

ARE THERE INTIMATIONS OF DIVINE TRANSCENDENCE IN THE PHYSICAL WORLD?

by *Lawrence W. Fagg*

Abstract. This essay, suggesting two physical phenomena that might serve as meaningful analogies to divine transcendence, is a theological complement to two earlier *Zygon* articles that show how the underlying ubiquity of electromagnetic phenomena in all of nature is a compelling physical analogy to divine immanence. My perception of transcendence and its relation to immanence are specified to provide a context for the discussion. A description of our being ensconced in what I term a cosmic cocoon introduces the discussion of how the finite limit of the speed of light and quantum non-locality could be considered as physical analogies of, or pointers to, God's transcendence. The relevance of our cosmologic future to transcendence is also treated. Selected examples of transcendence found in spiritual experiences and in religious scriptures are presented that complement the physical discussion. Finally, the relevance of this study to a theology of nature as well as a natural theology is examined.

Keywords: analogy; cosmologic future; eschatology; immanence; natural theology; quantum non-locality; speed of light; theology of nature; transcendence.

In two earlier *Zygon* articles as well as other work (Fagg 1996; 1999; 2002) I have discussed how electromagnetic phenomena underlie virtually all of the earth's nature from rocks to plants and animals, including humans and their brains. I have shown how the ubiquity of these phenomena constitute an evident and compelling physical analogy to the ubiquity of God's

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immanence, or indwelling. For example, as the electromagnetic spectrum extends far beyond the visible, so is God's light far beyond our ability to see.

Here, however, instead of immanence, I address the question of transcendence. This article could therefore be regarded theologically as complementing my earlier work. I have chosen to use the same general analogical approach I did in that work, but this time looking for physical phenomena that might suggest themselves as meaningful analogies or metaphors for divine transcendence.¹

I establish the context for the discussion by defining what I understand as transcendence and its relation to immanence. I describe how I see humanity as being enclosed in a kind of cosmic cocoon and how two physical phenomena therein, the finite speed of light and quantum non-locality (as manifested in Einstein-Podolsky-Rosen experiments), may serve as physical analogies for divine transcendence. I then discuss our cosmological future and its relevance to transcendence and eschatology. Following that, I give selected examples of divine transcendence as found in the spiritual experiences of mystics and in religious scriptures. Finally, I treat the relevance of this study to theology of nature and natural theology and offer concluding remarks.

TRANSCENDENCE AND IMMANENCE

Analogies in the case of transcendence are challenging to justify. This is in part because there seem to be a number of definitions of transcendence, each characterized by a slightly different nuance. The situation is further complicated by the problem of how to distinguish transcendence from immanence.

I do not see transcendence and immanence as constituting a clear black and white duality but as roughly defining poles of a seamless continuum descriptive of our sense of universal divine presence. For me, immanence involves a feeling of inner or inherent immediacy, a vibrant indwelling that is pervasive here on earth and in the universe. Transcendence involves a perception of an unreachable "beyond," a transcosmic presence engendering a sense of an encompassing, omnipresent Other. The two conceptions mutually endow each other with a sense of richness and completion that either alone would not have. Thus they make for a consistent spiritual whole. To paraphrase theologian Edward Oakes, a balance must exist between the immanence and transcendence of God in order to distinguish us and the world from God meaningfully. The two aspects abide in coherent, interactive tension, neither subsumed by the other (Oakes 1997, 33).

Another problem we face in understanding the nature of divine transcendence is that perceptions of it are encumbered by too closely thinking of it, or defining it, in spatial terms, e.g., cosmic space, the heavens, and so forth. Using spatial metaphors to conceptualize transcendence seems almost unavoidable and to a certain extent may be reasonable, but if we

think entirely in these terms we miss the essential nonspatial and nontemporal aspect or dimension that characterizes true transcendence. So I try, perhaps with limited success, to envision the divine Other as somehow transspatial as well as transtemporal. In what follows I work within a framework of these conceptions of transcendence and its relation to immanence.

OUR COSMIC COCOON

The universe we live in is enclosed in what I term a “cosmic cocoon” (Fagg 1995, 27–28; 1999, 128–29), a vast cosmic cocoon whose limits are imposed on one extreme by the finite speed of light, which defines the frontier of the observable universe, and on the other extreme by the Heisenberg Uncertainty Principle, which specifies the limits of observability of the microscopic world.

