



FAITH AND REASON

Creation, Faith, and Science

Theodore Feldman

To take an aspirin for a headache, and then to repudiate Darwinian evolution, is hypocrisy. For aspirin's work in our bodies, and the biochemistry of the willow tree from which it is derived, are inextricably bound to evolution. To drive a car and repudiate evolution is hypocrisy. For the car consumes fossil fuel, the knowledge, extraction, and use of which are, again, bound to evolution, which explains the formation of petroleum from ancient sea creatures. If we live in the modern world, enjoying the fruits of science, then we cannot reject its theories.

The psalmist proclaims that the Lord "set the earth on its foundations, so that it should never be moved" (Ps. 104:5, ESV). It was against this assertion that Galileo stumbled, when his church persecuted him for arguing that the earth rotates on its axis and revolves around the sun. If we interpret Scripture literally, then we must

reject the earth's rotation and with it all of astronomy, which traces the formation of stars over billions of years and cannot abide a six-day creation. We are compelled as well to discard all the historical sciences, which reach back into time much further than the authors of Genesis ever imagined. What, for example, are we to do with the science of linguistics? Genesis tells us that prior to Babel all nations spoke the same language. Linguistics cannot countenance this, any more than geology the six-day creation. If we insist on a literal interpretation of Scripture, we will end up rejecting all of modern knowledge.

But what is meant by "a literal interpretation of Scripture"? The letters (*literae*) of Scripture tell us nothing; they are marks on a page. They have no spirit in them. We Christians must read them in the Spirit in whom we abide. What spirit, then, do we bring to Scripture in a so-called "literal"

interpretation? We are told that a literal interpretation insists on the “plain meaning,” “simple meaning” or “common understanding” of the words of Genesis.¹ This “plain meaning” is certainly not the meaning of the authors of Genesis; those who bring to Genesis a “literal” interpretation make no attempt to discern the intent of Genesis’ authors or the understanding of their audience. Rather, the “plain meaning” is of course *our* “plain meaning,” the meaning of our common speech and conversation. But this speech, this conversation, is thoroughly informed by our modern, positivist, scientific worldview, which declares that only what science can show us is real. From our youth, this metaphysic has been so ingrained in us that to see beyond it is as difficult as to jump out of our own skin.

So for example, some creationists in the Orthodox Church argue that the six days of creation recorded in Genesis could not have been enough time for evolution to proceed. How much time is necessary for the evolution of species is, however, a *scientific* question. Others dispute whether the days recounted in Genesis were twenty-four-hour days or longer periods of millions of years, a question regarding measurement that takes no account of the world view of ancient Israel, which did not divide the day into hours and had no conception of periods of time millions of years long.² Orthodox creationists ask whether God created the heavens and earth “all at once” on the first day or over a longer period. They argue that the sequence of events reported in Genesis contradicts the order of the evolution of species.³ They deny that the many ancient skulls found outside of modern Iraq are human and questions the dating of these discoveries. Since Eden was located in what is now Iraq,

they believe, there can have been no primitive humans outside that area.⁴ They grant variation among species but disallow “that one kind or species changes into another,” an argument dating back to Darwin himself, which, despite the abundant evidence in the fossil record, was not conclusively disproven until quite recently.⁵

These arguments—involving concepts of the succession of time, descent and inheritance, length of the solar day, ice ages, and skull finds—abide in a universe of discourse that is governed not by the spirit in which Genesis was written but by modern science. Orthodox who accept evolution and attempt a reconciliation with Genesis fall into the same trap, questioning “whether the scientific evidence of humankind, or *Homo sapiens*, being around 200,000 years old [can] be reconciled with the Biblical record that Adam and Eve lived at a much later date, probably after the end of the last Ice Age.”⁶ The logic of creationism stands Genesis side by side with science as if the two were of one kind, and debates their compatibility. But since Genesis was written some thousands of years before the emergence of modern scientific habits of thought, this endeavor will only do violence to the one or the other.

