

Nord's Net: "Ways of Knowing" for the Science Classroom

Paul Geisert

It is apparent that Professor Warren A. Nord has found Eddington's parable of a fisherman's net advantageous in supporting his side of an ongoing discussion about religion and science in school curricula. He has employed the story on a number of occasions in various articles. Readers should not carelessly absorb "Nord's Net," however. Whenever any given allegory finds widespread and frequent employment in intellectual discussion, it deserves some scrutiny—which is the purpose of this essay.

You may not be familiar with the net parable, so let's have Nord himself acquaint you with the tale. The following is a quote that succinctly summarizes both the parable and Nord's direct application of it. It comes from *Taking Religion Seriously Across the Curriculum*, by Nord and Haynes¹ (I am assigning this particular text to Nord since the net metaphor appears under his name alone in a number of different places.)²

The astronomer Arthur Eddington once told a parable about a fisherman who used a net with a three-inch mesh. After a lifetime of fishing he concluded there were no fish shorter than three inches. Eddington's moral is that just as one's fishing net determines what one catches, so it is with conceptual nets: what we find in the ocean of reality depends on the conceptual net we bring to our investigation.

For example, the modern scientific conceptual net—or scientific method—allows scientists to catch only replicable events; the results of any experiment that cannot be replicated are not allowed to stand. This means that miracles, which are by definition singular events, can't be caught; scientists cannot ask God to replicate the miracle for the sake of a controlled experiment. Or, to take another example, scientific method requires that evidence for knowledge claims be grounded in sense experience—the kinds of experience that instruments can measure. But this rules out religious experience as a source of knowledge about the world.

First I will place Nord's premises in the context of how two approaches to human understanding—science's "replicable events" approach to knowledge, and religion's "miracles and religious experience" approach—have interacted over the centuries. Then I will take up the educational ramifications of implementing his premises in public education.

Emergence of science's "net," and its effect on religion

Plato, who founded an academy that lasted over 800 years, taught Athenian youth philosophy, not religion. Nevertheless, it was religion that held sway on most human understanding until the emergence, in recent centuries, of what we now call modern science.

In early societies, if a person wanted to understand his or her universe and place in it, religion was a prime provider of knowledge. It was from the religion of his or her society that an ordinary person could get answers to questions about the origins and operations of the universe, the meaning of life, morality, and death. There were religious answers, provided by the priestly class, for inquiries about the conduct of the sun and moon, observed behavior of objects, death of people and living things, and other matters of ultimate concern. These answers were a blend of early observational and religious knowledge.

For an extended time, the physical realm was explained with rather simple precepts. These included such ideas as matter is made of four basic elements—earth, fire, water, and air, rocks fall because they are supposed to go down to earth and smoke rises because it belongs up in air, and spirits and spells cause disease. Applying Eddington's metaphor, the "religious knowledge fish" in the "ocean of reality" in the distant past were gigantic in size. The "net of science" had yet to take much form.

Conceptually, in olden time, gods ruled. In ancient Greece, it was certainly "known" that the sun went around the earth under the auspices of Helios. For the Romans, Sol, and for Egyptians, Ra, fulfilled a similar explanatory function for the observed reality. The heavens were some sort of fixed plane and the actual location of heaven, while there was an underworld somewhere below human feet. For millennia, those feet were firmly planted on a flat earth.

In the monotheistic western heritage, a number of concepts related to human concerns were codified in the Pentateuch, the Prophets, and the Hagiographa, forming the Bible of Judaism (constituting for Christians the Old Testament). For example, God had created the earth and universe and all kinds of creatures in seven days, Noah had saved all land life forms on earth, humans were given dominion over the earth, and so forth. All of

these concepts issued forth from religion, and one must assume, from the religious ways of thinking of the early writers. Claims are still made that God wrote the Bible through religiously inspired humans and many religions and individuals adhere to the doctrine of a literally true Bible. Clearly, in the religious past, there was no *verifiable* concept “fish” of any size or kind. Priestly explanations regarding the world and human lives in the world were not testable. There was no “conceptual net” of science, so it was not required that the evidence for their knowledge claims be, as Nord terms it, “...grounded in sense experience—the kinds of experience that instruments can measure.” Rather, explanations could be simply “made up” from common observation and religious experience. For the ordinary person, these explanatory strands would entirely satisfy desires for an intelligible reality. If the Norse priest said Thor sent thunder, then he did. Or if the Church avowed the earth to be flat, then it was indeed so.

