

TOWARD AN EVOLUTIONARY CHRISTIAN THEOLOGY

by *Karl E. Peters*

Abstract. In order to develop a single narrative of God's continuing creation that includes salvation, this essay in theological construction focuses on the idea of transformation. Using the metaphor of conceptual maps in science and religion, it weaves together ideas about evolution, God working in the world, and how humans can be brought to wholeness in community in relation to God.

Keywords: creation; evolution; God; maps; natural selection; salvation; Spirit; transformation; variation; Word

For some time now I have wondered why the work done in science and religion over the last fifty years has not had more impact in religious communities. Much of our science-and-religion thinking—certainly my own—has focused on creation and has attempted in various ways to relate religious understandings of creation constructively with scientific understandings of evolution. However, this work often has missed what is most important for Christian churches and other communities of faith: “salvation”—that which leads to human wholeness in community. In Western theistic religions, salvation takes place when people are reconciled with God.

In order to overcome this disconnection between science-and-religion work and the primary concern of religious communities, I shall engage in theological construction that uses ideas from both science and Christian thought. I do this as a Unitarian Universalist for whom the various world religions, as well as the sciences, provide resources for constructive religious thought and living. I do this also as a person whose primary religious heritage is Christianity. Even though this essay may be regarded as an exercise in constructive Christian theology, I hope it will also stimulate

Karl E. Peters is professor emeritus of philosophy and religion, Rollins College, Winter Park, Florida, co-editor of *Zygon: Journal of Religion and Science*, and president of the Center for Advanced Study in Religion and Science. His mailing address is 30 Barn Door Hills Road, Granby, CT 06035; e-mail kpeters396@cox.net.

[*Zygon*, vol. 42, no. 1 (March 2007).]

© 2007 by the Joint Publication Board of *Zygon*. ISSN 0591-2385

similar reflection by thinkers in other religious traditions—reflection that brings together ideas about creation with ideas about “salvation.”

I begin with two passages from the Bible.

In the beginning when God created the heavens and the earth, the earth was a formless void and darkness covered the face of the deep, while a wind from God swept over the face of the waters. Then God said, “Let there be. . . .” (Genesis 1:1–3a NRSV)

If anyone is in Christ, there is a new creation: everything old has passed away; see, everything has become new! All this is from God, who reconciled us to himself through Christ, and has given us the ministry of reconciliation. (2 Corinthians 5:17–18 NRSV)

In traditional Christian thought these passages refer to two distinct divine activities—creation and salvation. In what follows I hope to weave together ideas about evolution, about God working in the world, and about how humans can be brought to wholeness in community in relation to God, in order to develop a single narrative of God’s continuing creation that includes salvation.

MAPPING THE WORLD IN SCIENCE AND RELIGION

First I want to discuss the idea of mapping. We humans construct concepts to describe the world, how the world works, and what is of significance for human well-being in the world. These concepts, whether scientific or religious, are not the world itself. One way to think about this is to regard sets of concepts as maps.

Different kinds of maps represent different features of the world. A weather map represents high- and low-pressure systems. A topographical map represents elevations in the terrain. Road maps represent ways to travel from one point to another. All of these maps can be of the same territory, say, a country such as the United States or India. They map the same reality but in different ways.

However, no map is the same as the reality being mapped. The map is not the territory. This contributes to epistemological humility. Sets of concepts in science and religion are not exactly the same as the reality being described, explained, or valued. Like maps, sets of concepts can be refined, revised, or even replaced in light of further experiences as we try to navigate the world in which we live. This epistemological humility applies also to the mapping that I do in this essay. The concepts that I discuss in science and religion are constructs that attempt to portray reality, but they are not reality and are subject to change in the light of further experience and reflection.

We can use the idea of maps to compare some sets of ideas from science and the theological thinking of a particular religious tradition. Consider the analogy of two different maps of the same city, a subway map and a

street map. These maps are quite different in many respects. Lines indicating routes rarely match up if one map is laid over the other. One map may include more territory than the other, and each map may have names different from those of the other. In spite of these differences, we have reason to assume that the maps are of the same city. How can we support this assumption? We can use both maps in traveling around the city in order to see whether there is a common set of street corners and subway stops. If there is, we can conclude that they are indeed maps of the same territory, even though they appear quite different.¹

Applying this analogy to religious and scientific ideas, we first assume that they are maps of the same world. Of course, as maps, they are quite different and may even map different aspects of that world. Still, we should be able to find some points at which their ideas come together. If we use them to orient us on our life journeys, we will find that some “subway stops” of our scientific map are congruent with some “street corners” of our religious map. They bring us to some of the same points. In this essay I explore some ways that scientific concepts may bring us to the same points in our world and our living as concepts from Christian theology.