Its narrow focus on the first six days leads creationism to ignore God’s continuing activity, and to imply—if only by its silence—that his creative work afterwards stopped. In this, it adheres to a constitutive aspect of our modern scientific outlook: that nature runs as an autonomous realm by its own laws. The notion that after the first six days God abandoned his creation, allowing it to run according to the laws of nature, is often expressed as the “watchmaker” analogy. Favored by seventeenth- and eighteenth-century deists

¹ For example, Jesse Dominick, “A Patristic Perspective on a Crucified Mind: Fr. Seraphim Rose and the Doctrine of Creation” (M.Div. thesis, St. Tikhon’s Orthodox Theological Seminary, 2013); Seraphim Rose, *Genesis, Creation, and Early Man: The Orthodox Christian Vision* (Platina, Calif.: St. Herman of Alaska Brotherhood, 2000). A search online for “Genesis plain meaning” returns many references to non-Orthodox discussions.

² Rose, 111; Andrei Kuraev, “Can an Orthodox Christian Accept Evolution?” *Silouan* (blog), February 11, 2016, silouanthompson.net/2011/02/can-an-orthodox-christian-accept-evolution/; S.V. Bufeev, “Why an Orthodox Christian Cannot Be an Evolutionist,” n.d., www.creatio.orthodoxy.ru/sbornik/sbufeev_whynot_english.html; “Interview with Fr. Damascene (Christensen),” *Pravoslavnie.ru* (blog), February 22, 2006, www.pravoslavie.ru/english/7197.htm.

³ Rose, 135–136.

and by scientists such as Isaac Newton, the watchmaker analogy grew up with the young science as part and parcel of its methods. According to it, God does not eternally fill his creation with his energies and his love; he is, rather, like a watchmaker who builds a watch and then leaves it to run on its own. Seraphim Rose, whom we can regard as the father of contemporary Orthodox creationism, was most likely unaware of his adherence to this view when he insisted that the first six days occurred “*before* all the world’s natural processes began to work. . . . If we can know what happened in those Six Days at all, it is not by scientific projections . . . but by God’s revelation.”⁷ Implied is a radical divide between our Lord’s creative work during the first six days and the rest of the history of creation.⁸ All of us inherit from our culture this outlook: that God, absent from his creation, simply allows it to run according to its own laws.

Scripture contradicts this view. “My Father is working still, and I am working,” Jesus assures us (John 5:17). Psalm 104 confesses that God is always creating: “When you send forth your Spirit, they are created; and you renew the face of the ground” (Ps. 104:30). We thank God at every Divine Liturgy, who “by your measureless power have made all things, and in the greatness of your mercy have brought all things from nonexistence into being”—*all* things, that is, including those present and to come, not just those supposedly created in six days. Since creation continues without end, we need not trouble ourselves to count the days of creation or calculate the age of the earth according to Scripture. The entire dispute over the six-day creation evaporates when we take scripture as a whole instead of tearing a single chapter out of context, and when we include the practice of our worship.

Moreover, God does not reserve creative activity to himself. In his boundless generosity he grants to creation itself power to create. He *commands* creation: “Be fruitful and multiply,” and in obedience his creatures bring forth new life through procreation. Even lifeless creatures enjoy a certain creativity. God commands: “let the earth put forth” plants, “let the waters bring forth swarms of living creatures” (Gen. 1:11, 20). Earth and water, lifeless beings, bring forth life.

Nor does Genesis draw any clear distinction between the creative power of the earth and God’s creative act: “Let the earth bring forth living creatures. . . . And God made the beasts of the earth” (Gen. 1:24–25). The acts of God in nature cannot be separated from nature’s own activity according to its laws. By this I do not mean to imply that God is somehow bound to the laws of nature or dependent upon them. Rather, the laws of nature are a manifestation of God’s creative work. Our Lord is “upholding the universe by the word of his power” (Heb. 1:3)—all things, including the laws of nature themselves. The acts of God in nature are a mystery, the same order of mystery as his acts in history. And indeed, why should they be of a different kind? It is we who draw the distinction between nature and ourselves, a distinction not to be found in scripture.

Even brute force, as we like to call it, exercises creative power. Gravity forms rock from sediment carried by air and water, acting in cooperation with these other elements of nature. Out of gases it brings forth stars. Finally, nature herself, through evolution, creates new forms of life. The authors of Genesis certainly did not envision this. But we can say that the creative work of nature, commanded by God in Genesis, is manifest in the process of evolution.

⁴ Andrew Phillips, “Towards an Orthodox View of Creation and Evolution,” *OrthodoxEngland.org* (blog), August 2006, orthodoxengland.org.uk/towardsso.htm.

