

TRANSCENDENTALISM OR EMPIRICISM?
A DISCUSSION OF A PROBLEM RAISED IN
E. O. WILSON'S BOOK *CONSILIENCE*

by Rudolf Brun

Abstract. E. O. Wilson writes that the “choice between transcendentalism and empiricism” is this century’s “version of the struggle for men’s soul” (1998, 240). The transcendentalist argues for theism—that there is a God, a creator of the world. The empiricist instead makes the point that the notion of God, including morality and ethics, are adaptive structures of human evolution. Before entering the debate of the transcendentalist/empiricist controversy I analyze how things exist and suggest that all that exists as united diversity, as identity in difference. I argue that oneness by itself is intangible because wholes are concrete only through their tangible parts. I briefly discuss this understanding of existence in the realm of art to show that transcendence and immanence are not mutually exclusive but constitute each other. I conclude that existence, the hypostasis of unity in diversity, might be seen as a gift from absolute existence. In this view, the world might reveal itself as a gift that reflects the trinitarian existence of the Giver.

Keywords: Christianity; complexity; cosmogenesis; creation; emergentism; empiricism; evolution; natural law; origin of religion; racism; transcendentalism.

In this essay I enter into the discussion between empiricists and transcendentalists. E. O. Wilson writes: “The choice between transcendentalism and empiricism will be the coming’s century’s version of the struggle for men’s soul” (1998, 240). I think he is right: The trouble in bridging the gap between science and religion is the difficulty of harmonizing the empiricist’s positions with the transcendentalist’s views. It is a central

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[*Zygon*, vol. 40, no. 3 (September 2005).]

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problem that already came into the foreground when comparing the materialist understanding of the world with essentialist views—Democritus with Plato, for example.

Descartes attempted to bridge the abyss between these two contrasting positions. He suggested that God created matter and set it in motion “and then lent his concurrence to enable nature to operate as it normally does” (Descartes [1637] 1988, 42). Descartes had to publish his work anonymously, because the Roman Inquisition had just condemned Galileo. In Descartes’ work published posthumously he argued that the many changes that one observes in nature could not be properly attributed to the actions of God. This was because, according to the church’s doctrine, God’s action never changes. Therefore, changes had to occur according to the laws of nature (Descartes [1664] 1985, 93).

I understand Descartes to put forth a deistic understanding of creation: God creates matter in motion and natural law, and these guide creation toward the predetermined goal set by the Creator.

Charles Darwin ([1859] 1902) showed that such a deistic, rather mechanical model was incapable of explaining evolution. In one long argument he made the case that organisms could not have evolved according to a preconceived plan. Rather, plants and animals came into being through genuine natural history, peppered with accidents and extinctions, not supernatural guidance. Nature evolved by natural means, not by supernatural concurrence. Therefore, the natural process of accidental variation and natural selection could not reach a predetermined goal.

To this day, the transcendentalist opponents of such an empiricist view believe instead that God created the world with a goal in mind and for a purpose. If they accept evolution by natural law at all, they believe that God either constantly guides the process or intervenes in it at least occasionally during critical stages (for variations of this model see Russell 1993, 1–32). One such critical stage would have been during the original explosion, the Big Bang. In this case God would have fine-tuned natural law and constants in such a way that life and human beings could evolve (Barrow and Tipler 1986).

The stakes are high in deciding these matters for one’s personal life. If God exists and created the world, we humans are a part of God’s creation. If God brought forth the laws that organize the universe, God might also be the author of the moral laws supposed to guide and organize our lives. How can one obtain a defensible, reasonable position on these crucial issues?

I want to follow E. O. Wilson’s example and also lay my cards face up on the table. I agree with Wilson’s transcendentalist who wonders, like many philosophers and theologians before, “Why is there something instead of nothing?” (Wilson 1998, 242) This fundamental question originates from the experience that human beings are obviously not the creators

of the universe. The belief that a supreme being that transcends the world created it, including us, is the foundation of transcendentalism. It attests that the Creator instituted the laws of nature and with them also the laws of moral guidance. God created “the starry heavens above me and the moral law in me,” as Immanuel Kant piously confessed ([1788] 1977, 133).

Kant showed that human comprehension must work within the limits imposed on it by time and space, that we cannot reach reality as it is in and by itself. We cannot rid ourselves from the constraints of our mind to comprehend reality from God’s perspective. We therefore have no hope to ever grasp reality objectively, because the world we understand is really but a construct of our subjective mind. Kant compared his discovery to the Copernican revolution. The sun does not circle around the earth, but instead the earth revolves around the sun; so our knowledge cannot conform to objects, but objects must conform to our knowledge ([1788] 1977, 148–50).