We begin by making some general contrasts between scientific and religious mapping.² Scientific maps offer explanations about how things happen, how things come about because of preceding events. Science customarily uses nonpersonal models to account for how things happen. And most of the time science seeks knowledge about the world, including humans and human society, regardless of whether that knowledge contributes to human well-being. Of course, some scientific inquiry is conducted for the purpose of helping human beings to live well. For example, science seeks knowledge for the effective treatment of disease. Yet the same science may seek to understand microorganisms and how they live and propagate regardless of whether the knowledge gained is beneficial to humans. The point is that science values knowledge for its own sake.

Religious maps also may be concerned with how things happen, but they tend to focus more on what things matter. They are concerned with values, with what is more and less important—and with what is of ultimate importance. Religious maps may at times portray the world in nonpersonal ways, but the dominant tendency is to use personal models to portray how the world works and the significance of that for humans. Religions also seek knowledge about the world for a particular purpose: human well-being. They seek knowledge that contributes to human wholeness in relation to other humans and to the rest of the natural world. We might say that religions seek knowledge that is salvational, drawing on the meaning of the Latin word *salus*—health, safety, well-being, salvation.

How can we use these two kinds of maps with their different questions, different ways of modeling the world, and different reasons for seeking knowledge? I suggest that one way scientific and religious mapping can be

used together is to focus on transformations—transformations in the universe, in life on Earth, and in the lives of human beings.

MAPPING CREATION

That transformations occur is indicated by both scientific and religious maps of the world. In the scientific map, in keeping with the first law of thermodynamics, energy-matter is neither created nor destroyed but is transformed. For example, energy was transformed from potential energy into subatomic particles and simple atoms when the universe initially expanded and cooled after the Big Bang. Matter also was (and is) transformed from simple elements to heavier elements in the hypernovae and supernovae of massive stars. On Earth matter was transformed from simple molecules composed of elements to more complex self-replicating molecules and from organisms with simple nervous systems to those with nervous systems complex enough to think with symbols—the human “symbolic species” (Deacon 1997). With the advent of human thought and communication by means of language, humans were transformed from communities that biologically evolved to care for genetically related kin into large social communities guided by morality and shared beliefs about the world.

Judaism and Christianity also highlight several transformations in their maps of the world. These include the transformation of heaven and earth from a potential state without form into light and darkness, day and night, sun, moon, and stars, an earth that gives rise to life, and human beings. Transformation occurred with the liberation of tribes of nomads enslaved in Egypt to become the people of the god Yahweh (Exodus 3–24). Centuries later there was a transformation in the understanding of Yahweh as a national deity to an understanding of God as the universal God of all nations (Isaiah 40–66). In Christianity the prophet Jesus, who proclaims the coming kingdom of God and universal love, was transformed through crucifixion and resurrection to be experienced as a living presence in a new religion, Christianity. There was a transformation when Hebraic ways of thinking inherited by early Christians were combined with Greek philosophical ideas to speak of a universal and cosmic Christ as the *logos* (word or reason) of the universe. Today, some of us are attempting to help transform older understandings of our religious traditions in dialogue with the contemporary sciences. For example, I am seeking to transform older Christian understandings into new ways of expressing how God through Christ and the Holy Spirit accomplishes creation-salvation in our world today.

When we turn to *how transformations occur*, we begin to see differences in the sets of concepts in the scientific and Christian theological maps. Yet, we also find that the two maps bring us to some of the same points, similar to when subway and street maps bring people to the same intersection.

Scientific maps portray how transformations occur through interactions within the world. Drawing on the thinking of various sciences and the

philosophy of science, I suggest that transformative interactions within the world can be modeled as a process with a twofold pattern. One part is the appearance of variations or random fluctuations in existing systems. A second part is the selecting of some of the variations to continue as new stable structures. Selection occurs as a result of the inherent laws of nature, or with living organisms as a result of natural laws and the selection pressures of the environment, or with cultural organisms according to moral laws, moral exemplars, and criteria of inquiry.