Eventually, society gave rise to individuals whose conceptual framework did not rest on the shoulders of priests and their books. Rather, it rested on the shoulders of the universe. These persons had begun looking to their observations of physical phenomena to verify answers to questions. And, as they refined techniques to answer their questions, their actions soon yielded replicable observations. Before long, they were insisting that the universe itself could provide worthy knowledge, better even than people and their all too human institutions could provide. As science emerged, so did the knowledge claims base on its evidence. The “fish” became demonstrably verifiable concepts.

Scientists had started “weaving a science net.” The warp of the net was *rationality*, and it was intertwined at 90 degrees with the woof of *empiricism*. There had come a point in human development when the previously acceptable “explanatory strands” would not be given recognition quite so readily. Rationally developed sentences, which philosophers and religious scholars had previously produced in great abundance (and continue to produce) would no longer be accepted just because they seemed to be sensible interpretations of circumstance or because they satisfied long-lasting human yearnings. Henceforth, science would test such statements against the universe rather than against those interpretations sanctioned by religions, or against the feelings and beliefs of, or books written by, individuals.

Thus with a simple net (of rather gigantic mesh) Galileo was able to capture the movements of sun and earth. Newton’s mesh (its warp and woof woven from the equations stating the laws of gravitation) captured the nature of the movement of particles in the universe from rocks to stars. Einstein’s net (which Sir Arthur Eddington helped to establish) was finer

yet, and the quantum physicists' net today is of such acute proportions as to capture the nature of the sub-sub-particles in the nuclei of atoms.

Now each time these scientist "fishermen" hauled their nets through the universal sea, they obtained rational statements supported by verifiable empirical information (their scientific facts, laws, and theories). And all the while, as they furthered their explanatory endowment, they were snatching away cherished concepts from the religious sea of experience. Gone was the priestly power to describe accurately the movements of the sun and planets, and the origins of the universe and humankind. As the scientists' net developed both a finer mesh and a larger domain of inquiry and as the explanations of science have grown larger, the fish in the religious sea has grown smaller. Today the biological net is starting the process of capturing the nature of life, of mortality, and even of morality itself.

What is left? What "religious fish" swim in the larger ocean of reality beyond the "conceptual net" of science? Certainly God and miracles, says Warren Nord—and personal religious experience. But do we really wish, as Nord advocates, to carry our ancient religious tradition forward into public education and across the curriculum?

Public Knowledge versus Private

There is one philosophic notion I think basic to the question of whether schools should engage in teaching what Nord terms "the religious way of knowing." It is the relationship of private knowledge, which is *perhaps true for one person*, and "verifiable public knowledge" which holds true *for all people in all places at all times*.

The discipline most strictly consisting of "what is true for everybody anytime" is mathematics. Math's axioms and facts, at least what is taught at elementary and secondary levels, deal only in such a system of knowledge. Perhaps this is the reason you do not find Nord including mathematics as part of his "across the curriculum" proposal. In fact, you do not find math given mention in *Taking Religion Seriously Across the Curriculum* (except to say on the last page that perhaps there should be a year less of it). Mathematics teachers may need to be concerned about losing a year of the curriculum to make room for religion, but they need not fret about having to teach "religious ways of knowing" in their math classes. Science, on the other hand, is a major focus for Dr. Nord.

In the excerpt from Nord presented early in this essay, he states that the modern science net "... allows scientists to catch only replicable events..." and "...the scientific method requires that evidence for knowledge claims be grounded in sense experience—the kinds of experience that instruments

can measure.” But by focusing on the procedural aspects of science, he ignores the major value of science to the process of education: *The process of science produces public and verifiable knowledge.*

Science education attempts to impart to youngsters an understanding of the “scientific way of knowing” (scientific attitudes and processes and skills, and the “rules of the game”) as well as a broad base of the “scientific knowledge.” What is taught in K-12 science courses consists largely of this public verifiable knowledge that has been generated by the scientific endeavor (using its conceptual net of rationality and empiricism).

History and social studies teachers also attempt to teach verifiable history/social studies, although their task is limited by their sources of evidence. Where they can, they use original source documents and illustrate for youngsters how historians engage in their endeavors. History/social science is a highly appropriate place in a curriculum for teaching about religion, whether studied through the lens of history or as part of society.³

In these subjects—math, science, and history/social science—educators in public schools are dedicated to providing, to the extent they can, a curriculum consisting of public information that is trustworthy. Teachers may teach math, science, and history/social studies knowledge, and even teach about religion, knowing they are in little present danger of imparting to students information, concepts, or other understandings that are patently false.

