

INTERCONNECTEDNESS AND INTRINSIC VALUE AS ECOLOGICAL PRINCIPLES: AN APPROPRIATION OF KARL RAHNER'S EVOLUTIONARY CHRISTOLOGY

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The ecological crisis today is due in great part to a widespread anthropocentric attitude toward nature characterized by (1) a dualism that sees humanity as totally distinct from nature and (2) an instrumentalism that sanctions an indiscriminate use of nature for the sake of humans. To offset the possible destructiveness of this anthropocentrism, we need ecological principles that recognize deeply both nature's intrinsic value and the inherent link between humanity and nature. Karl Rahner's evolutionary Christology can theologially ground such ecological principles.

TO ALL WHO HOLD that the world is God's creation, today's ecological crisis presents a moral crisis. In the face of the ecological disruption of nature, we are inclined to ask ourselves, "What is happening to our beautiful land," God's treasured creation?¹ We are now facing environmental deterioration both globally and locally, as global warming, deforestation, and the pollution of air, water, and land make increasingly obvious. Many of these ecological problems are deeply interrelated: both destruction of tropical rain forests and unrestrained use of fossil fuels contribute to global warming; this global warming in turn disturbs ecosystems.

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¹ Catholic Bishops of the Philippines, "A Pastoral Letter on Ecology from the Catholic Bishops of the Philippines," in *And God Saw That It Was Good: Catholic Theology and the Environment*, ed. Drew Christiansen and Walter Grazer (Washington: United States Catholic Conference, 1996) 309-18.

We must respond to this ecological plight as a call to reassess the dominant values and goals that have governed how we live in the world: competition, efficiency, progress, affluence, profit, and so forth—all without limit. These values and goals have impelled us to a “development” of nature that has seriously damaged Earth’s ecology, such that the crisis must be seen rather as a human problem than as a problem of nature. A large part of the problem seems rooted in an anthropocentrism that determines how we live in the world,² and I believe that if we Christians are to constructively engage with the ecological crisis we must critically reflect on our own worldview.³

I maintain that we need ecological principles that correct an anthropocentric worldview, principles that regard humans as an important part of nature’s interrelational matrix but not as its center or end. This article will therefore: (1) articulate principles that can guide an ecologically oriented perspective on nature by developing the notions of the interconnectedness and intrinsic value of nature; (2) theologically ground these ecological principles in Karl Rahner’s evolutionary Christology; and (3) show them to be applicable to the real evolutionary world of natural selection.

ECOLOGICAL PRINCIPLES AND KARL RAHNER’S EVOLUTIONARY CHRISTOLOGY

If they are to be efficacious for and relevant to our day, ecological principles must be able to mitigate an anthropocentrism that has proved disastrous to nature. I take the mechanistic worldview prevalent in modern times as the main source of a dominant anthropocentric attitude toward nature. René Descartes laid the foundations for a mechanistic view of reality by dividing the world into *res cogitans* and *res extensa*. Nature as *res extensa* was seen as inert and passive matter and as completely different from the human being as *res cogitans*.⁴ Isaac Newton conceived the physical world in terms of matter and force in a void of space.⁵ This new mechanistic view objectified or desacralized nature, turning nature as a living organism or a sacred place into a machine—as Carolyn Merchant put it, “composed of interchangeable atomized parts that can be repaired or replaced from outside.” “Because nature was now viewed as a system

² See, e.g., Lynn White Jr., “The Historical Roots of Our Ecologic Crisis,” *Science* 155 (1967) 1203–7, at 1205–7.

³ I use the term *world* to mean the natural world or the entire cosmos, often with the connotation of God’s creation.

⁴ See Ian Barbour, *Religion and Science: Historical and Contemporary Issues* (New York: HarperCollins, 1997) 12–13; and Fritjof Capra, *The Turning Point: Science, Society, and the Rising Culture* (New York: Bantam, 1983) 59–61.

⁵ See Barbour, *Religion and Science* 18–19; and Capra, *Turning Point* 65–67.

of dead, inert particles moved by external rather than inherent forces, the mechanical framework itself could legitimate the manipulation of nature."⁶ Thus nature became a machine to be analyzed, controlled, and governed by humans, while humans saw themselves charged to know, conquer, and govern nature so that it might serve them.

This dualistic, mechanistic worldview, which sees the material world instrumentally according to an anthropocentric orientation, lies at the philosophical root of humanity's reckless exploitation of nature.⁷ The anthropocentric viewpoint tends to separate human beings from the rest of the world and to ascribe intrinsic value only to humans;⁸ an alternative viewpoint could see the human and the nonhuman aspects of the world as inseparable and intrinsically valuable. Ecological principles, if they are to repair the damage done and prevent further damage, must support this integral perspective and respect the intrinsic value of nonhuman nature alongside human nature.

A viewpoint that sees humans and nature integrally related finds support in the Darwinian evolutionary worldview born in the 19th century. Scientific perspectives of the 20th century, based on new theories and discoveries in physics and astronomy, have also challenged the mechanistic perspective.⁹ A new integral view of reality, in contrast to the mechanistic one, conceives of the world not so much as passive and static, with discrete and externally linked parts, but rather as active, dynamic, and continuous, with inherently related parts. It may be called a relational view of reality.

⁶ Carolyn Merchant, *Radical Ecology: The Search for a Livable World* (New York: Routledge, 1992) 48.