Following the work of Ilya Prigogine (1980) and Eric Chaisson (2006), we can hypothesize that such a twofold pattern of creativity was present in the origins of the universe. As a result of the Big Bang some fourteen billion years ago, the universe began to expand, analogous to the way the surface of a balloon expands when inflated. An interesting question is why the universe does not just expand uniformly in all directions until its density decreases and its temperature cools down to a few degrees above absolute zero. Why isn't the entire universe composed only of what we now call the background radiation of the universe? Why is anything at all created out of the initial inflation called the Big Bang?

It appears that two things need to be present along with the potential energy released in the initial inflation. There must be laws governing the formation of structures so that, as the universe begins to cool, radiation forms elementary particles. To prevent these elementary particles from simply expanding uniformly in all directions, there must be fluctuations or disturbances that disrupt homogeneity. Cosmologist Joan Centrella suggests that "the soup of particles in the early universe was rippled with waves, much like the ocean" (quoted in *Science* 83 [1983], 8). As these waves moved through the early universe, they caused matter to squeeze together until it collapsed to form stars, galaxies, and clusters of galaxies. In February 2003, pictures from WMAP satellite (the Wilkinson Microwave Anisotropy Probe) analyzed the background radiation of the Big Bang, which was discovered by Arno Wilson and Robert Penzias more than forty years ago (<http://map.gsfc.nasa.gov>). The analysis of data from this satellite resulted in "pictures" with a resolution high enough that we can clearly see the inhomogeneities in the early universe that gave rise to the structure we observe today.

This twofold pattern continues to be present as the universe evolves from its basic elements into life forms and humans with culture. Following Charles Darwin, we can see variation and selection as the twofold pattern responsible for the biological evolution of life on Earth. Ralph Burhoe (1981) and Donald Campbell (1960; 1974) have argued that this pattern is present in cultural evolution as well as biological evolution. Others, such as William Calvin and Gerald Edelman, have suggested that variation-and-selection is a way to understand how the human brain works to make decisions—"neural Darwinism" (Calvin 1990, 255–73; Edelman

1992, 81–98). Philosopher of science Karl Popper (1972) calls our attention to the same twofold process as “conjectures and refutations” in the methods of science.

I find that this twofold variation-selection pattern is the way my mind works. In my reading, listening to lectures, or conversation with others, new variations in thought are presented to me. New variations also may come when I am alone with my thoughts, welling up from my subconscious where they have been stored as fragments of past conversations and readings. Often these variations challenge my present ways of thinking, forcing me into a selection process. Sometimes my present thought patterns are coherent enough so that the new ideas are selected against. At other times the new ideas compel me to rethink in order to develop a more coherent and comprehensive set of ideas about the subject matter that occupies my mind. I experience this variation-selection process even as I write the sentences and paragraphs of this essay.

To map how transformations occur theologically, in a way comparable to the scientific map just described, we can begin with the Christian idea of the immanence of God. Christian theologians affirm that God is also transcendent (see Appendix for how the transcendent aspect of God may be developed in relation to what follows); for our purposes, however, I focus on asking how God is immanent in the ongoing creation of the world and in the salvation of humans. In other writings I have developed a naturalistic theism, an understanding of God as the creative process of the world, using a Darwinian model to portray that process (Peters 2002, 38–51; 2005). What follows is consistent with this form of theism but now expressed in Christian terms with a focus on the immanence of God.

From a Christian perspective one can develop a theological map of the same twofold process of creative transformation outlined above with the scientific map. In Christian terms the process can be modeled as the “work of the Spirit and the Word of God.” According to *The Hastings Encyclopedia of Religion and Ethics* (1925, “Spirit”) the Hebrew word for “spirit,” *ruach*, signifies the wind, human breath, heightened emotions, and the work of extrahuman agencies affecting humans for good or ill. It is both life sustaining and a disturber of an existing state of affairs. In Genesis, the Spirit or Wind of God disturbs the waters in an initial phase of creation and continues to blow where it wills. The Word of God is also present as God speaks out the creation in a series of commands: “Let there be. . . .” Further, in early Christianity, Christ is understood in Stoic or Neoplatonic terms as the *logos* or foundational principles or reason of the universe. The *logos* is present at the beginning and becomes flesh in Jesus of Nazareth.

Now let us bring together the ideas of our scientific and Christian theological maps. We can say that the Word of God represents the underlying laws that govern the evolution of the universe, and the Spirit represents

random fluctuations or variations in existing states. When the Spirit “blows where it wills” creating new variations, some new variations are selected to continue in accord with the ever-present Word. In this way new stable states and new levels of existence come into being. These states and levels in turn provide a basis for further divine dynamics. The activity of Spirit and Word is continuous. This is one way of speaking about the immanence of God as the ever-present ground of all becoming.

