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Grounds for Optimism about Science

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RESPONSE TO NANCY PEARCEY

Grounds for Optimism about Science

by Dr. Arnold E. Sikkema

Unlike Keith Sewell, I was not surprised to be asked to respond to your lecture, since I used your and Thaxton's book, *Soul of Science*, both times I taught *Perspectives in Physical Science* with philosopher Mark Tazelaar.[1] In this course, we discuss and develop historical, philosophical, and theological perspectives in, on, and about physical science. But it is still with trepidation that a theoretical condensed-matter physicist without formal training in history, philosophy, or theology responds along with two scholars in the history of science.

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Let me begin by saying that I appreciate the fact that your popularization of aspects of the Christian origins of science has helped many Christians discard the view that science and Christianity are opposed to one another, and your lecture tonight has undoubtedly introduced to many of us some new ideas in this vein. Particularly interesting to me were your discussion of the Dominican apologetic against dueling divinities, how the Reformation helped clarify the nature of symbolism, and the pre-Calvin use of "covenant" in describing the relationship between God and the world.

While I am not sure you are defending the thesis that Christianity in and of itself gave rise to modern science, it does seem important for Christians who are recovering a sense of ownership, even parenthood, of science to see the origins of science in a broader context. This is why we have also used Cohen's 1994 volume, *The Scientific Revolution: A Historiographical Inquiry*[2] in our course. One way to clearly demonstrate that Christianity did not single-handedly give birth to science is to realize that modern science did not begin in the early church. Without a recognition of the significance of factors such as magic, technology, capitalism, society, universities, craft, politics, industry, voyages of discovery, printing presses, we foster a too triumphalist notion that Christianity produced science. And while I agree that it is important for Christians today to realize that many of the early scientists were Christians, we should acknowledge that they were not any more so than the rest of the culture of their time, and some, being dualists, deists, and

magicians, were even less so.

Near the end of your paper you indicated your doubt as to whether science can survive without a basis in Christianity. Now, Francis Bacon once said, "Truth emerges more readily from error than from confusion." Thomas Kuhn[3] used this quote in demonstrating the fruitfulness of working within an incorrect paradigm ("error") as compared to the floundering which results when not having a paradigm at all ("confusion"). Think, for example, of the progress of science within the paradigm of Newtonian mechanics: known since Einstein to be not completely true, it continues to successfully direct much of science and engineering in many ways.

I think this phenomenon is at least somewhat related to what's going on when science attempts to make progress without acknowledging its foundation on the covenant faithfulness of the Creator in sustaining the created world. For *working from* a basis does not require *acknowledging* that basis. True, science is possible because of the created and upheld coherence of the world. In fact, God has made the world so that everyone, not only the believer, sees that it is coherent:[4] newborns learn this truth (e.g., developing "object permanence") and rootless post-moderns pretend to unlearn it. And scientists explicitly acknowledge *that* the world is coherent, by virtue of being involved in a community of persons who are studying it. Even if a false foundation is imagined for the unity of creation, like the Pythagorean mathematical divinity of the world, the world is still acknowledged as coherent and hence science is possible. And there is plenty of productive science being done around the world by scientists who rarely, if ever, give thought to why the world is so integral a harmony; science seems to function quite well without a philosophy.[5] Even within the false paradigm of evolutionary biology, many amazing things about God's wonderful creation are being uncovered day by day.

So I think science can survive and in fact flourish, and among the many negatives—some of which you have identified I do see a number of very positive signs in science today.

Issues related to cloning, stem cells, GMOs, etc., are very effectively teaching the general public that science raises ethical issues that have to be dealt with, so science cannot continue to be as aloof as it has become. I believe it is a good thing for science to be open to public scrutiny and to the recognition that scientists' work is informed by their worldviews. Not only is science getting talked about in the public square, but science is leaving behind some of its strict interdisciplinary separations with research teams and doctoral degrees in multiple fields, including fields outside of science, becoming more common. In this way, one of the things you mentioned as being lost to science due to the Reformation—the wide variety of meaning in creation—is slowly being reclaimed, although not necessarily with the intention of recognizing and cultivating the integrality of the cosmos for the glory of God.

What is the purpose of science, especially for Christians in science? Science for science's own sake is vain idolatry, yet our curiosity is a gift of God. Science for technology's sake is exploitative materialism, yet science is a significant tool in our response to the cultural mandate, and we should not leave it to others to (unwittingly) obey the Creator in this.[6] Science for humanity's sake is humanistic, yet we can enhance our ability to love and serve our neighbor through advances in science and technology. A Christian in science should be motivated by all of these three, putting them subservient to the glory of God in Christ. For us, as you point out it was for the Dominicans, science and religion should be inseparable. And "[W]hatever you do, do it all for the glory of God" (I Cor. 10:31).

ENDNOTES

1. For course syllabus, see homepages.dordt.edu/~sikkema/phsc201/2000
2. H. Floris Cohen, *The Scientific Revolution: A Historiographical Inquiry* (University of Chicago Press, 1994).
3. Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 2nd edition (University of Chicago Press, 1972), p. 18.
4. Even more, even though many do not *acknowledge* it, everyone knows that the world is a signpost pointing to its creator (Romans 1).
5. That is not to say that I think it shouldn't have one. In fact, Christians in science should have a well-developed philosophy of science.
6. For more on this, see Arnold Sikkema, "Science: A Cultural Activity," *Reformed Perspective* 20:3 (January 2001) 28-9.