The “religious way of knowing” produces private knowledge. It may be profound knowledge with respect to the individual who obtains it, but it is not externally verifiable. Neither is the content teachable without high degrees of uncertainty as to validity. This explains to some degree why most teachers are uncomfortable with the notion of teaching about a “religious way of knowing.”

Teachers know that knowledge gained through observation of miraculous events or through personal religious experience can never muster any guarantees of surety. As educated individuals, they know that when a peasant, priest, guru, or scientist speaks of his or her private knowledge (of miracles or other religious experiences and beliefs), such pronouncements are possibly true, *or* possibly erroneous, deluded, irrational, deranged, fraudulent, manipulative, or an approximation or revision of someone else’s words.

Personal expressions of religious belief, such as “The Bible is the word of God,” may be false or true. In every case, since the first day a human individual uttered a statement, *there has never been a way to determine which of the previously mentioned mental conditions is the foundation under any given personal statement.* And looking back over the panoply of possibilities with respect to the veracity inherent in a statement of private

knowledge, should educators not have immense skepticism regarding such knowledge?

Nord has used his net parable as a convincing argument that secularism and science in public education have “netted out” any instruction on the religious approach to understanding the world—the “religious way of knowing” as he calls it. He extends this argument to promote taking religion seriously across the curriculum. But I find his application of the parable to be faulty. A religious view being a private view of knowledge not publicly verifiable should not play a role in public education. Let each religion teach its religious ways of knowing to its members, but do not transfer that duty to the public school curriculum.

Schools must always choose from among the various religious ways in order to teach any, including some and excluding others. Variables and stakeholders concerned with how schools make these choices are many. There is but one “scientific way of knowing.” It works in India for Hindus like it does in the United States for Christians.

It is the task of the public schools to present an unbiased schema of secular knowledge. If teachers are to teach the religious way of knowing, then the topic, by law, must be presented from a secular viewpoint. That will be, due to the nature of the topic, taught from a posture of extreme skepticism. I am not sure Dr. Nord will exactly welcome such an outcome. Germane to Dr. Nord’s situation is a line by Oscar Wilde from the play, *An Ideal Husband*: “When the gods wish to punish us they answer our prayers.”

Notes

1. Nord, W. A. & Haynes, C. C., *Taking Religion Seriously Across the Curriculum*. (Nashville, TN: First Amendment Center, 1998): 40.
2. The net appears in articles such as Nord, W. A., “Science, Religion, and Education,” *Religion & Education* (Fall 1999) and Nord, W. A., “Is Nothing Sacred?” *Teacher Magazine* (August 1995) which can be found at www.edweek.org/tm/1995/9sacred.h06.
3. Teaching about religion, following appropriate guidelines is legal and can be desirable. This is far different, however, than Nord and Haynes’ notion of taking religion seriously across the curriculum. Additional comments and position statements and guidelines on teaching about religion can be found on OABITAR’s website (disclosure: I am a co-developer of that site) www.teachingaboutreligion.org. OABITAR (Objectivity, Accuracy, and Balance In Teaching About Religion) is a 503(c)(3) non-profit organization dedicated to teaching about religion with a view to diversity.

Warren A. Nord Responds

Eddington's parable simply points out that what sense we make of the world depends on our philosophical commitments, our worldview, our methodological presuppositions, or, to use the language of the parable, our "conceptual nets." Even if some intellectuals think critically about them, these conceptual nets often come to be *assumed*, with the result that we don't take seriously the possibility that reality is richer than (or different from) what our conceptual nets tell us is there. This is the point of Eddington's parable, and I don't see that Geisert has said anything that discredits the parable.

Geisert's problem is not, in fact, with the parable, but with religious conceptual nets, for he believes that modern scientific conceptual nets are much more trustworthy. After all, he argues, modern science makes claims that are publicly verifiable (unlike religion, which is a matter of "private knowledge"); modern science is an empirical, rational discipline (again, presumably, unlike religion). And, since schools should teach only what is publicly verifiable they should not teach (merely personal) "religious ways of knowing." If teachers do teach about religion it must, by law, "be presented from a secular viewpoint," which appears to mean for him that it must be "taught from a posture of extreme skepticism."

There are a number of problems here.