MAPPING SALVATION AS NEW CREATION

How does this scientific/theological understanding of creation relate to salvation? We can continue to relate scientific and theological maps on the concept of salvation, although perhaps not so clearly. Among various ways of thinking about salvation, I sketch here two views. I label one the “linear-dichotomous” view and the other the “systems-relational” view.

One example of what I call the linear-dichotomous view is John Hick’s definition of salvation that he applies to major world religions: Salvation is a transformation of human beings from self-centeredness to Reality-centeredness, or God-centeredness (Hick 1982, 9). This view seems to assume a concept of human beings as atomistic individuals either related to God or not related to God. It also may assume an either/or dichotomy (self-centeredness or God-centeredness), so that salvation is analogous to making a U-turn—from going one direction to its opposite.

A major way in which Christianity focuses its understanding of salvation is with the idea of love: God’s love expressed in Jesus as the Christ creating a transformation in the human’s ability to love in return.³ In the linear-dichotomous view this transformation in love is portrayed as moving from egoism to altruism, to the point of sacrificing oneself for others. There is much in the science-religion literature about egoism and altruism and the importance of humans going beyond excessive self-concern and -involvement to considering equally the interests and needs of others.

The second view of salvation, the systems-relational view, assumes that humans are social creatures. We become what we are in relation to other humans and the nonhuman world. It also assumes that humans have a variety of internal parts that function more or less well—in what we might say is a state of better or worse health. Health is not an either/or matter. One can be more or less healthy. Scientific concepts of health may combine with religious understandings of wholeness in this understanding. Likewise, humans in community function together more or less well. The saving transformation is from poorer functioning in a less harmonious manner to more harmonious and mutually enhancing relationships. The goal of mutually enhancing relationships extends to more than the human world to create ever-widening, mutually supportive communities of humans, nature, and God.

With this systems view of salvation, one also can affirm the Christian focus on the love of God that transforms humans to greater love. However, now the transformation is from being alienated from others to being reconciled with others in mutually loving relationships—wholeness in community in relation to God. Alienation and reconciliation are two Christian concepts that relate to similar concepts from the human sciences.

WHY DO HUMANS NEED SALVATION?

Why, in either view, is a transformation necessary? What are humans saved from? From the perspective of Darwinian theory, there are good reasons to think that human beings have evolved to be ambivalent (Peters 2002, 92–97; 2003, 336–37). Through natural selection we have evolved capacities for supporting our individual well-being. These capacities contribute to reproductive survival. However, under conditions such as extreme stress or attack on our self-esteem, these self-supporting capacities can lead to withdrawal or aggression. If this continues long enough, the result can be excessive self-concern, dissociation, and alienation.

At the same time, we are social animals who cannot survive apart from some kind of supportive community. Hence, we have prosocial predispositions, such as empathy for genetically related persons. These too have evolved in a Darwinian manner. According to kin-selection theory, this gives rise to parental love and family caring.

William Irons (following Richard Alexander [1987] and Robert Frank [1988]) suggests that this caring is extended to non-kin by the development of moral rules. Moral rules evolved as ways of resolving intragroup conflicts by facilitating cooperation. Such cooperation developed and was selected as early human groups competed with each other, because it enabled larger groups to be effective in competition, including warfare—the “warfare hypothesis” for the evolution of morality (Irons 1996, 19; see also Peters 2003, 341–43).⁴

One can further hypothesize, as does Burhoe (1981, 222–27), that religion contributed to the evolution of even larger human groups by creating “symbolic families” with shared beliefs, rituals, and moral codes for those within the family. All followers of Christianity or Islam are brothers and sisters because all are children of a divine parent. All such symbolic children are to follow common religious practices and behave in moral ways toward one another. This allows a religion to grow and flourish, often in competition (and sometimes warfare) with other religious communities.

This view of the evolution of morality and religion illustrates why something I call ambivalence is characteristic of humans. We are ambivalent creatures: cooperative and competitive, caring and hating, lovers of each other and killers of each other. One can argue on evolutionary grounds that this ambivalence has been important for human survival, depending

on the various circumstances in which people have lived. In today's world, however, when our capacities for competition, hating, and killing are enhanced with the aid of technology, and when our cooperation, caring, and loving are often limited to our own groups, our ambivalence often is destructive of humans and the rest of our planet.

