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Science and John Calvin: A Review Essay



by John Zwart

Davis A. Young. *John Calvin and the Natural World*. Lanham, MD: University Press of America, 2007. 260pp.

One of my tasks as a physics professor at Dordt College has been to teach a general-education physical science course. As a part of this course, we take a close look at what it means to be a Christian in the Reformed tradition studying science. When we consider the question of how faith and science are related, I find that roughly equal numbers of students can be put into three categories. One category contains students that recognize that their Christian

faith should affect their understanding of science. While they have a variety of understandings of what this influence should be, they are open to discussion on the topic. The other two categories are of greater concern. One group is ready to embrace essentially anything that is considered scientific. As one student put it, “Science is proven, so it is right.” I suspect that these students have not had the opportunity to critically examine claims that are made in the name of science. The other group is quick to reject science (and scientists), claiming that science has a built-in anti-Christian bias. I believe that one major reason for this last category is that for many of the students, the relationship between science and faith has been considered only in the context of creation-evolution, and simplistically at that. It can be a real challenge to engage this last group in meaningful discussion.

It has been helpful, in teaching physics, to look at the historical development of the concepts, so I decided to do this with a Reformed understanding of science. While Herman Dooyeweerd and Abraham Kuyper (especially with his 1898 Stone lecture “Calvinism and Science”) offer considerable insights, not many of these insights are at a level that readily lends itself to a freshman course for non-science majors. My physics training taught me to focus on fundamental concepts before moving beyond, so I decided to use the same approach here. Who is more fundamental to Reformed thought than John Calvin? In addition, Calvin is particularly interesting to me in that his work took place during the same time period as the first scientific revolution. Calvin wrote during the period after the publication of Copernicus’ *On the Revolution of the Heavenly Spheres*, which argued for a sun-centered solar system, but before Galileo

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made the telescopic observations and arguments in support of this heliocentric system, which led to his well-known forced recantation by the Catholic Church.

Furthermore, quite a few contemporary authors claim that Calvin was against the new science. For example, Brian Silver states, “The straightlaced Protestant John Calvin also blasted Copernicus...,”¹ while a recent astronomy text repeats the now discredited Calvin “quotation,” “Who will venture to place the authority of Copernicus above that of the Holy Spirit?”² For the interesting history of this fabricated quotation attributed to Calvin, see Keith Sewell’s article, “Calvin and the Stars, Kuyper and the Fossils: Some Historiographical Reflections.”³

At first, my look at Calvin’s work was rather unfocused, as I looked primarily at his commentaries and sermons on well-known scriptural passages that refer to the physical aspects of the creation, such as Psalm 8, Psalm 19, Genesis 1, and Job 38. I did read Susan Schreiner’s *The Theater of His Glory: Nature and the Natural Order in the Thought of John Calvin*,⁴ but as a revised dissertation written for a doctorate from Duke Divinity School, it did not have the focus that I hoped to find for my introductory classes. Therefore I was delighted to attend a three-week seminar at Calvin College titled “Natural Science in the Calvinist Tradition,” led by Calvin College geologist Davis Young and theologian John Schneider, during the summer of 2002. Since then, I have used many of the ideas presented at the seminar in my classes, but I did not have a comprehensive reference. Thus, I was gratified to see that Davis Young developed his research into the book *John Calvin and the Natural World*, which provides a very thorough look not only at Calvin’s understanding of science but as his way of interpreting scripture when it speaks about the natural world and what that may mean in terms of our understanding of contemporary science. (Before getting too deeply into a discussion of the book, I should acknowledge that I provided some pre-publication feedback on a few of the chapters.)

Young draws on a considerable array of Calvin’s works. He references the *Institutes of the Christian Religion*, Calvin’s commentaries on various books of the Bible, many of Calvin’s sermons, and several of Calvin’s booklets, such as “A Warning against Judiciary Astrology.”⁵

Young begins his book with an overview of Calvin’s views on the arts and sciences and learning

in general. Calvin was certainly no biblicist! His view might be summed up by his statement in his commentary on I Corinthians: “Natural perspicacity is a gift of God, and the liberal arts, and all the sciences by which wisdom is acquired, are gifts of God.”⁶ Calvin clearly appreciated what the natural sciences (as we now call them) had to say about the natural world. He frequently used ideas learned from the study of the natural world as sermon illustrations, and in his commentaries he expanded on what Scripture has to say when referring to the creation.

To Calvin, clarity of scripture was far more important than scientific exactness. He did not force the insights that studies of the creation provide in order to follow a literalistic reading of Scripture.

So what can we learn from what Calvin has to say about science? We cannot look to his writing for correct teaching in the sciences. Calvin clearly understands the universe to be geocentric; for example, in his introduction to his commentary on Genesis, he writes, “We indeed are not ignorant, that the circuit of the heavens is finite, and that the earth, like a little globe, is placed in the centre.”⁴ In other places, he refers to additional aspects of Aristotelian/Ptolemaic “science”; for example, he suggests that four elements—earth, water, air, and fire—each have their natural places. On the biological science side of things, Calvin assumes unicorns to be real. In other words, Calvin uses the science of his day and shows a thorough understanding and appreciation of it. While it might be tempting for some to use him to support a young-Earth creationist viewpoint—since Calvin puts the age of the Earth as less than 10,000 years—that would constitute ignoring the context in which he wrote.