This raised the problem whether the notion of God was also just a fabrication of the human mind. If so, how could God’s objective existence be demonstrated? Kant asserted that it was impossible for human beings to attain speculative or theoretical knowledge of God. This insight, however, opened up the space of faith, the certitude that God existed. Not theoretical reason but the desire of practical reason was the faculty given to human beings to acknowledge the existence of God. Such desire provided the certitude that God, the highest, most perfect, eternal, all-powerful, omniscient, omnipresent creator of the world, existed. For Kant this was certain, because God was the originator of moral law. He called it the “categorical imperative” given to all human beings. It states: “Act only on that maxim through which you can at the same time will that it should become a universal law” ([1788] 1977, 112). Obviously, there is tension between pure and practical reason. On the one hand, the world is a construct of the mind. On the other, God’s (objective) existence is certain and acknowledged by practical (moral) reason.

It did not take long to release this Kantian tension. Roughly fifty years later, in the mid-nineteenth century, Ludwig Feuerbach declared that the notion of God was nothing more than a phantom of the human mind: “The divine being is nothing else than the human being, or, rather the human nature purified freed from the limits of the individual man, made objective i.e., contemplated and revered as another, a distinct being” (Feuerbach [1841] 1975, 14). “*Theology is anthropology*: in other words, the object of religion which in Greek we call *theos* and in our language God, express nothing more than the deified essence of man, so that the history of religion or, what amounts to the same thing, of God—for the gods are as varied as the religions, and the religions are as varied as mankind—is nothing other than the history of man” (Feuerbach [1851] 1967, 17). The

deified essence of humanity contains all the powers that self-centered humanity wishes to have. Like humans, the gods are egotistic and therefore must be appeased and worshiped. "Since the gods command over life and death, fortune and misfortune, therefore ethics, the theoretical and practical distinction between good and evil, right and wrong, have been linked to them and their cult" (Feuerbach [1851] 1967, 297).

Modern insights into the origin of religion support Feuerbach's view. "An estimated one hundred thousand belief systems have existed in history, and many fostered ethnic and tribal wars. . . . All great civilizations were spread by conquest, and among their chief beneficiaries were the religions validating them. . . . But every major religion today is a winner in the Darwinian struggle waged among cultures and none ever flourished by tolerating its rivals" (Wilson 1998, 244).

The Darwinian struggle is the struggle for resources. Survival of any human group depends upon having the means necessary to produce and support its members and their offspring. Competition for such resources favors those groups in which individuals cooperate. Cooperation provides a critical advantage in the battle for rich territory with other groups. "Conquest by a tribe requires that its members make sacrifices to the interest of the group, especially during conflict with competing groups. That is simply the expression of a primal rule of social life throughout the animal kingdom. It arises when loss of personal advantage by submission to the needs of the group is more than offset by gain in personal advantage due to the resulting success of the group" (Wilson 1998, 245).

In a nutshell, the empiricist's view is that religion and morality are adaptive outcomes of human evolution. They evolved because they increased the chance of human groups and societies to beat competing groups over the head more efficiently. Human history is peppered with religious, racist, and tribal wars. Genocidal slaughters in Cambodia, Rwanda, Bosnia, and Darfur provide a few current examples. Racist struggles are going on right under the surface of any society. In-group understandings that conflict with outside groups become readily inflamed by religion. How many times disciples of different religions slaughtered one another for the "love" of God!

Taking all of this into account, does the empiricist's argument fully make the case? Transcendentalists might answer like the one in Wilson's book does: "Confine your thoughts to the material world if you wish. Others know that God encompasses the ultimate causes of Creation. Where do the laws of nature come from if not a power higher than the laws themselves? Science offers no answer to that sovereign question of theology" (1998, 242).

I disagree with this particular point of Wilson's transcendentalist, because I think science *does* offer an answer to his question.

TRANSCENDENTALISM OR EMPIRICISM? THE VIEW
FROM SCIENCE

Over the last few decades, cosmologists and particle physicists have made tremendous progress in tracing the origin of natural laws. Within the first fraction of a second gravity split from the strong, the weak, and the electromagnetic force; at this time those three forces were still unified. Then the strong force (it holds the atomic nuclei together) split from the electro-weak force and the still-unified electromagnetic and weak force. The electro-weak force then split into the electromagnetic force—the union of magnetism and electricity—and the weak force that controls radioactive decay (Chaisson and McMillan 1999, 629). The point is that the laws of nature did not originate from beyond nature but emerged in time, from within the history of the universe. A speculation here is that a sequence might have unfolded differently, leading to “zillions of universes” (Overbye 2003) with natural laws (and constants) different from ours.