THE EVOLUTION OF EVOLUTION

How does Christianity promise to move us beyond this ambivalent state to one of mutual respect, care, and love in order to bring about an era of worldwide, peaceful cooperation? Bringing together concepts from scientific and religious maps into a junction of a "subway stop" and a "street corner," I suggest that the process of salvation first involves the evolution of that which creates the world—of the evolutionary processes or of the Spirit and Word of God.

Looking at the transformations portrayed in our scientific map of the history of the universe, we might say that evolution is not just the creation of new emergent kinds of things but that, in a sense, evolution itself is also being created. Evolutionary processes are coming into being along with what they create. In his *Zygon* essay "On the Evolution of Human Freedom" Karl Schmitz-Moormann suggests that the laws of nature evolve (1987, 445–46). Most of us have learned that laws of nature are eternal. This assumes a Platonic and somewhat static perspective on the universe; specific things may change, may come into being and pass away, but underlying all of the contingencies of the natural world are eternal laws. However, Schmitz-Moormann suggests that in an evolutionary framework it is reasonable to say that as new things are created, so are new laws according to which they operate. The laws of physics arise in the earliest phase of the universe along with elementary particles. When these are transformed into atoms and molecules, other laws come into being. When living creatures emerge, so do the processes governing their interactions. One cannot separate anything from its interactions, and, insofar as interactions are lawlike, the laws governing the interactions come into being along with the newly created interacting elements and molecules.

In the living world, as new species are created they become part of a new system of interactions. These interactions exert new selection pressures on other species. So we can say that natural selection evolves. The same is the case with human cultural evolution. What governs the interactions of ideas in a contemporary scientific community was not present at the origin of the universe or of life on planet Earth. The criteria that distinguish supported theories from unsupported theories are as much the result of cultural evolution as are the proposed theories themselves. Thus, on the whole, we might say that the processes that create the universe—summed up with the term evolution—evolve along with the rest of the evolving universe. There is an evolution of evolution.

If we look at the evolution of the laws of nature and of natural selection from our Christian theological map, we might say that the Word of God evolves from natural laws to biological natural selection and to the cultural selection pressures of moral and religious systems. We might also say that the Spirit of God evolves in new kinds of random interactions that give rise to new possible life forms, cultural artifacts, ways of living, and forms of thought. I suggest that a major event in the evolution of evolution or of the immanence of God as Spirit and Word took place about two thousand years ago. The Gospel of John calls this event the “Word become flesh.” Biblical scholar Gerd Theissen calls it a great mutation in the history of Judaism-Christianity. He writes that Jesus called people to a “form of life in which we develop structures adapted to our environment, not against each other but with each other, in which our less adapted fellow human beings and lower forms of life do not fall by the wayside as ‘dysfunctional’, but are integrated into a more comprehensive structure of adaptation” (Theissen 1985, 122). We could say that this was an emergence of a new kind of human being or a new way of being human.

What was it about Jesus and the way people experienced him that led some to conclude that the Word had become flesh? World religions scholar and teacher Huston Smith suggests that it was not how he looked or any particular thing he said or did but the kind of person he was. In people’s experience of him, the tradition of loving God and neighbor was transformed from loving only certain people to universal, unconditional love—love that knew no bounds, love for everyone, in every condition:

Through the pages of the Gospels Jesus emerges as a man of strength and integrity who bore, as someone has said, no strangeness at all save the strangeness of perfection. He liked people and they liked him in turn. They loved him; they loved him intensely and they loved him in numbers. Drawn to him not only for his charismatic powers but for the compassion they sensed in him as well, they surrounded him, flocked about him, followed him. . . . People responded to Jesus, but equally he responded to them. He felt their appeal, whether they were rich or poor, young or old, saints or sinners. We have seen that he ignored the barriers that mores erected between people. He loved children. He hated injustice because of what it did to those he called, tenderly, “the least of these” (Matthew 25:40). Above all he hated hypocrisy, because it hid people from themselves and precluded the authenticity he sought to build into relationships. In the end it seemed to those who knew him best that here was a man in whom the human ego had disappeared, leaving his life so completely under the will of God that it was transparent to that will. It came to the point where they felt that as they looked at Jesus they were looking at something resembling God in human form. (Smith 1991, 328–29)

As Gordon Kaufman writes, this radical love of Jesus was a new and transformative development of the creativity that underlies the evolution of the universe in all its emergent phases. The love advocated and lived out by Jesus was a radical, transforming love. “Christians were being transformed by this gospel of love, and they had been given the commission to

spread it around the world. It was because of the transformative power of this love that Paul was able to declare that ‘if anyone is in Christ, there is a new creation: everything . . . has become new! All this is from God’ (2 Cor. 5:17–18)” (Kaufman 2006, 112).

