

Article

How Not to Link the Reformation and Science: Reflections on Brad Gregory's *The Unintended Reformation*

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Abstract: This article evaluates Brad Gregory's argument in *The Unintended Reformation* that links the Reformation with the rise of secular science. I provide an overview of Gregory's claims and make two criticisms, arguing that Gregory's thesis lacks historical evidence to support it and mistakenly implies that retaining the framework of premodern metaphysics would have prevented the rise of scientific naturalism. The paper concludes by pointing to more positive accounts on the connection between the Reformation and science by recent historians.

Keywords: Reformation and Science; science and Christianity; history of science and Christianity; Brad Gregory; Unintended Reformation

1. Introduction

This article will evaluate the first chapter of Brad Gregory's *The Unintended Reformation*, critiquing the connections that he draws between the Reformation and modern secular science. As I will outline below, Gregory draws a direct line from the Reformation to the rise of the "new atheists" such as Richard Dawkins or Daniel Dennett. This assertion might seem puzzling at first. Yes, the Reformation may have made the individual the supreme authority for deciding truth, undercutting traditional authorities, but what does this have to do with science? What do the theological and institutional changes initiated by the Reformers have to do with the study of nature, especially since the Scientific Revolution occurred over a century later?

Gregory places his account of science and Christianity in the first chapter because it most strikingly confirms his overall thesis: the Reformation, from at least a Christian point-of-view, has had catastrophic effects on Western culture. Whereas the Reformers wanted to reform and purify society in light of the gospel message, they sowed the seeds of a post-Christian society. Science is now perceived as conflicting with Christian belief because it provides a naturalistic framework that disenchants the natural world, leaving no room for the providentialist God of Christianity. If the Reformers are ultimately responsible for godless science, then the consequences of the Reformation are far more severe than commonly assumed.

2. Teaching the Christian Intellectual Tradition

In what follows, I will argue that the links between the Reformation and science are not as clear as Gregory suggests. Before I criticize Gregory's account, let me first give some positive comments about the book. Read any of the numerous reviews, and one will see consensus on this point: *The Unintended Reformation* is a work of enormous scope and scholarship. Like many reviewers, I found the work impressive for the footnotes alone, covering some 150 pages. More importantly, Gregory's arguments and criticisms seemed to be often on target. One can object to his account of the relationship between the Reformation and science, while still accepting most of the analysis he sets forth in the rest of the book.

There is also much to appreciate in Gregory's work for instructors teaching the Christian intellectual tradition. Specifically, Gregory provides a helpful historical background to the questions we wrestle with today: "How should I live?" and "How can I know what is true?" He provides a narrative that helps both scholars and students to make connections between debates 500 years ago and our modern culture. As Gregory says, "the Western world today [is] an extraordinary complex, tangled product of rejections, retentions, and transformations of medieval Western Christianity, in which the Reformation era constitutes the critical watershed" (Gregory 2015, p. 2). In short, Gregory argues for why we all, secular and religious alike, should study the Christian intellectual tradition.

To explain the emergence of modern culture, Gregory is not hesitant to address questions of metaphysics, philosophy, and morality, topics outside the normal purview of modern historians. As he says, "A different approach is needed if we are to avoid being overwhelmed by specialized scholarship...which tends to reinforce ingrained assumptions about historical periodization that in turn hamper an adequate understanding of change over time" (Gregory 2015, p. 3). His willingness to go beyond normal disciplinary boundaries allows him to offer a larger narrative, a schema for connecting debates in the Reformation to modern beliefs and attitudes. I find his ambition and critique of disciplinary specialization to be exactly right. From a teaching perspective, it is difficult to teach the "Christian intellectual tradition" if we cannot provide larger frameworks for connecting diverse thinkers and topics. Our students need stories which allow them to see the big picture and integrate new information.

3. Gregory's Argument

The big-picture perspective is well and good, of course, but our narratives need to explain history, instead of imposing a narrative upon it. So how does Gregory connect the Reformation and science? When one reads Gregory's account, one sees that despite the title, the real blame for the rise of secular science lies with medieval philosophy. He argues that the philosophers Duns Scotus and William of Ockham bear responsibility for the rise of secularism, for they introduced ideas about God and nature that would later culminate in secular science.

For Gregory, the Christian doctrine that God created the world *ex nihilo* contains certain metaphysical commitments shared by the Christian tradition up until Scotus. Thomas Aquinas, for example, believed in an "analogical metaphysics of creaturely participation in God," meaning Aquinas "presupposed and sought to preserve a view of God so 'otherly other' that God shares no genus in common with creatures" (Gregory 2015, p. 30). In other words, the transcendent God of Christianity is, by this definition, unlike any other thing in the universe, because of the infinite distance between creator and creature.

