

COMMENTARY

The Perceived Conflict between Science and Meaning

Recent actions by the Kansas Board of Education (KBOE) have focused attention on the nationwide struggle over the presentation of evolution in biology classrooms (see Melott [1] for an excellent discussion). This attention provides an opportunity to improve our ability to communicate physics to the public, by making us aware of an issue underlying many conflicts between the scientific community and other segments of society.

At the root of many such conflicts is the association often made between science and a view of the world which is devoid of human meaning. Scientific explanations are commonly identified with a description of the world which lacks human meaning or purpose. In contrast, creationists and proponents of various beliefs presented in opposition to science make a very direct appeal to the desire for human meaning. They offer a view of the world in which our actions are significant in a fundamental way, and they present this perspective as being in contrast to the scientific view. This perception is a real barrier to accepting scientific ideas when, as Viktor Frankl expressed it, "Man's search for meaning is the primary motivation in his life..."[2] Most people will give up almost anything else before they will give up a sense that their lives and actions are meaningful.

This communication gap is apparent in the differing focus of editorial letters by the two sides following the KBOE decision. The scientific perspective focuses (understandably) almost entirely on questions of consistency with the overwhelming body of scientific evidence. But on the religious side (or even simply from the perspective of the average non-scientist), the central issue is not consistency with scientific evidence. At issue instead are the implications for human meaning and morality which get automatically and perhaps unconsciously linked with the terms "creation" and "evolution." From this perspective, the (assumed) moral/spiritual implications of one or the other set of beliefs form the primary focus in the debate. The scientific merits of either belief merely tag along for the ride (just as, for most scientists, consistency with scientific evidence is primary and any possible moral implications are carried along without direct consideration). Editorials from this perspective praise the KBOE decision to remove evolution from the standards with many variations of "we are not an accident," "humans are not the same as animals," and "in order to act responsibly, we need a belief system (based on creation, presumably) which holds us responsible for our actions." If we allow it to remain a battle between "meaning" and "non-meaning" and don't actively challenge the entrenched identification of science with meaninglessness, many will continue to resist our arguments, no matter how overwhelming the evidence we offer.

An analogy may help illustrate the concrete impact of shifting our approach slightly. Imagine communicating (by radio) with someone lost in the desert, near death from dehydration. She has focused her attention on an oasis in the distance, which we know to be a mirage. We're trying to convince her that she will find no water by heading to the oasis (mirage). In arguing our case, we'll have a much better chance if we recognize that the oasis represents a great deal more than just a source of water; it also represents her last hope. While we may be arguing on the basis of the scientific evidence for believing it's a mirage versus believing it's an oasis, for her the debate is also a battle between maintaining hope and giving up hope. If she gets the impression that we don't even care that she is thirsty, if we don't acknowledge her thirst as a reasonable feeling to experience, then she is very unlikely to listen to us at all. She'll conclude that we have no understanding of her situation and thus that we have nothing relevant to say to her. On the other hand, if we communicate a clear sympathy for her predicament, pointing out that there's hope of finding water elsewhere if she doesn't chase the mirage, we'll have a much better chance to persuade her. We allow the possibility for her to accept our evidence without also giving up the hope which is crucial to her.

A more general expression of this unease about science is found in the writing of such popular anti-science proponents as Bryan Appleyard, who points out with some degree of truth that "On the maps provided by science we find everything except ourselves,"[3] that "Science, quietly and inexplicitly, is talking us into abandoning ourselves, our true selves,"[4] and draws the disturbing conclusion, "...we must resist, and the time to do so is now." [5] By appreciating this perspective many people bring to their interaction with science, we'll be better able to get them to listen to the evidence we wish to present, not just on the creation/evolution debate, but on a variety of topics such as astrology, UFOs, ESP, etc. Sensitivity in this regard can go a long way toward opening ears which otherwise might remain closed to the words of scientists. If in our zeal for "debunking" incorrect beliefs we give the

impression that scientists view the needs behind these beliefs as evidence of a lazy desire to be comforted and consoled, then I fear we will only further alienate those we wish to persuade.

Todd Duncan
Science Integration Institute
1971 SE 73rd Ave
Hillsboro, OR 97123
duncan@scienceintegration.org
(503) 848-0280
www.scienceintegration.org

[1] Melott, Adrian. "What Happened to Science Education: Kansas and Beyond,"
Physics and Society, vol. 29, no. 2, April 2000, pp. 6-9.

[2] Frankl, Viktor E. *Man's Search for Meaning*. Washington Square Press,
New York, 1984, p. 121.

[3] Appleyard, Bryan. *Understanding the Present*. Doubleday, New York, 1992,
p. 14.

[4] *Ibid.*, p. xvi.

[5] *Ibid.*, p. xiv.

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Religious Education Harms Science/Math Education

Since Sputnik, there have been on-and-off periods of intense concern over the fact that our children consistently score low on science and math tests relative to students in other countries; Congress has held hearings, science organizations say we need better curricula, educators say we need more and better paid teachers, etc. etc. My thoughts on this subject were jogged in March 2000 by the announcement that Freeman Dyson had been awarded the Templeton "science and religion" Prize; a prize that, in my estimation, is awarded to agnostics who seem to be sort of ambivalent or, perhaps, confused. Specifically, this has led me to the following line of questioning and reasoning: Where are the child-development psychologists hiding when a discussion centers around possible reasons for our children's generally poor test results in mathematics and physics? I'm sure that they know that if a child, soon after birth, is told that there are absolute truths that cannot be questioned, and this is impressed on him or her day-after-day and especially on Sundays by someone whom he or she has been taught to revere, then, after years of such tutelage, it will be almost impossible for that child to develop into a curious, no-holds-barred questioning student and adult; in short, the primary characteristics necessary for the understanding and appreciation of science will have been sabotaged and forever stifled by dogmatism. I suggest that there should be broad in-depth discussion along these lines. Such might lead to a better understanding of the problem, and thereby point to a reasoned and reasonable solution.

Karl H. Puechl
26864 Stanford St. Hemet, CA 92544
puechl@earthlink.net