First, Geisert may well be right that scientific conceptual nets are more trustworthy than religious conceptual nets, but that makes no difference regarding whether or not schools should also teach "religious ways of knowing" (or, *take religion seriously*, the phrase I prefer). Nothing in my argument hinges on whether science or religion provides the better conceptual net. What *is* essential for my argument is the (empirically verifiable) claim that this is a matter of considerable controversy, for in spite of its cultural authority modern science continues to be highly controversial—not just among fundamentalists, but among various kinds of theologians, philosophers, and intellectuals (and, I might note, in all cultures). No doubt simple scientific facts are often uncontroversial; but at the level of basic theories, worldviews, and the relationship of science to other sectors of culture, science is often deeply controversial.

Now, if we disagree deeply about the relative merits of science and religion then, as a matter of a good liberal education, political justice, and constitutional neutrality, we cannot privilege the users of one kind of net and disenfranchise the users of alternative nets so that students remain ignorant of their potential value.

There is always a danger when people think that their way of making sense of the world is the only one that should be taken seriously. By relegating religion to the study of distant history (as is usually done) education becomes profoundly illiberal; by marginalizing religion, education discredits it. A good liberal education should initiate students into a discussion in which they hear a variety of voices.

This is also a matter of justice. Just as it would be unjust to have officially Republican schools that ignore the values and traditions of the Democratic party, so it is unjust to have schools that teach only secular ways of making sense of the world and ignore religion. Just as it would be politically oppressive to leave women's and minority voices out of the study of history and literature, so it is oppressive to leave religious voices out of the curriculum. *Public* schools must take the public seriously.

Moreover, as the Supreme Court has interpreted the Establishment Clause for more than fifty years now, public schools must be *neutral* in matters of religion—neither promoting religion *nor denigrating religion*. I take this to mean that if religion and science disagree about something important, they must include *both* scientific and (a variety of) religious interpretations in the curriculum. How else could they be neutral?

Of course public schools can't teach students that "religious ways of knowing" are more reasonable or in some sense truer than science; that would be to endorse or promote religion and would be unconstitutional. We must teach *about* religion, not practice it or endorse it. But this doesn't mean that we can only teach about religion as it is understood from within the secular conceptual nets of modern science and social science, for this isn't neutral either. Much of what religious people believe makes sense only within a religious worldview (from within "religious ways of knowing"). Students must learn about religion (or, better, about various religions) in sufficient depth and breadth so that they can make sense of it, just as they should learn about modern science in enough depth and breadth to make sense of it.

Second, if Geisert insists on using a scientific criterion of public verifiability to determine what can be taught in public schools, then we must get rid of not just religious studies, but much moral education, literature, history, and social studies, for in all of these areas of the curriculum teachers use methodologies and make claims that are not scientifically verifiable and are controversial (as the multicultural debate of the past several decades has made clear). We disagree deeply about how to interpret morality, literature, economics, and history. Again, when we disagree, we must include various points of view (as with religion).

Third, Geisert is mistaken in drawing a sharp line of demarcation between science and religion on the grounds that one makes verifiable claims and the other cannot. Even the most “primitive” forms of religion don’t just “make it up”—though their standards of evidence and what counts as verification is quite different from that of modern science. Historically, however, much Jewish and Christian theology holds that Scripture and faith-claims must be subjected to critical assessment and draws on a broad range of evidence including moral and religious experience, philosophical reasoning, and the findings of science. Within this tradition, theology is a *critical* discipline.

Augustine read Genesis 1 allegorically to reconcile it with what he knew about the world from other sources. Aquinas and Maimonides drew on Aristotle to rethink their traditions. Deists appealed to modern science and Enlightenment philosophy. By the end of the nineteenth century the theory of evolution and historical criticism of the Bible had led many Jewish and Christian theologians to make *major* revisions in their theological commitments—to the point where a powerful conservative, often fundamentalist, backlash developed.

Conservatives have often argued that religious liberals have caved in to secularism (and some, no doubt, have). Many liberal theologians would claim, in response, that they are attempting to develop *a more reasonable* view of reality than either modern science or traditional religion is capable of providing by drawing on a wider range of evidence than either is willing to consider on its own.

Let’s take as an example, evolution. While religious liberals accept the massive scientific evidence for evolution some question the adequacy of *neo-Darwinism* as a *theoretical* account of how evolution works. The biochemist Michael Behe has recently argued that the “irreducible complexity” of cellular biochemistry can’t be explained in terms of the incremental and purposeless mutations required by neo-Darwinian theory; rather, it must be explained in terms of coordinated design and a designer. (It is important to note that Behe doesn’t deny evolution, only the adequacy of the neo-Darwinian theory of evolution.) The usual scientific response is that if no scientific explanation of such cellular mechanisms is now available then we must continue to look for one because it is *never* justifiable to appeal to design and supernatural causes.