Gregory claims that Scotus, by contrast, believed in a univocal conception of being, a metaphysical move that predicates in conceptually equivalent terms of everything that exists, including God. Scotus's move made it much easier to talk of God, because God, in Robert Barron's phrase, is "mappable on the same set of coordinates as creatures" (Gregory 2015, p. 37). By shifting away from Aquinas's metaphysical position, the logical and historical outcome of Scotus' philosophy is an "antisacramental" view of nature, because the natural and supernatural cannot be active at the same time in the same event. Scotus brings God down to the same ontological order as the created world, making it easy to exclude God from explanations of the natural world. Scotist metaphysics makes it easier to picture, as Descartes did, the cosmos as a closed mechanical universe. For Gregory, this mechanistic view of nature was a catastrophic move, for it assumes that nature operates according to its own intrinsic principles, independent from God.

What role do the Reformers play in this story? They inherited from Scotus these inferior metaphysical beliefs about God, but Gregory says the Reformers matter for the emergence of modern science in another way: only after the intractable theological disputes of the Reformation did the view of Scotus start to have toxic effects. Christian views about God and the world were sidelined because of unsolvable theological disagreements, leaving alone univocal assumptions. Unable to conceive

of God as working through natural causes, disenchantment became the only option when empirical science was unable to discover God's action in the world.

Gregory's account of Scotus and Ockham is popular in theological circles. As the historical theologian Michael Horton skeptically says, "Once you know the Scotus Story, everything else falls into place. The Reformation is the carrier of modern 'disenchantment.' Tearing the fabric of the sacramental tapestry, the reformers pushed the logic of metaphysical univocity, voluntarism, and individualism to its obvious conclusions" (Horton 2016). Unfortunately for Gregory, I do not think he makes a convincing case that the emergence of an obscure metaphysical doctrine in the Middle Ages is either necessary or sufficient to explain the rise of secular science. I will give two reasons for my skepticism, and then conclude by pointing to more positive, and more evidentially supported, accounts about the Reformation and the rise of science.

4. Criticism: Lack of Historical Basis

One problem for Gregory and other advocates of the Scotus story is that specialists in Scotus—scholars like Richard Cross, Thomas Williams, and Marilyn McCord Adams—find no basis in Scotus's own writings for the theological error attributed to him (Williams 2005; Adams 2014; Cross 2001). Scotus' theory of univocity is better seen as a theory about language rather than metaphysics and "is wholly consistent with the view that creatures somehow participate in divine attributes," the view that Gregory says was lost (Adams 2014, p. 16).

Gregory's misreading of Scotus is not fatal if he can show how Scotus's philosophy was received by later interpreters. The real difficulty with Gregory's narrative is how little historical evidence he gives for it, relying upon secondary sources for his argument. As one reviewer said: "There isn't a single primary source (or even a reference to secondary specialists) to justify this central thesis of his book" (Horton 2016). Historical studies of the medieval and Reformation period do not find the widespread influence of Scotus' metaphysics. In a recent article, for example, Richard Muller concludes: "A significant sampling of philosophers writing in the Reformed context confirms...a Scotist language of the univocity of being is not at all characteristic of Reformed orthodox thought. The absence of such language from what is arguably the majority of Reformed formulations...stands against the facile characterization of early modern Reformed thought as 'Scotist'" (Muller 2012, p. 144).

Moreover, it is not clear that a mechanistic philosophy of nature should be equated with excluding God from the natural world, as Gregory asserts. While the mechanical philosophy introduced a strong emphasis on causal reductionism into Western science, many of its early advocates had strong theological reasons for supporting it. As the historian John Hedley Brooke argues, "... those seventeenth-century scholars who did most to usher in the mechanical metaphors were those who felt that, in so doing, they were enriching rather than emasculating conceptions of divine activity" (Brooke 1991, p. 118). According to thinkers such as Pierre Gassendi, the proof of God's existence is an empirical inference from the nature of matter (Osler 2004). Because matter is inert, it does not have the ability for self-motion, much less to organize in the complex ways displayed in the natural world. Just as a watch exhibits no purpose except that of the artisan who constructed it, so too nature only reveals the purpose and perfection of the divine watchmaker. Rather than picturing nature as having its own intrinsic principles, as Gregory asserts, the mechanical philosophy encouraged natural philosophers to see the world as filled with inert matter and thus entirely dependent upon God's will.

I thus do not find persuasive the case that Gregory makes which links the philosophy of Duns Scotus to the rise of secular science. For all the historical material that Gregory packs into *The Unintended Reformation*, the chapter itself just repackages a traditional Catholic metanarrative which blames Christianity's problems on a deviation from the metaphysical scheme of Thomas Aquinas.