This evolution of the Word of God as the reason or laws of the universe and life into an inspiring exemplar of universal love provides a new cultural selection criterion for human behavior. According to Philip Hefner, this criterion calls for a stretching of genes and cultures with the “love command” taught and lived by Jesus. This is the command to be with all people in solidarity—solidarity in empathy and service. It prescribes behavior toward others that “aims at solidarity with all persons, regardless of their status, ethnicity, gender, or religion.” It includes “the obligation to empathize with others and thus to extend oneself in action that will benefit others” (Hefner 1999, 491; see also Hefner 1993, 206–9).

The evolution of evolution two thousand years ago was also an evolution of the immanence of God as Holy Spirit. It came to be understood that the Spirit created new opportunities for mutually supportive relationships not only among a small group of original followers of Jesus but among all peoples. This is one way to understand Pentecost, when under the influence of the Spirit people speaking different languages could understand one another. Thus the possibility arose for entering into more extensive, caring relationships with one another. Slightly modifying the words of Theissen, we could say that the Spirit creates among humans (who, influenced by their biology and cultural conditioning, often act at the expense of others) opportunities to go beyond themselves to consider the needs of others and to respond to those needs.

EVOLUTIONARY SALVATION TODAY

From a Christian perspective the transformation two thousand years ago is not all there is to salvation for human beings. Salvation continues to be effective for those alive today.⁵ Therefore, we ask: How does this evolution of the divine Spirit and Word, present in all aspects of the creation of the universe and evolving in a new way in Jesus and his followers (according to my theological map) enable humans today to be saved from becoming alienated and isolated to being reconciled with others in mutually caring communities?

First, we should recognize that, as evolution evolves, new kinds of cultural variations and new selectors may arise throughout the world. What Christians call the Spirit and Word of God may be found in other religious cultures, called by other names and mapped with other religious maps. Buddhism, for example, offers new possibilities for living along with a structured path of transformation from excessive attachments to transitory things to a life of compassion for all living beings. In Christian culture the

Spirit and Word of God continue in the lives of persons who become open to new possibilities for living and then follow those possibilities that meet the criterion of living as new beings in Christ by exemplifying universal, indiscriminating love in the formation of the peaceable kingdom.

As they have done throughout the ongoing creation of the universe, the interactions we have mapped as the Divine Spirit are constantly opening up new possibilities for our lives. In the last hundred years there has been an explosive expansion of the possibilities for human relationships with a variety of diverse peoples. Today, as our human world becomes more interconnected through the technologies of transportation and communication, and through political and economic interaction, we have more opportunities than ever before to move beyond our ambivalence as creatures who are both cooperative and competitive, caring and hating, lovers and killers. The interactions that are moving us toward a global community can be understood as the work of the Spirit giving us opportunities for more universal cooperation, caring, and loving. However, they also give us opportunities for more competition, hating, and killing.

This is where the Word of God provides us with the criteria of cooperating, caring, and loving universally and unconditionally. These criteria, proclaimed by the followers of Christ, and by others in their own traditions, are cultural selection pressures in favor of the biblical ideal of the peaceable kingdom of God. Further, and more important, as we are caught up in the processes of human evolution that I have mapped as the ongoing activity of Spirit and Word of God, we become related to—reconciled with—the Spirit and Word of God that Christians have associated with the creation of the world in Genesis 1. In our interactions with others we are transformed into a new kind of human being—a new way of being human. We become what the New Testament calls new creations in Christ: “If anyone is in Christ, there is a new creation; everything old has passed away; see, everything has become new. All this is from God, who reconciled us to himself through Christ, and has given us the ministry of reconciliation” (2 Corinthians 5:17–18 NRSV).