What *counts as reasonable* depends on our worldview, on the conceptual net we bring to our investigation. Most scientists rule out design explanations *a priori*. Modern science proceeds, in practice, on the assumption that scientific method is capable of catching everything in reality.

But, of course, *this* is a matter of faith, for it is clear (not least to scientists) that not everything has yet been caught: there is still a good deal that requires explanation, and many existing explanations (of cosmic evolution, the origins of life, the mind, behavior, morality) are controversial. Why should we *now* believe that science is competent to settle everything?

Moreover, as a result of considerable work in the history and philosophy of science it is now widely held that major theories (like neo-Darwinism) are not directly or unambiguously verifiable or falsifiable; their adequacy hinges on judgments made about a vast array of evidence, methodological assumptions, auxiliary hypotheses, lower-level theories that have varying levels of support and, often, aesthetic (or even political) considerations. They depend, that is, on “cumulative case” arguments; they are better or worse than their competitors *all things considered*.

But what are the *all things* that must be considered? While neo-Darwinism may explain a great deal about nature and evolution, one might argue that neo-Darwinism provides only a partial picture of nature given what we know of God from religious experience, from God’s actions in history, and from evidence of design in nature. Perhaps *all things considered*, intelligent design theory or theistic evolution can offer a more adequate and *reasonable* picture of reality.

The problem, again, is that because modern education ignores religion (religious worldviews, religious ways of knowing), it provides students no resources for making *all things considered* judgments. In fact, in *all* courses, not just science courses, we uncritically teach students to think in *secular* ways, withholding from them alternative religious ways of interpreting their subjects (history, literature, economics, morality, sexuality, health) that would enable them to make *all things considered* judgments. That is, we teach them to accept secular ways of thinking about the world *on faith* and, in so doing, we inhibit their ability to think critically or *reasonably*. If students are to be well educated, religion must be taken seriously across the curriculum.

I should say that it is not my purpose to argue that Behe is right or that Darwin is wrong. It is my purpose to argue that there is a legitimate controversy here, one that is not a matter of faith versus reason, public verification versus private commitment. Science is typically taught as a matter of faith; scientists typically proceed on the faith that scientific (or naturalistic) explanations are forthcoming. Theology, on the other hand, can (and often does) proceed critically, by drawing on a variety of scientific and philosophical insights and evidence.

Because Geisert insists on seeing everything in terms of science he can’t escape his own presuppositions and has fallen victim to the kind of

narrow mindedness that Professor Eddington's parable of the net was designed to warn us against. He is, in effect, entangled in the mesh of his own net.

Paul Geisert's Rejoinder

Professor Nord's rebuttal is but a few words short of my original essay, and he introduces many conceptual digressions. The editor has asked that I limit my response, so I will ignore manifold propositions deserving negation.

First: I am a pragmatic curriculum developer, not a skeptic. Were I advancing a "posture of extreme skepticism" toward *anything*, I might remark on how Nord's rebuttal seems to constitute a religious stealth project. Instead, I will reply here by raising an eyebrow at a strain of zeal in his work. After all, he asks for *hefty* changes in public school curricula to incorporate religion. *Taking Religion Seriously Across the Curriculum (TRSAC)* calls for teachers to teach "the religious way of knowing" in the following areas: elementary education, history, civics and economics, literature, the arts, and science. Its proposals include advocating the Bible as a course and the suggestion that there should be a year less math to make room for a year of religion.¹ *TRSAC* enmeshes "Biblical morality" and moral education. One need not be a skeptic to regard such fervor as suspect.

Second: I readily acknowledge where my own zeal surpasses Nord's. I am a *fervent* supporter of our constitutional principles guaranteeing freedom of conscience. As concerns schools, religious liberty principles are well stated in Nord and Haynes' *TRSAC*, Part I: "*We propose a third model that is consistent with First Amendment principles...: the 'civil public school,' where people of all faiths and no faith are treated with fairness and respect.*" The book's Part II, however, totally fails to even acknowledge, let alone implement, the "no faith" conception. Educators need to recognize "no faith" as a component of worldview education. Nord's rebuttal follows his *TRSAC* manuscript and falls short on this count.