We are very roughly near the center of this vast scale, a scale that covers a range of some forty-five orders of magnitude, or powers of ten. In a 2001 presentation, Tom Rockwell showed a series of pictures, each successively portraying a picnic scene on the shore of Lake Michigan with ten times greater magnification in fathoming the microscopic world and ten times greater distance in probing the cosmos. This was a takeoff on Philip and Phyllis Morrison’s book *Powers of Ten* (Morrison and Morrison 1994).

Our position is between the microscopic and cosmologic worlds—a position that most people call the macroscopic world, the world of everyday living. Electromagnetic phenomena underlie almost all of the earthly nature of this world, including us. More than that: these phenomena underlie and make possible the operation of almost all of modern technology, from laser beams used for eye surgery to massive motor generators furnishing electric power to our homes. The electromagnetic force has been harnessed to operate the colossal particle accelerators used to penetrate the microscopic realm of the quantum, the limits of which are prescribed by the Heisenberg Uncertainty Principle. It is also this force that is used by the gigantic telescopes probing the cosmologic realm to make observations, the limits of which are set by the finite speed of light.

Living in the macroscopic realm, we look at the other two worlds through electromagnetic eyes. This perception is supported by the fact that there is no quantum observation that does not make use of electromagnetic phenomena to accomplish the measurement, and essentially all of our astronomical observations of the cosmos are made by means of electromagnetic radiation, or light.

TWO PHYSICAL ANALOGIES FOR DIVINE TRANSCENDENCE

There are two phenomena the effects of which prevail throughout our cosmic cocoon and that I propose are reasonable physical analogies of divine transcendence. The first phenomenon is a well-known feature of the

special theory of relativity. The theory tells us that as the speed of an object with respect to us increases and approaches the speed of light, its clock progressively slows down. Consider a clock that ticks every second when it is at rest with respect to you, the observer. When the clock moves at one-tenth of the speed of light with respect to you, you will observe the duration of a tick to be 1.005 seconds. At one-half the speed of light it is 1.155 seconds. At nine-tenths it is 2.294 seconds, and at 99 percent of this speed the duration is 7.089 seconds. The nature of the progression is obvious. The fact that this effect only becomes noticeable at speeds closely approaching that of light explains why such relativistic effects went undetected for millennia. This time-related effect goes hand in hand with two other well-known effects: as an object moving with respect to us approaches the speed of light, its spatial dimension along the direction of its velocity progressively contracts, and its mass progressively increases.

However, in the case of a photon of light, whose rest mass is zero, it of course moves at the speed of light, and it has no clock to tick. Indeed the space-time interval (not the space interval or the time interval separately) of a photon in going from an emitting source to a detector or absorber is zero. The photon is therefore an atemporal object. This tells us that this constant speed of light, which is measured to be the same by all observers regardless of their speeds relative to each other, seems to present us with some kind of timeless barrier.

The second phenomenon that I consider a candidate for being an analogy for transcendence involves a feature of quantum theory that has engaged the close attention of physicists in the last several decades. It is based on a thought experiment first envisioned by Albert Einstein. It was published as a paper with his colleagues Boris Podolsky and Nathan Rosen and thus has since been known as the Einstein-Podolsky-Rosen experiment, or simply the EPR experiment. Especially in the last two decades the experiment has been performed in a number of different laboratories, particularly in the United States and Europe, with ever-increasing precision and complexity. All of these experiments so far have supported the validity of the quantum theory.

However, for the purpose of this essay it is sufficient to describe the simplest of all of the many variations of this experiment, most of which are now quite complicated. In this version of the experiment polarized light is used. Polarized light can be thought of as oscillating in a plane oriented in a certain direction. Essentially, polarized sunglasses are filters that preferentially pass the light whose waves oscillate in the same direction as the orientation of the filter.

In the experiment, two photons are simultaneously emitted in opposite directions and are polarized in the same plane (whatever that plane may be is arbitrary). Suppose the two polarization filters, A and B, are placed each one hundred miles away from the emission point in opposite directions.