In this essay, using the idea of transformation, I have tried to weave together ideas from the scientific map of cosmic, biological, and cultural evolution and the Christian theological map of creation and salvation. I have shown how they come together (as do some subway stops and street corners in large cities) as we talk about the transformations in the ongoing creation of the universe and the way humans can be saved from their destructive tendencies and transformed to cooperate with one another in peace and love. However, there is still something more to emerge in the salvation of human beings. It is enlarging what Christians call the ministry of reconciliation by expanding the criterion of universal, unconditional love to all the earth. In Christianity, unconditional love usually has been understood as the love of other *human* beings. Buddhism holds that the

universal compassion that results when one enters the Buddhist path is understood to be for *all living* beings. Today I think that the Spirit is calling us to see further new possibilities for love and reconciliation as we learn through science about our interconnectedness with other creatures in the ecosystems of planet Earth.

APPENDIX: TRANSCENDENT SOURCE

Besides being concerned with the presence or immanence of God in the world, the map of Christian theology tries to respond to the questions: What is the source of the potential energy present at the Big Bang or of the “heaven and earth without form” in Genesis 1? What is the source or ground of the pattern of disordering and reordering, of fluctuations and laws, of chance and necessity in the scientific map and of the immanent Spirit and Word in the theological map? Here Christian theology affirms that which transcends the world and often portrays it with the relational metaphor of God the Father. I prefer to use “Mother-Father God” to include the generative symbol of Mother.⁶

We must recognize that the ultimate ground of all being and becoming is a mystery. Our conceptual maps are maps only of the evolving, spatial-temporal world in which we live. Therefore, I do not offer the parental metaphor of God as giving us any insight into the nature of God, apart from what we can know through the presence of God continually creating in Spirit and Word. The metaphor of God as Mother-Father points to the relationship of the world to a transcendent source. In the language of the family, it suggests that whatever transcends the world is the source of the world, that upon which the world depends. In the final analysis, for me, it can be understood only as creative mystery (Peters 2002, 30–37).⁷

So, in a Christian theological map, it is possible to suggest a Trinitarian understanding of creation in which the transcendent aspect of God is the source of the potential state of the world prior to the initial inflation we call metaphorically the Big Bang. The transcendent Mother-Father is also the source of the Spirit and the Word (the Son).⁸ Spirit and Word are the immanent activity coming forth from the Divine in continually creating the universe, life, human society, and individual personality. This ongoing creative activity of God is the ground of creation in all of its phases. It is the ground of the transformations of natural history and of human culture discussed by scientists and also the ground of the transformations in the particular histories of Judaism and Christianity. The histories uncovered by science and by biblical and Near Eastern scholars are the same history. The processes of transformation that create these histories are the same processes, spoken of differently in two different maps of the same territory: our universe.

NOTES

This essay is based on lectures presented at the Epic of Creation course at the Zygon Center for Religion and Science in Chicago. I express my appreciation to the Zygon Center for the opportunity to develop and present these ideas and heartfelt thanks to Marjorie H. Davis for her insightful help in editing two drafts of the manuscript.

1. My idea of comparing maps can be considered an example of what J. Wentzel Van Huyssteen (2006) calls "transversality."
2. For a more extended discussion of what follows, see Peters 1992.
3. Marcus Borg, in analyzing the texts of the Bible, calls this a transformation from having a closed heart to having an open heart (2003, 149–63).
4. An alternative to the warfare hypothesis is that our hominid ancestors began to cooperate as a means of self-protection from being the prey of other animals such as leopards, tigers, and hyenas (Hart and Sussman 2005). For a short discussion of this idea see Ferber 2006.
5. Students of Christianity will recognize in these two sentences what are sometimes called the objective and subjective aspects of atonement.
6. Today, because of scientific knowledge of reproduction, we know that both mother and father biologically participate in producing children. In earlier times, it was thought that the father was the active producer of children, planting his seed in the mother.
7. See Charley Hardwick's challenge to my using the concept of mystery (Hardwick 2005, 676–77) and my response to him (Peters 2005, 708–9).
8. This position is consistent with that of some of the early Christian apologists. In surveying and analyzing the thought of the apologists regarding the Word of God, Jean Danielou writes that Theophilus of Antioch, in contrasting the Father and the Word, "assumes, first of all, that God in his unity and simplicity is at once incommunicable and communicable, both entirely other than the creation and also the power (*dunamis*) which is to be hypostatized as his Son. This explains why the distinction between the hidden and the manifested God coincides with that between the Father and the Son, without however compromising the unity of the divine nature of both" (Danielou 1973, 345). I would simply add that the same can be said about the relation of Mother-Father God and the Holy Spirit.