Along these lines and regarding public schools, Nord consistently confuses and confounds the two concepts "*secular*" (legally neutral) and "*non-religious*." My interpretation is that he believes that a secular setting imparts nonreligious worldviews and equates to "teaching about nonreligion." This is patently erroneous. Without further discussion, I refer you to a more complete discussion of this problem in my review of *Taking Religion Seriously Across the Curriculum*.³ I would be pleased to email anyone a copy of this argument.⁴ The extant muddle prompts my proposal that future dis-

cussions employ the *civically inclusive* phrase, “teaching about religion and nonreligion,” rather than the more restrictive “teaching about religion.”

Third: Dr. Nord claims I am insistent “...on seeing everything in terms of science.” I herewith affirm that I favor public schools’ teaching *about* diverse religious and nonreligious worldviews in history and current society. However, they must do so in a legally unassailable and academically sound way. I would even favor teaching *about* both religious and nonreligious “ways of knowing,” were it possible for schools to implement such an aim guided firmly by these prior criteria and further by commitment to national pluralism. For elaboration on these points I invite you to view the web resource, “Teaching about Religion with a View to Diversity: Worldview Education,” of which I am the director.⁵

Fourth: Nord is right that I do not have a problem with the parable. My problem is with his use of it. Readers must guard against efforts to elevate religion “intellectually” by refashioning science. I have long been a science educator, and I desire to see *science* taught in schools, not some *amalgamation* of ideas that current cultural pressure (be it Christian, creationist, or New Age) promotes. As I say in the aforementioned review, “*Religiously motivated efforts to weaken teaching of scientific evolutionary theory have occupied much of the 20th century. They continue today, sometimes by direct attack on evolution, and otherwise indirectly via strategies that do not refer directly to creation. The most recent permutation is espoused as ‘intelligent design,’ and Nord has been a public advocate of these concepts.*”

Many intelligent design elements inhabit Nord’s rebuttal. He seeks to elevate theology as a “critical discipline” and blur the demarcation between science and religion. Behe, whom Nord cites as a player in a “legitimate controversy,” is an intelligent design creationist who has been firmly refuted in a review of Behe’s book in *The Scientific American*⁶ and elsewhere by numerous scientists. Nord’s other “legitimate controversies” carry a similar weight of authority. Even a brief scan for the term “neo-Darwinism” on the Internet reveals a swarm of creationist bees hoping for a “...more reasonable view of reality” to lessen the marginalization of religion. The “neo-Darwinism” Nord presents is a straw man pitted against a “coordinated design and a designer.” Numerous legal decisions have reckoned religious interpretations of evolution and creation to have no place in a science classroom.

Finally: Science teachers, by law, must teach their discipline—science. What would *science* teachers teach when they teach about these “ways of knowing”? Does Nord really *want* science teachers to teach about a kind of thinking that claims Noah placed two of every creature (conservatively

estimated at 10 million) in a small boat? Liberal religionist interpretations also offer up much raw material for scientific scrutiny and deconstruction. Reader, ask yourself: Do you *really* wish science teachers to systematically undermine the nonscientific aspects of ancient religious texts? In science, should they *actually* teach *science's* perspective on faith, *per se*?

The framework for legally edifying youngsters within secular public schools is very broad. Teachers can use literature, art, music, creative writing to avail students of information that is not publicly verifiable. Research assignments or opportunities in uncensored libraries offer students varied avenues to such information and to controversial materials. Certain aspects of curriculum, though, *must* provide mainly verifiable public information (e.g., health education, mathematics, history, and science). For example, a *public school* curriculum should no more embrace creationist argument in science classrooms than the arguments of Holocaust deniers in history classrooms. Scientists and historians are the best sources to assess the validity of subject matter for school science and history.

In his closing line Nord says of me "He is, in effect, entangled in the mesh of his own net." Well, he got *that* part correct! *My* conceptual net of science has rationality and empiricism, and I do find it to be a trustworthy net. I leave it to Nord to characterize his *own* net's warp and woof, but what he has included in his rebuttal tells me clearly that *faith* rides on his weaving shuttle. His net may serve him well, but faith should not be a guiding element in the development of public school curricula.

Notes

1. Nord, W. A. & Haynes, C. C., *Taking Religion Seriously Across the Curriculum*. (Nashville, TN: First Amendment Center, 1998): 204.
2. *Ibid.*, 16.
3. Paul G. Geisert, review of *Taking Religion Seriously Across the Curriculum*, by Warren A. Nord & Charles C. Haynes, *The Educational Forum* 66, 2 (Winter 2002): 180-188.
4. Send request to instrnsys@aol.com.
5. <http://www.teachingaboutreligion.org>
6. Refer to: <http://www.sciam.com/0197issue/0197review3.html>.