Detectors are placed behind both filters to register the photons that succeed in passing through. These filters, as with the sunglasses, will preferentially pass the light that is polarized along the direction of their orientation. Let the filters be oriented, say, in the vertical direction. Because the joint polarization of the two photons (remember that they were assumed to be the same) can be in any direction, there is only a certain probability, according to the quantum theory, that, say, filter A will pass its photon. The greatest probability is when the photon's polarization has the same direction as the filter's orientation. Suppose I am at filter A and observe that it passes the photon and is registered by the detector. The photon's polarization is now measured to be vertical, because the filter is oriented vertically. A colleague at position B two hundred miles away, with the filter also oriented vertically, will observe that the other photon of the pair passes, too. Furthermore, if photon A does not pass its filter, photon B will not either.

The puzzling question is, how does photon B “know” instantaneously that photon A passed its filter so that it should pass also? By the quantum probabilities involved, photon A could have either passed or not passed its filter, and that is the case as well with photon B and its filter. Both photons either pass or do not pass. It never happens that one does and the other does not.

Here I give what I believe is the most generally accepted explanation for this behavior based on the quantum theory, which itself needs a little explanation. Any microscopic particle or system of particles can be described by what is called a wave function, which contains all the information about the system allowed by the quantum theory as constrained by the Heisenberg Uncertainty Principle. The wave function gives a probability for every value of a physical quantity that is used to describe the behavior of the system. When a measurement is made on the system the wave function “collapses” as it were, or reduces, to a specific value. Out of the whole range of values for which probabilities are available in the wave function, one is selected by the experiment. If the experiment is repeated, a different value in general will result.

In the present case, the original system, which is the emitting atom or nucleus, is described by a wave function. After emission of the photons, the entire system, emitting particle and photons, is still described by a total wave function. When this wave function is “collapsed” by an observation of the polarization of photon A, the whole thing collapses, and photon B, because it has the same polarization as A, does the same thing as A. If A passes the polarization filter, so does B; if not, it does not. Thus, the whole wave function, even though spread over two hundred miles, behaves as an inseparable, coherent whole, and the “collapse” at the moment of measurement is instantaneously active over the entire function.

This counterintuitive, correlative behavior is generally termed by physicists as “non-local.” What does this mean? First we must understand what *local* means in physics. With local forces or interactions the effects at one locality are transmitted to a neighboring locality and in turn to the next neighboring locality, and so on, at a speed less than or equal to the speed of light. For example, strangely enough, the gravitational force is a local force. Some catastrophic gravitational event occurring on the Sun would not be detected on Earth until about eight minutes later. Thus, local forces have a finite speed of propagation. But quantum non-locality phenomena transcend that speed and are instantaneous. So, although large distances dramatize the effects of non-locality, it is not necessarily defined in terms of distance.

Some have tried to explain non-locality by claiming that information of the result at A is communicated to B at a speed greater than that of light. But the theory of relativity, with light’s constant maximum speed, is too well established for many physicists to accept that explanation. Others have assumed that underneath the “quantum veil” imposed by the uncertainty principle, particles are really behaving in a classical (nonquantum) way that nature somehow does not allow us to see. Theories based on this concept, originally proposed by David Bohm, are known as hidden-variable theories. Although there are still a small number of physicists working on this kind of theory, it is not considered viable in current mainstream physics.

So what do these two phenomena, the extreme space-time effects at the speed of light and quantum non-locality, bring to mind concerning suggestions of divine transcendence? I believe that they are pointing to some encompassing reality acting beyond our capacity to experience and measure space and time. For me, this idea enhances my sense of being within what I have called a cosmic cocoon. We are part of a vast cosmic system and somehow subject to a fundamental axiomatic principle: complete knowledge of a system cannot be acquired if the observer is part of the system. And indeed we are part of the system.

In a thought-provoking article, Joe Rosen, son of the EPR Rosen, sees these two phenomena, the speed of light and non-locality, as indicative of some kind of nontemporal, nonspatial substrate that underlies the phenomena and the quantum vacuum (Rosen 1994). I believe that Rosen’s view supports my proposal that the two phenomena are reasonable pointers to the possible existence of divine transcendence. That is, they suggest the existence of some unreachable entity, probably nontemporal and nonspatial, that I believe may serve as a physical analogy to God’s transcendence. I readily grant that this is speculation, but for me it is meaningful speculation.