I have a wonderful friend and colleague in the chemistry department who, half jokingly, claims that chemistry is the central science. It took me some time to fully appreciate his point, which is that among all the sciences chemistry demonstrates most convincingly how novelty emerges from syntheses. Integration of atoms and molecules can bring forth new compounds with totally different properties as compared to the elements from which they were synthesized. A simple example is the synthesis of table salt (NaCl) that is obviously very different from either sodium (a metal) or chlorine (a gas).

COMPLEXIFICATION

Nature generates new things through bringing together entities that it generated before. Even after degeneration and disasters, the elements left over may become integrated into novelty. The formation of galaxies, for example, is driven by cannibalism, collisions, and other tumultuous events (West et al. 2004); planetary systems may form from the dust cloud left over from stars that exploded (Lissauer 2002). Natural history is the history brought forth by sequential syntheses. Therefore, sequential “dissection” of complexity, whether physical, chemical, or organismic, leads to the isolation of ever-older parts. Single-cell organisms are older than multicellular ones, atoms are older than molecules, and nuclear particles are older than atoms.

Sequential syntheses brought forth not only the physical universe but also life. How it evolved on Earth and perhaps elsewhere is a matter of current research. Our understanding of how nature brought forth all the different forms of life is also still fragmentary. Laboratory experiments and field work demonstrate that the Darwinian mechanism of chance and natural selection (“survival of the fittest”) played and still plays a crucial

role. Today, genetics has gained significant insight into the evolution of genomes. We now know that duplications of already existing genes increased the number of available genes. Some of these mutated to produce genes with new functions. In addition, it is now possible to compare entire genomes—mice to human, for example. These and other comparisons show that quite different organisms have surprisingly similar genes. The wide variety of organisms is therefore the result not so much of dissimilar genetic content as of the difference in how similar genes are used. Gene function is regulated by genetic programs—programs that control embryonic development, for example (Raff 1996).

In my view, genetic programs are analogous to musical compositions. They determine which notes are played, at what time and for how long; genetic programs work similarly by organizing when, where, and for how long genes are active. How nature generates new genetic programs from the ones it produced earlier in evolution is also a matter of intense current research (Lynch and Coney 2003). Organismic complexification, however, is not obligatory. Which ones diversify and evolve into higher forms of life depends on chance and the opportunities provided by the environment. Yes, there is complexification in evolution; the process, however, is probabilistic (historic), not a fated “ascent” from lower to higher. Complexification is probabilistic, not “railroaded”; teleomorphic, not teleological (Brun 2002, 181).

The entire process is driven directly or indirectly by the energy released in the original explosion of the Big Bang. It is this energy that makes sequential syntheses possible. The result of syntheses, however, is the emergence of new wholes, which then may provide the elements from which new wholes may become synthesized. From this view on cosmogenesis Karl Popper is precisely right: “We live in an universe of emergent properties” (Popper 1974, 281).

WHAT IS EMERGENCE?

Emergence is the universal phenomenon that synthesis brings forth new wholes with properties different from their (isolated) parts. Examples are the emergence of atoms from elementary particles, the emergence of molecules from the integration of atoms, the emergence of life from the integration of molecules, and the evolution of increasingly complex organisms from the synthesis of new genomes.

Science can trace the history of the universe and describe how it came into existence. The mechanisms can be described, their pathways analyzed and understood. Why it is, however, that synthesis brings forth new existence is, in my view, fundamentally inexplicable. I therefore respectfully disagree with Ursula Goodenough when she states, “The concept of emergence is both descriptive *and explanatory*” (Goodenough 2001, 204; emphasis added). I rather agree with Ernst Mayr that “more complex systems

seem to resist analysis.” This is because “new and previously unpredictable characters emerge at higher levels of complexity in hierarchical systems” (Mayr 1982, 63–64).

