

Evolution in Our Schools: What Should We Teach?

By Martinez Hewlett and Ted Peters

In this *Theological Brief* we take the position that a religious commitment implies a commitment to the best science. We write as a scientist and a theologian. Marty is a molecular biologist and virologist at the University of Arizona. Ted is a professor of theology at Pacific Lutheran Theological Seminary and the Graduate Theological Union in Berkeley.¹ We are concerned about the widespread controversy over the teaching of evolution in public and religious schools. Here is what we recommend.

We wish to make six points. First, children of every religious tradition, including those from Christian families, should be exposed to the best science.² It is the obligation of every school system to provide the highest quality education possible. This means science teachers should be well trained and up to date. The ability of today's children to function in tomorrow's world depends on this. No theological reason exists to justify teaching or learning half-baked or inferior science.

Second, it is our position that Scientific Creationism and Intelligent Design, even if conceived for wholesome reasons by well-intentioned people, do not represent the best science. We measure the quality of science by its fertility. By 'fertility' we mean the ability of a scientific theory to generate research projects that lead to new knowledge. What fertility leads to is a progressive research program that advances human understanding of the natural world; and in many cases this advance in understanding leads to innovative technology, such as medical therapy. The theory we know as Neo-Darwinian evolution meets this criterion. It's producing new knowledge every day. Scientific medicine among other fields benefits from the new knowledge this theory generates. It's the theory that our young people need to know if they are to progress academically in the life sciences and professionally in medical school, nursing, veterinary medicine, or any profession requiring biochemistry. We

would be cheating our children by confusing them regarding how we measure successful science.

As we said above, Marty is a virologist. He is the co-author of a widely read textbook in medical schools.³ In order for Marty to study viruses and to pursue research that lead eventually to medical therapies, he must rely on Darwin's concept of random variation as exemplified in genetic mutations, among other principles of Darwinian evolution. In an indirect way, reliance upon the Darwinian model of biology leads to the saving of human lives. Nothing in the theories of Scientific Creationism or Intelligent Design provide the research scientist with such a fertile understanding of how nature works. It would be tragic to take away a demonstrably successful science and replace it with an inferior one just to satisfy religious expectations.

Third, this implies a full commitment to support the teaching of evolutionary theory and

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laboratory practice in the public schools, Roman Catholic parochial schools, evangelical Christian day schools, and others. Once this commitment has been made, then consideration can be given to lifting up alternative models. A healthy curriculum will provide room for discussion of the cultural controversy that includes Scientific Creationism and Intelligent Design as well as Theistic Evolution. Because the swirl of controversy whelms all our children on a daily basis, a non-anxious discussion of the spectrum of beliefs should be made available. Once the children return to the laboratory, however, we recommend that the Neo-Darwinian model guide what takes place. In sum, we oppose the idea of 'equal treatment' under the label 'science' for non-Darwinian models.

Fourth, much more is at stake than simply showing respect for Scientific Creationism and Intelligent Design. What is at stake is faith, faith in the God who has created our beautiful world and who promises still yet more magnificent natural beauty in the future. In a religiously safe setting such as a Roman Catholic parochial school or an evangelical day school, the study of nature should be accompanied by a biblical appreciation for the God of nature. Our faith in God should not be reduced to its bare bones formulation by either the Creationists or the Intelligent Design advocates. Our faith is not dependent on either of these theories about evolution. We definitely oppose the misleading

association of the Christian faith exclusively with anti-Darwinism. A conscientious teacher should be able to point this out in an inspiring and edifying manner.

Fifth, we affirm that the faith of our biblical ancestors is not out of date, nor is it superseded by modern science. The temptation to disqualify religious commitments because they are pre-modern must be resisted. Our teachers must avoid embarrassing religion simply because it is old when touting the virtues of the new sciences. Rather, the depth of reality plumbed by faith should be presented as a complement to the surface understandings of the physical world provided by science. Disrespect for religion must be avoided, even in the public school setting.

Sixth, when a school teacher is well prepared to deal with the controversy, we urge that the distinction be made between Darwinism as a scientific method and Darwinism as an ideology. We want our young people to learn what Charles Darwin meant in the 19th century by random variation in inheritance and natural selection; and we want them to see how in the 20th century new knowledge of gene mutations led to the Neo-Darwinian synthesis. We want our young people to come to an appreciation of our natural world through the eyes of now updated evolutionary theory.

This science *qua* science must be distinguished from the ideologies that have been attached to it. There are four such ideologies (a) atheistic materialism, as

promulgated originally by Thomas Huxley; (b) social Darwinism, as promulgated originally by Herbert Spencer; (c) eugenics, as promulgated originally by Francis Galton; and (4) progress. Today's sociobiology of E.O. Wilson and Richard Dawkins could count as an ideology as well. All these are secular ideologies; and religious activists are in the right when they protest the teaching of such ideologies in our schools. The science of the Darwinian tradition, however, is fertile. We need to avoid throwing the baby out with the bath water.