Rosen calls it a substrate; I call it the cosmic inaccessible background (CIB). This is a takeoff on what is known as the cosmic microwave back-

ground (CMB), the very low energy electromagnetic radiation that is the earliest observable relic of the Big Bang and that now pervades the entire known universe.

Although invoking the concept of a CIB as well as of a cosmic cocoon may seem somewhat visionary, I wish to emphasize that I do not think that this unreachable plenum, this CIB, if it does exist, is God. My guess is that it is something physical. Nor do I think it would be God's transcendence; but I do believe it may serve as a physical analogy for, or pointer to, that transcendence. It is a way of helping us see what that transcendence might be like.

Analogies have been used by theologians as well as scholars of religion for centuries in their attempts to articulate aspects or attributes of God. Of course, the most serious problem in using analogies is the unbridgeable gap between the perfection and transfiniteness of God and the finiteness of us and the world. After all, an analogy is by definition not the real thing being analogized. And when we use part or all of finite creation as an analogy to some aspect of God, it is far from the real thing.

Nevertheless, I believe a case can be made for the use of analogy in formulating meaningful references to God. It is one powerful means to help us understand something about God and connect us to God. It helps us place ourselves in a realistic perspective with respect to God—we are separate and different, yet linked to God as derivative creatures.

So, in what way do I see this CIB, indicated by quantum non-locality and the limit of light's speed, as a physical analogue for God's transcendence? First, the CIB and God's transcendence share in the property of ubiquity; both are all-pervasive in the universe. Second, both are inaccessible and unreachable, having a quality of beyondness and otherness. Third, both are ineffable and indescribable.

TRANSCENDENCE AND THE FUTURE

I believe that what we are learning from physics and astronomy about our cosmic future almost forces on us thoughts of transcendence. Three possible events threaten our existence and immediately come to mind. First, there is the real possibility of a large asteroid colliding with the earth. Second, in some 6 billion years or so our Sun will become a red giant star, expand tremendously, and envelop the earth. Indeed, long before that, in some billion years or so, the earth will already become uninhabitable (Garlick 2002). Third, the latest measurements from several teams of astronomers indicate that the universe is expanding at an accelerating rate.

There are ways to deal with the first possibility. Among them are sending up a space missile to scatter a light-absorbing dust on the asteroid's surface so that the cumulative effect of the momentum of solar photons will gradually alter its orbit, or simply attaching a rocket to the asteroid to

change its trajectory. Concerning the sun's evolution to a red giant star, I believe that if the human race has the resourcefulness and ingenuity to last to the time when that becomes an imminent threat, the survivors will certainly have the technology to deal with it, possibly by finding a way to travel, even if it takes generations, to a more hospitable solar system.

The bleakest cosmic future scenario is that spelled out by the accelerating expansion. Granted, it will be billions and billions of years hence; nevertheless, imagining us watching Andromeda, the closest galaxy to us, slowly fade from view seems a lonely prospect. Some might find consolation in a theory recently proposed by Paul Steinhardt and Neil Turok (2002). In this theory the universe undergoes an everlasting succession of cycles of expansion and collapse, and it could even include the present accelerated expansion. However, the theory is based on brane theory, an extension of string theory, neither of which has been experimentally confirmed. Furthermore, if the gravitational wave detectors now becoming operational detect such waves from the Big Bang, the theory will be disproved.

Thus, if we stick with the experimental evidence, the cosmic picture is bleak. Although there may be other good reasons why we might thirst for transcendence, this one arises from contemplating our cosmic future. This future, along with quantum non-locality and relativity effects at the speed of light, are for me among the features of the physical world that are relevant to our search for transcendence.

TRANSCENDENCE IN SPIRITUAL EXPERIENCES AND RELIGIOUS SCRIPTURES

So what hope for transcendence is there? I find some in the spiritual experiences reported by mystics both East and West that have resulted in lasting enlightenment and unity with God, or an Ultimate Other. Even though most of us may not have had, and don't expect to have, such experiences, I believe that the mystics' testimony rings true, and the fact that they have glimpsed transcendence may reassure us that it is there as a potential for all of us.

