggested, the root of our challenge may be psychological, not philosophical. Summarizing a large body of research, social psychologists Carol Tavris and Elliot Aronson offer us this caveat:

> Most people, when directly confronted by evidence that they are wrong, do not change their point of view or course of action but justify it even more tenaciously. Even irrefutable evidence is rarely enough to pierce the mental armor of self-justification.[16]

As Tavris and Aronson also point out, when it comes to firmly held religious convictions, one is not likely to change any minds with a discussion of

strengths and weaknesses in metaphysical theories. Indeed, people who are somewhat insecure in their religious outlook are going to feel most uncomfortable with anyone or any set of ideas that challenge their fundamental faith and beliefs. The mere presence of contradictory statements (i.e., Philosophical Naturalism) can arouse the painful dissonance of doubt. People seek a sense of consonance regarding their identity, beliefs and self-image and are made most uncomfortable by the presence of those people or ideas whose mere presence may inspire doubt—in them or, in the case of our schools, in their children. For this reason, it is highly ingenious for critics of Darwin to call for an "open discussion" on the strengths and weaknesses of evolution. I do not believe an open discussion of metaphysical paradigms would be as welcome, even though this is precisely the kind of discussion that is needed.

It must also be conceded, however, that, as Tavris and Aronson also state, not all scientists are scientific, open-minded and willing to give up their strong convictions either.[17] One can adhere to Philosophical Naturalism—scientism—with the same degree of dogmatic certainty and epistemological arrogance that one can adhere to a supernatural approach to metaphysics. What may be the most valuable outcome of the kind of dialogue suggested here is that it might help us identify the difference between epistemological arrogance and epistemological humility. In a pluralistic, democratic society there is little doubt that epistemological humility and modesty are critical for advancing democratic ideals. Conversely, the arrogance and self-righteousness that affects those who subscribe to a dogmatic, Supernatural Metaphysics has a history of inspiring cruel, inhumane and undemocratic actions. Dewey was quite candid about this problem and the challenge that it poses to the democratic ideal. In *A Common Faith* he wrote:

> I cannot understand how any realization of the democratic ideal as a vital moral and spiritual ideal in human affairs is possible without surrender of the conception of the basic division to which supernatural Christianity is committed.[18]

The best explanation I have found for why a dogmatic, supernatural Christianity (or any dogmatic supernaturalism) may be incompatible with our democratic ideals is provided by Huxley, whose words will conclude my paper: "It is fatally easy to kill people in the name of a dogma; it is blessedly difficult to kill them in the name of a working hypothesis."[19]

NOTES

[1] Nel Noddings, *Educating for Intelligent Belief or Unbelief* (New York: Teachers College Press, 1993).

[2] Paul Farber, "Tongue Tied: On Taking Religion Seriously in School," *Educational Theory* 45, no. 1 (1995): 85-100.

[3] Nel Noddings, "The New Outspoken Atheism and Education," *Harvard Educational Review* 78, no. 2 (2008): 387.

[4] Suzanne Roxenblith and Scott Priestman, "Problematizing Religious Truth: Implications for Public Education," *Educational Theory*, 54, No. 9 (2004): 365-380.

[5] Ibid. 372.

[6] Ibid. 374.

[7] Aldous Huxley, *Ends and Means* (New York: Harper and Brothers, 1937), 291.

[8] Some of the ideas I present are discussed in Barbara Forrest' essay "Methodological Naturalism and Philosophical Naturalism: Clarifying the Connection," *PHIL* 3, no. 2 (2000): 7-29.

[9] Bertrand Russell, "Philosophy for the Layman," *Unpopular Essays* (New York: Simon and Schuster, 1950), 27.

[10] Huxley, *Ends and Means*, 291.

[11] John Dewey, *Human Nature and Conduct*, *The Collected Works of John Dewey, 1882-1953* The Electronic Edition, mw 14.58.

[12] John Dewey, *How We Think*, *The Collected Works of John Dewey, 1882-1953* The Electronic Edition, lw.8.226-227.

[13] Originally published in Aldous Huxley's 1944 novel *Time Must Have a Stop*, (Urbana/Champaign: Dalkey Archive Press edition, 2006): 247-249. Subsequently republished in *Vedanta For the Western World*, edited by Christopher Isherwood, and more recently in *Huxley and God; Essays*, edited by Jacqueline Hazard Bridgeman.

[14] Carol Tavris and Elliot Aronson, *Mistakes Were Made (but not by me): Why We Justify Foolish Beliefs, Bad Decisions and Hurtful Act* (New York: Harcourt, 2007).

[15] See the following web site: http://www.strengthsandweaknesses.org/weaknesses.htm

[16] Carol Tavris and Elliot Aronson, *Mistakes Were Made*, 2.

[17] Ibid. 102.

[18] John Dewey, A Common Faith, *The Collected Works of John Dewey, 1882-1953* The Electronic Edition, lw.9.56.

[19] Aldous Huxley, in "Aldous Huxley's Revisions of the Old Raja's *Notes on What's What* in His final Typescript of Island," *Aldous Huxley Annual* (in press)