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RESPONSE TO NANCY PEARCEY

Problems in the “Christian” Origins of Modern Science



by Keith Sewell

As I read your paper I was greatly encouraged by your emphasis on the history of the historiography of science. It is pleasing to see this complex of issues being addressed historically. If I have some misgivings at certain points, they should be considered in the context of that outer framework of appreciation. As I reflected on your paper, my response was not so much “Yes and No”, but more a matter of “Yes, but ...”. Let me explain by going first to “Yes.”

Yes, the history of the historiography of science enables us to unmask the “warfare” model of the

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relations between Christianity and science—as championed by John William Draper and Andrew Dickson White—for what it is: a gross misrepresentation driven by commitments having their immediate historical origins in the nineteenth century flow-on from the Enlightenment.

Yes, the history of the historiography of science in the twentieth century testifies to a shift away from a positivistic standpoint towards a more perspectival emphasis. Burt, Koyré, Butterfield, Heisenburg and Kuhn have all made contributions here.¹ Yes, the process is still incomplete. Anachronistically modernist views of the origins of modern science, being bound to a latter-day secularistic viewpoint, are still disposed to sideline developments with an obviously religious motivation. I think here of Cunningham and Williams and their call to re-center our attention on the Modern Origins of Science, rather than the Origins of Modern Science.²

Yes, certain of the origins of science as we know it lie in the medieval period. Yes, Aristotelian necessitarianism had to be overcome. The Paris Condemnations of 1277 are certainly part of this story, and so also is William of Ockham and latter day Nominalism.

Yet it is at this point that I start to get uneasy. Our speaker has encouraged us to consult the “great tradition”—the history and the heritage of the church. My concern is that that heritage, pre-Darwin, Wallace, and Huxley, is far from free of ambiguity. It may be that until the late nineteenth century “the majority of thinkers were Christians of some variety” who thought “within a framework shaped by theological concepts.” Nevertheless, that great

tradition needs to be approached with a scrupulous discernment and with every critical faculty engaged.

Our hearts and minds should be open to the possibility that some of our deepest problems arise from that great tradition because it was often mired in scholasticism and helped produce the Enlightenment. I agree, for example, that the recognition of contingency and abandonment of determinism has an important place. At times it looked as if progress in science could only be made with the abandonment of the Aristotelian legacy.

Yet Nominalism generated more than one line of approach. We have been taught to distinguish between the *Via Moderna* and the *Schola Augustiniana Moderna*.³ Similarly, we associate the precept “*Deus ex lex*,” or “God apart from His law,” with Ockham. Calvin, however, insisted that while God was not subject to His law, neither was he arbitrary, but freely kept covenant with his entire creation.⁴ I judge this distinction to be immensely important, not least because it helps us come to grips with the problems inherent in the kind of thinking about science that came to be associated with Protestantism in the English-speaking world.

Peter Harrison’s work is particularly relevant here.⁵ As our speaker has said, Harrison argues that Protestants retained the Augustinian-medieval “two books” approach, but now applied to both books “a literal, historical hermeneutical method.” Moreover, these Protestants claimed that they rejected medieval philosophy not for another philosophy, but for “a straightforward description of nature.”

And this is where my “buts” come thick and fast, for here we encounter what I would call the great Baconian presumption. Bacon, having given Aristotle and the schoolmen their marching orders, too readily presumed that he was addressing “nature” without reference to and ungoverned by any interpretative standpoint. Bacon not only opposed building any system of “natural philosophy” on the biblical texts, but also *insisted* that the two books be kept *separate*.

In Bacon, Christian doctrine is not repudiated, but elevated ethereally, so as to leave “nature” free to the exclusive attention of science. In insisting that religious and scientific truth be rigorously distinguished, his motivation was wholly on the side

of science. It was science that had to be preserved from the contamination of religion, rather than the other way round.⁶

Here we may detect a decisive step in the development of the distinctively Anglophone version of the dogma of the presumed or supposed autonomy of scientific thought. And this presumed autonomy was accompanied with bold talk, not merely of benefits, but of rolling back the effects of the Fall. Man was to become his own deliverer.

And the argument of Harrison is particularly important here. A literalistic reading of scripture had to be harmonized with a literalistic reading of nature. That was the project for many Protestants. For them literalization *required* harmonization. And so we have witnessed generations of English-speaking Christians wrestling to harmonize a literalistic reading of scripture with contemporaneous theories in the physical and life sciences.

In short, the legacy of thinking by Christians that we have inherited is full of traps and pitfalls. Accordingly, while I am opposed to evolutionism, I would beg to differ from the view that the first task of a Christian perspective is to mount an attack on scientism as expressed in evolutionism. Surely our first task is to clearly formulate what we mean by a Christian perspective.