Perceptions of transcendence found in the scriptures of some of the world's major religions are also valuable sources of insight. Both the mystical and scriptural sources give a perception of transcendence for which the physical phenomena I discussed are seen as analogs. With this attitude I move on now to a few aspects of the mystical experience of transcendence that I feel are particularly illustrative and highlight some of the most compelling expressions of transcendence found in religious traditions.

To provide a background for these examples it may be useful to point out how primal and deeply visceral is the sense of self and the sense of the other, our inner and outer worlds. The subjective relationship of these two worlds is described in lucid detail and with poetic cogency by Martin Buber in many of his works. The relationship is clearly distilled in one of the

three William Alanson White lectures he gave at the Washington School of Psychiatry in 1957, titled "Distance and Relation" (Buber 1957). He posits a principle of human life that is twofold, that is, manifested in a twofold movement. The first movement, in his view, is "setting at a distance," and the second is "entering into relation." In his own words: "here alone a being has risen from the whole, endowed and entitled to detach the whole from himself as a world and to make it opposite to himself." This "being of the world . . . is there for man as something that is for itself, with which he is able to enter into relation."

In his lecture this primal sense of the self and the other is entirely in the context of human interpersonal relations. But Buber extends this innate sense of the other in interpersonal relations far beyond—to God. He describes this in the last part of his book *I and Thou* (1958): "Of course God is the 'wholly Other': but he is also wholly the Same, the wholly Present. . . . He is . . . the mystery of the self-evident, nearer to me than my I" (p. 79). So here we see transcendence and immanence in a kind of harmonious, coherent polarity.

With this fundamental human perception in mind I wish to cite some relevant examples of transcendence and its relation to immanence in religious and mystical literature. I start with some early views of essentially pure transcendence as expressed in the concept of *emanations*—that is, seeing God as absolutely transcendent and affecting and activating the world by means of a series or succession of emanations, vaguely analogous to rays of light from the sun. This perception has its origins in Greek philosophy and characterized the neo-Platonism founded by Plotinus. It was further developed by Dionysius, the central feature of whose work is the synthesis of neo-platonic and Christian thought. It is apparent in the Kabbalah, wherein God reaches into the world by means of the Serifot, or emanations. Versions of this concept are also found in the thought of such Muslim philosophers as al Farabi and ibn Sina. In all cases God is seen as totally transcendent by means of some thing, emanation.

Although these examples seem to represent the idea of transcendence rather well, in general in my attempts to select representative examples of transcendence in the Western religions I encountered the same situation I discussed earlier—that is, transcendence and immanence are so intimately complementary that we cannot easily isolate one from the other. This is actually quite understandable, because, although there are exceptions, most mystics realize their own idiosyncratic mélange of transcendence and immanence in their experience, especially in the Western religions.

In the words of theologian Louis Dupre, "Mystics and spiritual men of all ages have known that God becomes more transcendent to us as He becomes more immanent in us" (1976, 9). Nevertheless, he does describe the nature of transcendence per se, saying, for example, "Prodding constantly to abandon the acquired and to sacrifice sufficiency, the dynamics

of transcendence incite man to his highest achievements” (p. 1). But he points out the danger of isolating transcendence from immanence by the tendency to objectify God, seeing God as an object.

Such objectification of transcendence is not apparent in the writings of the Christian mystics whose experience of transcendence is enriched by an attendant sense of divine immanence. This tempered experience of transcendence is certainly implicit in the visions of Christ reported by Saint Theresa of Avila. She writes, “If I were to spend many years devising how to picture to myself anything so beautiful, I should never be able, nor even know how to do it; for it is beyond the scope of any possible imagination here below; the whiteness and brilliancy alone are inconceivable” (quoted in Underhill 1961, 290). Thus, there is not only an experience of intimate luminous presence but also the perception of a source, an Other.

Before experiencing such brilliantly encompassing, yet intimate, otherness, many on the mystic path must negotiate a period of groping in the dark, or experiencing what has been called the “dark night of the soul.” This is described by the anonymous author of the *Cloud of Unknowing*: “When I say darkness, I mean thereby a lack of knowing. . . . And for this reason it is not called a cloud of the air, but a cloud of unknowing, that is between thee and thy God” (*Cloud of Unknowing* 1961, 58). Here we see the separateness and otherness of God clearly indicated.