⁵ Rose, 424–425. Patrick Nosil et al., “Host-plant Adaptation Drives the Parallel Evolution of Reproductive Isolation,” *Nature* 417 (2002): 440–443.

⁶ Vladimir De Beer, “Genesis, Creation and Evolution,” *OrthodoxyToday.org* (blog), May 25, 2010, www.orthodoxytoday.org/view/de-beer-genesis-creation-and-evolution.

⁷ Rose, 135–6.

⁸ See Walter Brueggemann, *Genesis: A Bible Commentary for Teaching and Preaching* (Louisville, Ky.: John Knox, 1982), 13, 17.

God is not jealous of nature's fertility through evolution; should we be, then? Do we prefer a miserly God, who keeps to himself all power to create? Indeed, God is jealous of our worship, but not of our creative work.

Nonetheless there is validity in creationism's charge against evolution. The theory of evolution, and modern science as a whole, allow God no role in his creation. There is certainly place for a questioning of science from the point of view of Christian faith that stands on firmer ground than a literal reading of Genesis. I want now to offer such a questioning.

Scripture reveals to us that we are a part of the creation. We do not stand outside it. The same language and rhythm that Genesis uses for the first five days of creation it also applies to the sixth day, to the creation of men and women: "Then God said . . . So God created . . . And God blessed . . ." Yet we differ from our fellow creatures, first in that God has created us alone in his image and likeness; and second in that he has tasked us with leading our fellow creatures to deification. The icon of our right relationship to creation is revealed in the Divine Liturgy, as we offer to God its fruits, not in their original form as grapes and wheat but transformed into bread and wine by the work of our hands and in cooperation with creation herself, in the form of yeast, heat, and other natural powers. It is through this work and this cooperation that nature is deified as the body and blood of our Lord, that God becomes "all in all."⁹

In many other places scripture reveals to us our community with creation. Psalm 104 recounts God's creative work from the earth's very foundation, through the formation of oceans and mountains, the loving provision

of food for animals and, without breaking rhythm, the labor of men and women on the earth. The lions roar for their prey; with the dawn they retire to their dens and we men and women go forth to our daily work. The creatures that fill the sea include both Leviathan and our own ships. The psalmist regards our work and the work of the other creatures as a united whole. He portrays a perfect harmony among all creatures.

Scripture also makes known our community with creation in the many places in which creation with us praises God: "Praise him, sun and moon, praise him, all you shining stars!" (Ps. 148:3) "The heavens are telling the glory of God; and the firmament proclaims his handiwork. Day to day pours forth speech, and night to night declares knowledge" (Ps. 19:1-2). Here the psalmist testifies to the knowledge and understanding possessed by what we today regard as inanimate objects. In sum, the separation of man and nature into two autonomous realms is not biblical. The vision of Scripture is that of a single realm united in harmony.

This is the vision of faith. What is the vision of science? Science treats nature as an autonomous realm distinct from us. We call this realm "nature" rather than "creation," removing it by our language from the divine economy, and we see ourselves as living outside it. Science stands over and against this realm and aims to work its will upon it. It inherited this posture from the Scientific Revolution itself. The pre-eminent exponent of this separation was René Descartes, who divided the cosmos into exclusive categories of mind and matter. Matter, the object of scientific investigation, has no properties according to Descartes besides being extended in space; it is inanimate,

⁹ Dumitru Staniloae, *The Sanctifying Mysteries* (Brookline, Mass.: Holy Cross Orthodox Press, 2012), 105.

dead. Even the processes of living beings Descartes and his contemporaries treated as the mechanical workings of dead matter. They laid the foundation of modern science upon the utter separation between us persons, or thinking beings, and nature.¹⁰ They and their successors understood that this was the path toward a mathematical treatment of the cosmos, toward scientific dominion over nature. I am painting with a broad brush—there were some who attempted a different path, such as Gottfried Wilhelm Leibniz and the nineteenth-century Romantic *Naturphilosophie* movement—but in the end, the roads they indicated were not taken by mainstream science. If creation is just dead matter, then we can do with it as we please. Early proponents of the new science spoke of forcing nature's secrets from her by torture—by which they meant the experimental method. Our faith calls us, ourselves part of creation, to lead creation to salvation and deification. By contrast, the scientific method places us outside of creation, making it an object to exploit rather than a subject to lead back to God.