A Special Word about Evangelical Day Schools

The Christian school movement has dedicated itself to integrating the Christian faith with our understanding of the 3 R's, including our understanding of the natural world through the eyes of science. Children fortunate enough to be enrolled in these day schools are blessed with a thorough integration of Bible reading, prayer, and worship right along with all other learning. Such children grow up with a single worldview where all important things are oriented toward God.

As evangelical teachers and administrators plan for the future of these children, they know these children need to be well prepared. They need to have been exposed

to the best science. Nothing less than the best science is morally permissible in such a school setting.

It may cause a moment of disorientation, then, for evangelical educators to hear our emphasis on the teaching of the Darwinian model of evolution. This is because the Christian Day School tradition has inherited some of its commitments and its support from fundamentalism and evangelicalism. The literature of Scientific Creationism and Intelligent Design circulates within this milieu. This literature appears to be consistent with the Christian Day School philosophy of overcoming the obstructions placed by secularism in our public schools.

Be that as it may, we plead with conscientious evangelical school teachers and administrators to consider seriously what is at stake. Neither Scientific Creationism nor Intelligent Design provide an understanding of the natural world that matches that of standard evolutionary biology. Christians need to live in an academic world where Darwin's model of evolution is dominant, useful, fertile, and necessary to progress up the education ladder.

Some of the world's leading scientists are evangelical Christians. Consider for example, Francis Collins, M.D., Ph.D., currently the director of the U.S. National Center for Human Genome Research in Washington, DC.⁴ He is virtually "Mr. Gene" in North America. Under no circumstances would this model of Christian intellectualism surrender

his scientific integrity to accommodate either creationism or intelligent design substitutes for evolution.

This leads to one final important point. Today's politically charged atmosphere leaves the impression that to be a faithful Christian one must be anti-Darwin. This slips easily into the impression that the Christian faith is anti-science. If our young people inherit this point of view, it will be devastating for their futures.

The study of God's creation through the microscope and the telescope is itself a divine calling, a vocation. Every generation needs a select group of young people to cultivate their natural curiosity in the direction of systematic research into the workings of nature. The whole of society benefits from the few who give their careers to science. We want faithful Christian professionals among this select few. One task of our Christian Day Schools is to inspire and guide the next generation of pioneers and discoverers.

A Special Word about Roman Catholic Schools

Roman Catholicism has such a rich tradition in the sciences that we want to see celebrated. For instance, the priest-scientists who played major roles in our understanding of nature should be held up as examples to follow. Figures such

Gregor Mendel and his genetic laws, Georges Lemaitres and big bang cosmology, or Pierre Teilhard de Chardin and paleontology should have their portraits hung in the science laboratories of Catholic high schools. In this way, young students can be encouraged to follow science as a sacred calling that is in no way in conflict with their faith.

With respect to biological evolution itself, it should be taught as the best scientific model that currently explains the observed data, as well as one with predictive value and the possibility for falsification. The Roman church has spoken about Darwin's theory throughout the 20th century, culminating in the wonderful statements from Pope John Paul II, who wrote in his 1996 message to the Papal Academy of Sciences:

Today, almost half a century after the publication of (*Humani Generis*), new knowledge has led to the recognition of the theory of evolution as more than a hypothesis. It is indeed remarkable that this theory has been progressively accepted by researchers, following a series of discoveries in various fields of knowledge. The convergence, neither sought nor fabricated, of the results of work that was conducted independently is in itself a significant argument in favor of this theory.⁵

The attitude in the science classrooms of Roman Catholic schools should exactly follow Pope John

Paul II's thoughts that he expressed in a letter to Father George Coyne, head of the Vatican Observatory:

Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish.⁶

Endnotes

1. See: Ted Peters and Martinez Hewlett, *Evolution from Creation to New Creation* (Nashville: Abingdon Press, 2003).
2. A helpful resource for public school education and a defense of the merits of the Dawinian model is the National Center for Science Education in Oakland, California, directed by a former university professor of anthropology, Eugenie C. Scott www.ncseweb.org.
3. Edward K. Wagner and Martinez J. Hewlett, *Basic Virology* (Oxford: Blackwell, 1999).
4. See: Francis Collins' "Foreword" to *Playing God? Genetic Determinism and Human Freedom*, by Ted Peters (New York and London: Routledge, rev. ed., 2002).
5. John Paul II, in *Science and Theology: The New Consonance*, edited by Ted Peters (Boulder: Westview Press, 1998) 150.
6. "Message from His Holiness John Paul II," in *Physics, Philosophy, and Theology*, ed. by Robert John Russell, William Stoeger, S.J., and George V. Coyne, S.J. (Notre Dame IN: University of Notre Dame Press) M13.