The alternative that I would propose to “Christian Baconianism” would be integral, not dichotomic. It would take the Bible literally, but not literalistically. On the basis of what the Bible reveals, I would argue that there is nothing other than God and his creatures. All creatures are dependent. Only God is uncreated and non-dependent. There are, therefore, no substances in the Greek metaphysical sense because there are no non-dependent entities or aspects.

Our religious belief either ascribes non-dependence to the one true God, or falsely ascribes non-dependence to an entity or aspect within the order of creation. Where the latter takes place, we are confronted with idolatry. Either way, we must reckon with the ineluctably religious character of theorizing. Contra Bacon, a religious starting point is always present and operative.

All theories in science are ultimately governed by some religious belief—which may be true or false. This is so even where the religious governance is not consciously experienced, or experi-

enced as such by the theorizer. Any theory that locates the non-dependent within the range of the creaturely is thereby reductionistic. It fails to recognize the true contingency of all creatures.

Such reductionism is exhibited in the presumed subordination of all that is deemed dependent to some facet or feature that is within the order of creation, but that is dogmatically [religiously] deemed to be non-dependent. Of course, the distorted (and therefore defective) viewpoint produced by such reductionism does not actually change the structure of reality thus misperceived.

Here, I believe, is a formulation that is consistent with what the Bible teaches, and that unmask the presumed neutrality of Baconian science. Moreover, we have here a method of detecting the absolutizing distortions that are the inevitable accompaniment of reductionist theories in science.⁷

Such reductionism leads always to absurdity, as God-given reality urges itself upon us in ways that point to and undermine our own absolutizations. And so it is that Darwin was confronted by his "horrid doubt," wherein the absolutization of his theory in the form of evolutionism had the effect of apparently undermining his entire theory.

Of course, we bring such judgements down upon ourselves whenever we do not serve the LORD our God wholeheartedly—our theorizing not excepted. I believe that an avoidance of reductionism is wholly consistent with the requirements of science rightly understood. In principle, the complete exclusion of reductionism would effectively protect science from the depredations of "-isms" such as evolutionism, materialism and naturalism.

As it is, it seems to me that many of those currently engaged in the increasingly labyrinthine "intelligent design" debate are too tightly bound to the standpoint of Bacon and Paley, and its often unspoken assumptions. I believe that this tradition disregards, or seriously underestimates, the impact of the Fall on human perceptions, thinking and theorizing. And it is from this same quarter that we have inherited our notions of scientific neutrality and human autonomy.

The Baconian legacy sits much closer to Deism and liberalism than many evangelicals realize. Another point of departure is surely needed. Meanwhile, I hope that we will not withdraw from Darwin and others the effort of understanding them

historically—especially where we disagree with them fundamentally. I trust that we will not be spooked by fundamentalism into failing to recognize that questions pertaining to the emergence, diversity, distribution, and extinction of species in geological time are legitimate questions. I watch the current "intelligent design" discussion with concern that the historical sources and historiographical literature will not simply be used as fuel for contemporary polemical fires. And I pray that we will become increasingly aware that prolegomenal clarity is a precondition for genuine progress in both the theory and historiography of science. Thank you for your contribution, and for your patient attention.

ENDNOTES

1. Burt, Edwin A, *The Metaphysical Foundations of Modern Physical Science* (London: Kegan Paul Trench Trubner, 1925); Alexandre Koyré, *Galileo Studies* [Paris, 1939], translated by John Mephap, (New York: Humanities Press, 1978); Herbert Butterfield, *The Origins of Modern Science: 1300-1800* (London: Bell, 1949); Werner Heisenberg, *Physics and Philosophy: The Revolution in Modern Science* (London: George Allen and Unwin, 1959); Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962, second revised edition, 1970).
2. Andrew Cunningham and Perry Williams, "De-centering the 'big picture': The Origins of Modern Science and the modern origins of science," *British Journal for the History of Science* 26 (1993): 407-432.
3. Heiko A. Oberman, *Masters of the Reformation: The Emergence of a New Intellectual Climate in Europe* (Cambridge: Cambridge University Press, 1981), 65-110, and Alister E. McGrath, *A Life of John Calvin* (Oxford: Basil Blackwell, 1990), 42-47, and *Reformation Thought: An Introduction* (Basil Blackwell, third edition 1999), 76-78.
4. J. M. Spier, *An Introduction to Christian Philosophy* (Philadelphia: Presbyterian and Reformed, 1954), 32.
5. Peter Harrison, *The Bible, Protestantism and the Rise of Natural Science* (Cambridge: Cambridge University Press, 1998).
6. See Basil Willey, *The Seventeenth Century Background* (London: Chatto and Windus, 1934), 28-30.
7. This alternative position is authoritatively stated by Roy A. Clouser in his *The Myth of Religious Neutrality: An Essay on the Hidden Role of Religious Belief in Theories* (Notre Dame: University of Notre Dame Press, 1991), especially 51-107.