This perception of transcendence is also implied by Meister Eckhardt in words that have haunted my contemplation ever since I read them some twenty years ago: “The highest and loftiest thing that one can let go of is to let go of God for the sake of God” (as quoted in Fox 1983, 50). This profound statement seems to be telling us to let go of God, to let God be God, free of our self-encumbering visualizations or fabrications.

The Eastern religions also give us some compelling cosmic views of transcendence, in particular as expressed in Vedantic Hinduism and in Taoism. Of the six schools of Hindu religious philosophy it is the Vedantic school, embodying the views of such great leaders as Shankara, Ramanuja, and Madhva, that now dominates the mainstream of Hindu thought. The Advaita Vedanta of Shankara, for example, tells us that the ultimate deity, from whom all other deities derive their power, is Brahman. The other gods, such as Brahma (not Brahman), the creator, Vishnu, the preserver, and Shiva, the destroyer, are but transient manifestations of the supreme Brahman. So Brahman is the only Absolute Reality—beginningless, endless, changeless, ineffable, and majestically beyond good and evil, space, time, causation, and the impermanent universe. For me this is a consummate perception of transcendence.

In the Bhagavad Gita, the scriptural jewel of Hinduism, Chapter 11 describes what Geoffrey Parrinder in his work on mysticism says is “perhaps the most detailed vision of God in all of religious literature” (Parrinder 1976, 95). I cite just a few sentences: “Thou art the final resting place of

this universe; Thou art the immortal guardian of eternal law” (from Verse 18); “O infinite one! Lord of the gods! O refuge of the worlds! Thou art the imperishable: Thou art being and non-being, And that which is beyond both” (from Verse 37).

A roughly similar expression of transcendence is found in the Taoist tradition. The Tao is the mysterious quiet that pervades all of nature. But the Tao of the world—the mountains, lakes, trees, and all living creatures—is just one of two aspects of Tao. There is the apparent aspect manifested by the order of the universe and an aspect from which the order arises, the Absolute Tao, often referred to as the Nameless or Non-being. From Chapter 1 of the Tao Te Ching we read,

The Tao that can be Tao'd is not the Absolute Tao
The name that can be named is not the absolute name.

And from Chapter 40:

For though Heaven and Earth and the
Ten Thousand Creatures were produced by Being,
Being was produced by Non-Being.

So, despite some philosophical differences from Vedantism about the relation of being and nonbeing, the Tao Te Ching in its own gentle way is telling us of a transcendent Reality that underlies the natural universe.

These are but a few examples of spiritual transcendence for which the physical phenomena I described earlier may serve as pointers, or hints. As I said earlier, these two phenomena, quantum non-locality and atemporality at the speed of light, suggest to Joe Rosen some kind of nontemporal, nonspatial substrate, what I called the CIB. As I argued earlier, this CIB is a reasonable analogue for divine transcendence. This aspect of the physical world, our cosmic cocoon, as implied by non-locality and light's limiting speed, transcends us. It is beyond our capacity for observation. We do not have access to it, and we probably never will. But just as this phenomenon transcends us, so it in turn is transcended by God's eternal otherness. Thus, I see it as a kind of stepping stone in that it helps us with some perception of the nature of God's transcendence, an analogue, admittedly speculative, that affords us some sense of what transcendence is.

THEOLOGY OF NATURE AND NATURAL THEOLOGY

In response to the question “Is nature enough?” posed by the theme of the 2002 IRAS conference on which this essay is based, I think I have made it clear that for me it is not. God has graced us with a natural world that has limits, limits that tell me that nature is not enough. In the jargon of mathematics and logic, nature is necessary but not sufficient. In fact, for the adherents of the many religions of the world that are based in large part on revelation, it has not been enough for millennia, possibly even since the

dawn of human consciousness. Furthermore, I believe that the question goes right to the heart of the distinction between natural theology and theology of nature.

The natural theologian seeks hints of, or pointers to, God in the beauty and order of nature. The theologian of nature interprets the role of nature in a traditional theology based on divine revelation and spiritual insight. The two sound the same, but they are not. Natural theology starts with nature and seeks God, a bottom-up theology, while theology of nature starts with God and interprets nature, a top-down theology.