The most complex hierarchical system that nature produced is the human brain. Sequential integrative steps brought forth our self-conscious mind. It emerged from anatomical and mental parts and modules of the conscious minds of our animal ancestors. Our mind, therefore, is a construct that emerged through the synthetic steps that result from the creativity of nature. Because our mind is a result of the creativity of nature, it is connected to nature. The deepest root of our mind is connected to the nature of nature. It reaches into the source of creativity and in this way becomes itself creative. This is why we can explore nature—create a mathematical language, for example, capable of formulating how nature works. Human creativity is a continuation of the creativity of nature. In technology and art it is also the unification of parts that brings forth new wholes. Works of art, whether paintings, dance, or music, emerge from the integration of elements. Areas on a painting consist of unities that integrate form, color, and brush strokes. The overall composition integrates all parts into an overarching, static unity. To choreograph a dance means to integrate dynamic parts into a dynamic unity, and music emerges from the unification of notes, bars, and melodies into an overarching dynamic whole. In static and dynamic wholes the unity transcends its parts yet only exists through the empirical reality of its parts. The constructs of nature and works of art are unities that emerge from the unification of parts that are unities themselves. The creativity of nature and human creativity bring forth hierarchies that unify elements that are hierarchies themselves. Unities therefore are complex because they emerge from the unification of unities that are unified complexities themselves. In nature and art creativity brings forth unified complexity.

The structure of nature and art is simplex. Simplicity is unity in diversity, unity that transcends its parts. Transcendence and immanence are therefore not mutually exclusive but interdependent dimensions of all unities.

TRANSCENDENTALISM VERSUS EMPIRICISM: A CHOICE?

The transcendentalist in Wilson’s book is of course not debating the structure of reality but rather makes the case for theism, the belief in a personal God (1998, 241). The transcendentalist’s fundamental point is that there must be a creator of the universe because one cannot explain why there is something rather than nothing (p. 242).

The empiricist acknowledges

that religion has an overwhelming attraction for the human mind and that religious conviction is largely beneficent. Religion rises from the innermost coil of the human spirit. It nourishes love, devotion and, above all, hope. People hunger for

the assurance it offers. I can think of nothing more emotionally compelling than the Christian doctrine that incarnated himself in testimony of the sacredness of all human life, even of the slave, and that he died and rose again in promise of eternal life for everyone. (p. 244).

However, hundreds of thousands of belief systems existed in human history. Many have been and are still used to foster ethnic wars. Christian rulers could justify aggression using passages in the Old Testament in which God himself ordered genocide (Deuteronomy 20:16–17).

Jesus tells Pilate that he was not born to be of this world, the most dangerous of devotions (John 18:36). “With a second life waiting, suffering can be endured—especially in other people. The natural environment can be used up. Enemies of the faith can be savaged and suicidal martyrdom praised” (Wilson 1998, 245). True, all of these terrible things happened and are still happening. Jesus’ statement to Pilate, however, is not the center of Christianity; Christ is. Deciding whether he is just another human invention is of course a personal decision.

CHRISTIANITY, A SYNTHESIS OF TRANSCENDENTALISM AND EMPIRICISM?

Within Christianity there is a view relevant to the problem of immanence and transcendence. It is that God who transcends the world became immanent in the world. This is not an insight of human knowledge but a matter of faith. Christian faith also proclaims that the world was created through the Word of God, which *is* God. This Word departed from God, was given away to creation, so that the world could become. In this view, creation is the gift of God’s Word to the world. Through this gift the world—not God—comes into being in time. The world, therefore, can be misinterpreted from the perspective of naturalism as that “which is all there is”—misinterpreted because the dimension of gift is reduced to “existence out of itself” instead of acknowledging “existence given.” Religious naturalism, however, comes close to Christian perspective, to the belief that “the deeper vision we seek to attain is not of another realm or an invisible spirit but rather a revised insight into the importance of things. There is a depth not apart from but right in the midst of things” (Stone 2003, 785).

A genuine gift, a gift really given away, is unconditional, with no strings attached. A true gift also reflects the nature of the giver. Therefore, if creation is the gift of the Word of God to creation, and from the Christian perspective creation emerges from this gift, then creation reflects the nature of God. It does so because all that exists in creation can only exist as a one. This oneness, however, is not flat and indistinct but is diversity unified into complex simplicity. In this way creation mirrors the simplicity of the trinitarian Creator, the simplicity of the nature of absolute existence that is One in the difference of Father, Son, and Holy Spirit. From this

perspective, there is no choice to make between transcendentalism and empiricism. The task rather seems to be to train our eyes again to see and appreciate the wonder of existence. Help is available not only from the photographs taken by the Hubble space telescope but also from poetry “that prickles the skin!” (Wilson 1998, 247).

NOTE

I thank Professor C. David Grant, Department of Religion at Texas Christian University, for critical reading of the draft of this essay.

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