REFERENCES

- Alexander, Richard D. 1987. *The Biology of Moral Systems*. Hawthorne, N.Y.: Aldine de Gruyter.
- Borg, Marcus J. 2003. *The Heart of Christianity: Rediscovering a Life of Faith*. San Francisco: HarperSanFrancisco.
- Burhoe, Ralph Wendell. 1981. *Toward a Scientific Theology*. Belfast: Christian Journals Ltd.
- Calvin, William H. 1990. *The Cerebral Symphony: Seashore Reflections on the Structure of Consciousness*. New York: Bantam.
- Campbell, Donald T. 1960. "Blind Variation and Selective Retentions in Creative Thought as in Other Knowledge Processes." *Psychological Review* 67:380–400.
- . 1974. "Evolutionary Epistemology." In *The Philosophy of Karl Popper*. The Library of Living Philosophers, ed. P. A. Schilpp, 1:412–63. LaSalle, Ill.: Open Court.
- Chaisson, Eric. 2006. *Epic of Evolution: Seven Ages of the Cosmos*. New York: Columbia Univ. Press.
- Danielou, Jean. 1973. *A History of Early Christian Doctrine Before the Council of Nicea*. Vol. 2. Philadelphia: Westminster.
- Deacon, Terrence W. 1997. *The Symbolic Species: The Co-evolution of Language and the Brain*. New York: W. W. Norton.
- Edelman, Gerald M. 1992. *Bright Earth, Brilliant Fire: On the Matter of the Mind*. New York: Basic Books.
- Ferber, Dan. 2006. "Preyed Upon, Hominids Began to Cooperate." *Science* 311 (February 25): 1095.
- Frank, Robert. 1988. *Passions within Reason: The Strategic Role of the Emotions*. New York: Norton.
- Hardwick, Charley D. 2005. "The Power of Religious Naturalism in Karl Peters's *Dancing with the Sacred*." *Zygon: Journal of Religion and Science* 40:667–81.

- Hart, Donna, and Robert Sussman. 2005. *Man the Hunted: Primates, Predators, and Human Evolution*. New York: Westview.
- The Hastings Encyclopedia of Religion and Ethics*. 1925. New York: Charles Scribner and Sons.
- Hefner, Philip. 1993. *The Human Factor: Evolution, Culture, and Religion*. Minneapolis: Augsburg Fortress.
- . 1999. "Going as Far as We Can Go: The Jesus Proposal for Stretching Genes and Cultures." *Zygon: Journal of Religion and Science* 34:485–500.
- Hick, John. 1982. *God Has Many Names*. Philadelphia: Westminster.
- Irons, William. 1996. *Morality, Religion, and Human Evolution*. Unpublished manuscript.
- Kaufman, Gordon D. 2006. *Jesus and Creativity*. Minneapolis: Fortress.
- Peters, Karl E. 1992. "Empirical Theology and Science." In *Empirical Theology: A Handbook*, ed. Randolph Crump Miller, 57–82. Birmingham, Ala.: Religious Education Press.
- . 2002. *Dancing with the Sacred: Evolution, Ecology, and God*. Harrisburg, Pa.: Trinity Press International.
- . 2003. "Ambivalence and Pluralism in the Bio-cultural Evolution of Morality." *Zygon: Journal of Religion and Science* 38:333–54.
- . 2005. "Confessions of a Practicing Naturalistic Theist: A Response to Hardwick, Pederson, and Peterson." *Zygon: Journal of Religion and Science* 40:701–20.
- Popper, Karl R. 1972. *Objective Knowledge: An Evolutionary Approach*. Oxford: Clarendon.
- Prigogine, Ilya. 1980. *From Being to Becoming: Time and Complexity in the Physical Sciences*. San Francisco: W. H. Freeman.
- Schmitz-Moormann, Karl. 1987. "On the Evolution of Human Freedom." *Zygon: Journal of Religion and Science* 22:443–58.
- Science* 83. 1983. Washington, D.C.: American Association for the Advancement of Science 4 (December).
- Smith, Huston. 1991. *The World's Religions: Our Great Wisdom Traditions*. San Francisco: HarperSanFrancisco.
- Theissen, Gerd. 1985. *Biblical Faith: An Evolutionary Perspective*. Philadelphia: Fortress.
- Van Huyssteen, J. Wentzel. 2006. *Alone in the World: Human Uniqueness in Science and Theology*. Grand Rapids, Mich.: William B. Eerdmans.