5. Criticism: Thomist Metaphysics Does Not Avoid the Problems Bequeathed by Science

There are attractive aspects to Thomist metaphysics, especially the idea that God is not to be understood as another object in the furniture of the universe, competing with physical objects to

accomplish his will. But Gregory is overly optimistic to think this could have resolved major tensions between science and Christianity, or could have headed off the rise of naturalism. Gregory suggests that whenever one reasons from the physical world about the nature of God, one has committed a metaphysical error. He says, for example, “It is self-evident that a God who by definition is radically distinct from the natural world could never be shown to be unreal via empirical inquiry that by definition can only investigate the natural world” (Gregory 2015, p. 32).

To see why this is not sufficient, consider the fact that “methodological naturalism”—where God is not considered as an explanation for natural events—only became the norm of scientific discourse at the end of the nineteenth century, much later than Gregory seems to assume. After 1870, scientists increasingly avoided invoking the supernatural as an explanation for phenomena within the natural world, thus severing the link between science and natural theology (Reeves 2008). This move toward naturalism helps to explain why the work of Charles Darwin was considered significant. Darwin’s hypothesis represented a general approach to scientific explanation, though many scientists disagreed with the details.

Does this confirm Gregory’s claim about univocity, where moderns are presented a false choice between whether God intervened to create biological organisms or it was natural process, but not both? It is not clear to me that this metaphysical move alone would solve the challenge of Darwinism. The core of the challenge of Darwinian evolution is how to reconcile the providentialist God—who in the Biblical tradition cares for us, down to the very hairs on our head—and the seeming role of chance in natural selection. Can the same event be both unintentional and specifically intended by God? Can a genetic mutation be both random, as biologists claim, and providentially determined? In the human realm, it makes little sense to claim that I can specifically choose the particular outcome of a random coin flip. Even if we use Thomist metaphysics to claim that a transcendent God can choose the outcome of chance events, it still suggests that poorly designed aspects of nature (or at least ‘poorly designed’ from a human perspective) are still divinely determined. Why would a gambler lose vast sums of money at the casino table if he or she could determine the outcome of each roll of the dice? Why would God use this process for creation and not others?

I am not suggesting that there are not answers to these questions. My point simply is Thomist metaphysics will not magically make this and other problems go away. I see no reason why the history of science after Darwin would have ended up differently if Duns Scotus had never entered the realm of philosophy.

6. Conclusions: Telling a Better Story about the Reformation and Science

I conclude with better ways to tell the story of the Reformation and Science. In the end, *The Unintended Reformation* is a deeply pessimistic book, attributing most of modern ills to the Reformation. If Gregory had been interested in a more positive account of the way Christianity encouraged the rise of science, there are many alternative accounts from historians of science upon which to draw.

Thus, for example, Peter Harrison argues in *The Bible, Protestantism, and the Rise of Natural Science* that the Reformers’ literalism denied the symbolic capacity of objects to refer beyond themselves, which became a necessary ingredient of the Scientific Revolution (Harrison 2001). The outlook of natural historians during the period of the Renaissance is often referred to as the “emblematic world view,” because it was “a world where animals are just one aspect of an intricate language of metaphor, symbols, and emblems” (Ashworth 1990, p. 305). If one were to consult the *History of Animals* (1551–58) by Conrad Gesner for information on the peacock, one would find not a collection of empirical generalizations, but rather a concordance of materials culled from ancient sources. One would find, for example, peacock recipes, proverbs, and legends (such as the fact that the bird’s flesh does not decay after death), as well as other curiosities (that, for instance, it is ashamed of its feet). Thus, to quote the historian William Ashworth, “Gesner believed that to know the peacock, you must know its associations—its affinities, similitudes, and sympathies with the rest of the created order” (Ashworth 1990, p. 306). When the Reformers began to emphasize the literal sense of Scripture, it

naturally suggested a new way of ordering nature, where it was no longer filled “with signs and symbols of transcendental truths” (Harrison 2006, p. 500).

There are many other ways to draw positive connections between the Reformation and the rise of science. For example, Francis Bacon provided an important theological rationale for the study of nature because it would lead to an increased appreciation of God’s power and glory. Science should be judged by the “good fruits” it produced, as Scripture commanded of the believer (Briggs 1996). Reformed presuppositions can also be detected in the advocacy of experimental approaches to natural knowledge, where persons like Bacon and Robert Boyle argued that the effects of original sin required a cautious, experimental approach to nature (Harrison 2009). Instead of speculating about general principles of nature, as philosophers tended to do, it would be far more useful to focus on what happened during particular experiments. Christian assumptions about God and nature helped lay the foundations for the emergence of science, which for some historians explains why modern science began in European culture.

In the end, I conclude that Gregory’s aim to pin the errors of the modern world unto the Reformation pushes him to read too much of our modern conflict between science and Christianity back onto the early modern period. As inheritors and teachers of the Christian intellectual tradition, we can tell a far richer and more accurate story about the history of science and Christianity.

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