Laboring along their chosen path over the course of four centuries, scientists have met with great success. They have delineated a realm of activity, the autonomous realm of nature, where their results cannot be questioned. To challenge them on their own ground—on issues such as the age of the earth or the evolution of stars and of species—is a fool's errand. Yet against the fundamental approach of science, as I have described it, we can offer a challenge. Science indeed can prove that the earth is about four and a half billion years old. But that its matter is dead science can never prove. This is not a scientific finding but a metaphysical assumption, one that makes possible the very activity of science. It is an axiom for science that its objects are only matter,

and axioms can never be proven. But our culture takes it as proven. It is far from an inconsequential assumption, a simple compartmentalization that allows science to proceed. It separates us from creation and tempts us to abuse it by separating it from God.

We Orthodox Christians affirm that matter is not dead. We pray many times daily to the Holy Spirit, confessing that he fills all things. If the Holy Spirit fills all things, then he fills all matter. And if matter is full of the Holy Spirit, then Descartes was wrong: matter is more than mere extension. The Holy Spirit is the giver of life; therefore matter, filled with the Spirit, is not dead but alive. "In him all things live and move," we proclaim.¹¹ In the Mother of God "all Creation rejoices," we sing. We exhort "sun and moon . . . and all you shining stars" to praise the Lord. How can dead matter rejoice in the Mother of God? If we believe in the correctness of our worship—that is, in its orthodoxy—then we can confidently affirm that matter, far from being inert, is filled with the presence of God.

Nor is it any use proposing, as many do, that science and faith both search out truth: science the truths of nature and faith the truths of God. For this again is to separate God from nature. There is one truth, our Lord, as he himself said. He created both nature and ourselves. Any truth about nature must be seen in the light that proceeds from him. That light we find in Scripture, in our tradition, and in our worship.

As Orthodox Christians we must take our faith seriously, so that what we proclaim in our worship is not cast aside when we look around ourselves at—and act in—creation. We must free ourselves from science's unproven assumptions, with which we have been

¹⁰ See Edwin Arthur Burt, *The Metaphysical Foundations of Modern Science* (London: K. Paul, 1925).

¹¹ Sunday Matins, Antiphon on Hymns of Ascent, Tone 3.

catechized from our youth up. But we must also understand science and its methods, and not venture to contradict science on its own grounds. Only then can we properly engage in a search for the right relationship with creation. Only then will we possess both the wisdom and the credibility to begin a dialogue with science and

its practitioners. Only then will we be able to offer to science the wealth of our theological understanding, built up across many millennia, since the ancestors of ancient Israel first began thinking about their God. We can keep in mind that, in contrast, the scientific world view is only a few centuries old. There is much work to be done. *

© 2017 THE WHEEL.
May be distributed for
noncommercial use.
www.wheeljournal.com



Protodeacon *Theodore Feldman* (Holy Trinity Orthodox Cathedral, Boston) holds a B.A. in mathematics from Harvard College and a Ph.D. in history from the University of California, Berkeley. After teaching history and history of science for many years, he left academia and currently works as a database administrator for an insurance company near Providence, Rhode Island.

FAITH AND REASON

Taxonomy and Anthropology

Sergius Halvorsen

Taxonomy, the science of classification, is a basic means of understanding the world around us. In biology, organisms are classified according to the well-known system of kingdom, phylum, class, and subsequent levels of increasing specificity, all the way down to species and subspecies. Taxonomy is not inherent in the organisms themselves, however. People are not born with the label *Homo sapiens*. Rather, taxonomy is a hermeneutic, a method for systematically defining and understanding creation. While every classification system is based on quantifiable, objective data (such as morphology, genetics, and reproduction of fertile offspring), the act

of classifying organisms or objects into particular taxa is a hermeneutic exercise. Moreover, taxonomy is not static; over time, systems for classification change to reflect deeper understandings emerging from new observations. Even though the objects that are classified have not changed, modifications in taxonomy can result in striking reorganizations. The implications of taxonomical classification and reclassification are manifold, for both science and faith.

An example of taxonomy's importance—and of how quickly it can change—was revealed in a recent episode of the radio show *Radiolab*,