To give a feeling for what we can find in Calvin, let's look at a few examples. In the discussion below, I will focus on John Calvin's understanding of astronomy. Calvin not only made references to the geocentric model of the universe but used this model in a more active way in order to understand what scripture is saying. Consider the following discussion about the creation of the two greater and lesser lights in his commentary on Genesis:

Nor, in truth, was he [Moses] ignorant of the fact, that the moon had not sufficient brightness to enlighten the earth, unless it borrowed from the sun; but he deemed it enough to declare what we all may plainly perceive, that the moon is a dispenser of light to us. That it is, as the astronomers assert, an *opaque* body, I allow to be true, while I deny it to be a *dark* body. For, first, since it is placed above the element of fire, it must of necessity be a fiery body. Hence it follows, that it is also luminous; but seeing that it has not light sufficient to penetrate to us, it borrows what is wanting from the sun. He calls it a "lesser light" by comparison; because the portion of light which it emits to us is small compared with the infinite splendor of the sun.⁷

In the section preceding the one quoted above, Calvin defended Moses theologically rather than scientifically:

It is well again to repeat what I have said before, that it is not here philosophically discussed, how great the sun is in heaven, and how great, or how little, is the moon; but how much light comes to us from them. For here Moses addresses himself to our senses, that the knowledge of the gifts of God which we enjoy may not glide away. Therefore, in order to apprehend the meaning of Moses, it is to no purpose to soar above the heavens; let us only open our eyes to behold this light which God enkindles for us in the earth. By this method (as I have before observed) the dishonesty of those men is sufficiently rebuked, who censure Moses for not speaking with greater exactness. For as it became a theologian, he had respect to us, rather than to the stars.⁸

Here we see an example of what is often called Calvin's

"accommodation" of Scripture with science.

To Calvin, the language of the Bible is accommodated to address its listeners,' or readers,' understanding rather than to provide precise scientific insight. Another example of Calvin's accommodation principle can be found in his commentary on Psalm 19:

The other planets, it is true, have also their motions, and as it were the appointed places within which they run their race, and the firmament, by its own revolution, draws with it all the fixed stars, but it would have been lost time for David to have attempted to teach the secrets of astronomy to the rude and unlearned;...He does not here discourse scientifically (as he might have done, had he spoken among philosophers) concerning the entire revolution which the sun performs, but accommodating himself to the rudest and dullest, he confines himself to the ordinary appearances presented to the eye, and, for this reason, he does not speak of the other half of the sun's course, which does not appear in our hemisphere.⁹

And in the commentary on Psalm 136, he states this:

The Holy Spirit had no intention to teach astronomy; and, in proposing instruction meant to be common to the simplest and most uneducated persons, he made use by Moses and other Prophets of popular language, that none might shelter himself under the pretext of obscurity, as we will see men sometimes very readily pretend an incapacity to understand, when anything deep or recondite is submitted to their notice. Accordingly, as Saturn though bigger than the moon is not so to the eye owing to his greater distance, the Holy Spirit would rather speak childishly than unintelligibly to the humble and unlearned.¹⁰

To Calvin, clarity of Scripture was far more important than scientific exactness. He did not force the insights that studies of the creation provide in order to follow a literalistic reading of scripture. Young describes Calvin's view of God's revelation in scripture as that of a teacher who explains things in a way that is adjusted to the student's level and as evidence that God "tolerates many of our own deficient understandings about the world and does not always attempt to correct them in the interests of achieving the infinitely higher goal of leading us

to Christ” (164).

However, in spite of stating that it is not the role of the Bible to teach astronomy, Calvin did have a high view of the discipline. In the commentary on Genesis, Calvin states this:

I have said, that Moses does not here subtly descant, as a philosopher, on the secrets of nature, as may be seen in these words. First, he assigns a place in the expanse of heaven to the planets and stars; but astronomers make a distinction of spheres, and, at the same time, teach that the fixed stars have their proper place in the firmament. Moses makes two great luminaries; but astronomers prove, by conclusive reasons, that the star of Saturn, on account of its great distance, appears the least of all, [but] is greater than the moon. Here lies the difference; Moses wrote in a popular style things which, without instruction, all ordinary persons, endued with common sense, are able to understand; but astronomers investigate with great labor whatever the sagacity of the human mind can comprehend. Nevertheless, this study is not to be reprobated, nor is this science to be condemned, because some frantic persons are wont boldly to reject whatever is unknown to them. For astronomy is not only pleasant, but is very useful to be known: it cannot be denied that this art unfolds the admirable wisdom of God. Wherefore, as ingenious men are to be honoured who have expended useful labour on this subject, so they who have the leisure and capacity ought not to neglect this kind of exercise.¹¹