The theologian of nature knows that nature is not enough. But I think that nature may not be enough for some natural theologians, either; otherwise, why are these theologians studying nature looking for intimations of God? Natural theologians must have some sense of what God is about, or have some yearning or apprehension, or they would not be looking—or know what is the most informative part of nature to examine in their quest.

Suppose a very skeptical, or agnostically inclined, natural theologian is studying a part of nature to see whether it might be a reasonable pointer to God. If this part of nature is that worthy of study, I would be very surprised if the theologian of nature would not see it as one of the glories of the creation of God, the God of revelation in which he or she believes.

Both theologians are seeing the same part of nature from different viewpoints, different religious and/or philosophic postures. But both, in one way or another, have God in mind. This is why I follow Thomas Torrance, who maintains that “natural theology . . . must be brought within the body of positive theology and be indissoluble with it” (Torrance 1995, 40). By positive theology here he means revelatory theology.

ESCHATOLOGY AND THE FUTURE

In the very posing of the question “Is nature enough?” are we not subconsciously revealing at least some yearning for, or some vague indefinable apprehension of, a transcendent God? This question is especially timely because of what I mentioned earlier concerning our cosmic future, namely, asteroid collisions, our Sun’s becoming a red giant star, and the universe’s accelerating expansion. In addition to the loneliness attendant with this expansion, the fact that so far our search for extraterrestrial intelligence has found no evidence for such intelligence tells us that we may really be alone.

All of this together elicits thoughts not only about how our species is going to physically survive but also thoughts about whether there is hope for transcendence. Transcendence and the future go hand in hand. Eschatology has no meaning without transcendence. Hans Kung writes,

Transcendence then is conceived no longer as in ancient physics and metaphysics, primarily spatially: God over or outside the world. . . . Christianity has rediscovered its heritage of the future: future is a new paradigm for transcendence. Which

means that God is not to be understood simply as the timeless eternal behind the one homogeneous flow of coming to be and perishing, of past, present, and future, as he is known in Greek philosophy; but is precisely as the eternal that he is, the future reality, the coming reality. (Kung 1985, 214)

Here Kung acknowledges that he was influenced by the systematic work of Jürgen Moltmann on relating transcendence to the future.

Implicit in this hopeful perception of a transcendent future is, again, the position that nature is not enough. We must remember that we are part of nature, and all creatures of living nature must sooner or later die. Death is part of nature's life. To paraphrase Joseph Campbell, at death we are "planted" to become seeds for generations to come. Our biological clocks run down, and we cannot indefinitely "borrow" atoms and molecules from our natural surroundings without giving something back. Jacques Benigne Boussuet expresses it cogently when he says that "nature, almost envious of the good she has given us, tells us often and gives us notice that she cannot for long allow us that scrap of matter she has lent. . . . She has need for it for other forms, she claims it back for other works" (Enright 1987, 6).

CONCLUDING REMARKS

So, in addition to the cosmic considerations I have discussed, at the personal level, with the inevitability of death, there is an obvious human disposition to contemplate and to thirst for transcendence. This thirst is intimately related to our quest for meaning. As I suggested in my summary statement of the 1988 IRAS Conference on "Cosmology and the Meaning of Human Existence," at least part of the meaning we seek inheres in the search itself, that is, there is meaning to be found in the searching process and not necessarily entirely in the goal.

Indeed, our quest for meaning is implicit in our thirst for transcendence. I consider this a God-given thirst, a primal human need to seek God. I believe it should be considered as one of God's blessings, a divine act of grace giving us a way to connect to God. It is our spiritual libido, if you will. In this thirst all of us have some feeling for what transcendence is. We have experienced it in varying degrees, some in direct visions or near-death experiences. All of us have at least a glimpse of what it might be like. James Wiseman tells of how "in Dante's 'Paradiso', the poet asks a saint in the lower region of heaven if she is not envious of those who are still more exalted. Piccarda (the saint) replies: "Brother, the power of love quiets our will and makes us wish only for that which we have and gives us no other thirst" (Wiseman 2002, 94). So, again considering the theme for the 2002 IRAS Conference, "Is Nature Enough? The Thirst for Transcendence," I suggest a corollary theme: "The Thirst for Transcendence, Is That Not Enough?"

NOTE

1. This work derives from a lecture on the 2002 IRAS Conference theme, "Is Nature Enough? The Thirst for Transcendence."

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