As we see, Calvin had a high view of the astronomer’s work and recommended the study of astronomy for those with the gifts to study it. Calvin showed little patience for those that ignore what the creation tells us:

As for those who proudly soar above the world to seek God in his unveiled essence, it is impossible but that at length they should entangle themselves in a multitude of absurd figments. For God—by other means invisible—(as we have already said) clothes himself, so to speak, with the image of the world, in which he would present himself to our contemplation. ... [L]et the world become our school if we rightly desire to know God.¹²

That is not to say that the insights of science and

other endeavors provide a completely separate way of learning about God as creator and sustainer. In 1549, John Calvin wrote a tract titled “A Warning Against Judiciary Astrology and Other Prevalent Curiosities.” In it, Calvin’s understanding of the role of science in the life of a Christian are clearly articulated in his attempts at distinguishing between “true astrology” (what is close to what we think of as astronomy in the present day) and the false “judiciary astrology” (which involves divinations and horoscopes). While using the term “astrology” for both may sound odd to our modern ears, for Calvin and his contemporaries the term was an inclusive one, meant to describe the general study of the heavens. The line between what we presently label astronomy and what we label astrology is fairly clear-cut today but was not for

In summary then, while Calvin had a high view of the work of the astronomers, he did not see the Bible as a source of scientific knowledge. Instead, its main purpose is to help us know God, using everyday language to do so.

those using the Aristotelian model of the universe. The motion of the heavenly spheres was seen as causing events on earth in this model, so it was not unreasonable to expect that the position of the stars at birth of an individual could somehow be used to predict future events for that person. Calvin defined true astrology as “...the knowledge of the natural order and arrangement which God established for the stars and the planet, which involves estimating their office, property, and power and subjugating the entire science to God’s end and God’s use,” whereas

“our counterfeit astrologers take a true principle—namely, that terrestrial bodies and in general all subcelestial creatures are subject to the order of the heavens and draw from them whatever qualities they possess – and then apply this principle poorly.”¹³

In summary then, while Calvin had a high view of the work of the astronomers, he did not see the Bible as a source of scientific knowledge. Instead, its main purpose is to help us know God, using everyday language to do so.

Davis Young’s book provides a fine compendium of Calvin’s thoughts about the natural world and what they have to say about God as the creator and sustainer of that world. It provides a fascinating view of sixteenth-century science and what believers of the day could learn from it about God. If Young had only written his introductory chapter and those chapters devoted to various aspects of the natural world—the heavens; physics and the atmosphere; the Earth; living things; and the human body, medicine, and origins—the result would be an interesting historically based review of the beginnings of a Reformed view of science. However, the last two chapters provide additional helpful insights for us today. Chapter 7, “Calvin, the Natural World, and Scripture,” provides a detailed exposition of Calvin’s accommodation principle. Chapter 8, “Calvin and Contemporary Science,” uses the accommodation principle to gain insights into modern science and into understanding biblical texts while pulling together many of the threads developed in earlier chapters. I would certainly join Davis Young in calling for preachers to become better versed in understanding the book of creation (194-199). After all, Article 2 of the Belgic Confession reminds us that “the universe is before our eyes like a beautiful book, in which all creatures, great and small, are as letters to make us ponder the invisible things of God.” Davis Young’s *John Calvin and the Natural World* is a good book for anyone desiring to read a Reformed understanding of what the creation says to us about the Creator.

Endnotes:

1. Brian Silver, *The Ascent of Science* (New York: Oxford U Press, 1998), 53.
2. Karl F. Kuhn and Theo Koupelis, *In Quest of the Universe*, 4th ed (Sudbury, MA: Jones and Barlett, 2004), 67.
3. Keith Sewell, “Calvin and the Stars, Kuyper and the Fossils: Some Historiographical Reflections.” *Pro Rege* 32.1 (2003): 10-22.
4. Susan Schreiner, *The Theater of His Glory: Nature and the Natural Order in the Thought of John Calvin* (Durham, NC: Labyrinth Press, 1991).
5. John Calvin, “A Warning Against Judiciary Astrology and Other Prevalent Curiosities,” trans. Mary Potter. *Calvin Theological Journal* 18.2 (1983): 157-189.
6. John Calvin, *Commentary on the Epistles of Paul the Apostle to the Corinthians*, Vol 1, trans. John Pringle (Grand Rapids, MI: Wm. B Eerdmans, 1948), 145.
7. John Calvin, *Commentaries on the First Book of Moses Called Genesis*, Vol 1, trans. John King (Grand Rapids, MI: Wm. B. Eerdmans, 1948), 86.
8. Ibid, 85-86.
9. John Calvin, *Commentary on the Book of Psalms*, 5 vols, trans. James Anderson (Grand Rapids, MI: Wm. B. Eerdmans, 1949), 1.315-316.
10. Ibid, 5.184-184.
11. Calvin, *Commentaries on the First book of Moses Called Genesis*, Vol 1: 86-87.
12. Ibid, 60.
13. Calvin, “A Warning Against Judiciary Astrology and Other Prevalent Curiosities,” 165-166.