⁷ The debate about anthropocentrism as the root of humanity's reckless exploitation of nature has become sophisticated, notably between two camps called "deep ecology" and "ecofeminism." The former regards anthropocentrism or human-centeredness as the main root of nature's deterioration, while the latter considers androcentrism or male-centeredness as the main root. See Pamela Smith, *What Are They Saying about Environmental Ethics?* (New York: Paulist, 1997) 30–33. However, one may note that deep ecologists and ecofeminists have in common a nonhierarchical attitude toward nature, which is in opposition to what is called hierarchical dualism. See Elizabeth A. Johnson, *Women, Earth, and Creator Spirit* (New York: Paulist, 1993) 10. I use the term *anthropocentrism* to mean this hierarchical dualistic attitude toward nature. Anthropocentrism and androcentrism can then be seen to have common characteristics such as radical division and exclusion and instrumentalism. See Val Plumwood, "Androcentrism and Anthropocentrism: Parallels and Politics," in *Ecofeminism: Women, Culture, Nature*, ed. Karen J. Warren (Indianapolis: Indiana University, 1997) 327–55, at 335–41.

⁸ See Johnson, *Women, Earth, and Creator Spirit* 10–11; and Andrew McLaughlin, "The Heart of Deep Ecology," in *Deep Ecology for the Twenty-First Century*, ed. George Sessions (Boston: Shambhala, 1995) 85–93, at 86–87.

⁹ See Merchant, *Radical Ecology* 93–100.

Ecological principles, if they are to reverse our current direction, must adopt this relational worldview as more consistent with recent scientific perspectives and attending to our increasing awareness of the negative consequences of the mechanistic view.¹⁰

According to one current, well-established scientific cosmology, there was a discrete moment when the universe began around 15 billion years ago, and the universe has since been expanding and evolving.¹¹ All things in the evolving cosmos are products of this event. Even unique human characteristics such as self-consciousness and free will have a place in this narrative. This comprehensive cosmic perspective clearly indicates the interconnectedness of all things. Our recognition of this interconnectedness and the consequent interdependence of all beings allows us to call into question the instrumentalist view of nature and elevate our sense of the intrinsic value of nonhuman nature. If all things are inherently connected, they depend on one another, and each being in its own way influences the whole. In this respect, nothing in the world may be depleted, manipulated, or eliminated simply because it is useful or useless for humans, and, we must conclude, nonhuman creatures do not exist primarily for humans, although they may do so secondarily. With respect to the whole, they have their own *raison d'être*, which may often lie beyond our current understanding.

Ecological principles as explored above may now be identified under the rubrics of interconnectedness and intrinsic value.¹² I will theologially explicate and support the principles of interconnectedness and intrinsic value by appeal to Karl Rahner's evolutionary Christology.¹³ First, however, I must note that an evolutionary worldview is so critical an issue in

¹⁰ Ibid. 44–45.

¹¹ For a brief explanation of the so-called big bang theory of cosmic origins, see Barbour, *Religion and Science* 195–99. For more detailed and more scientific accounts of the origin and evolution of the cosmos and Earth and their implications, see, e.g., Brian Swimme and Thomas Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era—A Celebration of the Unfolding of the Cosmos* (New York: HarperCollins, 1992).

¹² We find ourselves in a position similar to that of deep ecologists, who claim the interconnectedness of all species and, in principle, espouse biospherical egalitarianism. Their stance may be called biocentric or ecocentric. See Arne Naess, "The Shallow and the Deep, Long-Range Ecology Movements: A Summary," *Inquiry* 16 (1973) 95–100; and Smith, *What Are They Saying about Environmental Ethics?* 5–18.

¹³ Rahner, "Christology within an Evolutionary View of the World," in *Theological Investigations*, vol. 5, trans. Karl-H. Kruger (London: Darton, Longman, & Todd, 1966) 157–92; Rahner, *Foundations of Christian Faith: An Introduction to the Idea of Christianity*, trans. William V. Dych (New York: Crossroad, 1978) 178–203.

the contemporary understanding of the world that we can hardly discuss our perspectives on nature without considering evolution.¹⁴ In this widely held theory, relatedness is an essential aspect, as the idea of evolution claims a certain continuity among all species having common ancestors. The viewpoint I espouse here is neither anthropocentric nor primarily biocentric or ecocentric. Rather, it may be called theocentric, since, as I will show, interconnectedness and intrinsic value are grounded in God's presence in creation.

In virtue of this relatedness inherent in evolution, a Christology such as Rahner's, worked out within an evolutionary view of the world, can reinforce the principle of interconnectedness. Appropriation of Rahner's evolutionary Christology can deepen our awareness of the profound linkage between humans and nonhumans as parts of the one cosmos they constitute. This deepened consciousness of interconnectedness will then be efficacious against what I refer to as the first aspect of anthropocentrism, namely, a dualistic view of humans and nature.

I submit, also, that all creatures have intrinsic value rooted in their respective relationships with God. One of Christianity's most fundamental beliefs is that God created all that exists and sustains all creatures by being present to them according to their mode of being.¹⁵ Reciprocally, all creatures are seen to exist by participating in God's being.¹⁶ If creatures are good and have value, that goodness and value are grounded in and ensured by God's presence in them and by their participation in God.¹⁷ The typical anthropocentric claim that nonhuman creatures have value not primarily in themselves but by virtue of their relationship with and usefulness to

¹⁴ Rahner was aware that an evolutionary viewpoint was becoming influential in his day and could not be ignored if a Christian understanding of the world were to be intelligible to his contemporaries. He therefore sought to present Christology within an evolutionary view of the world and thereby contributed to a contemporary, authentic understanding of the classical formula of the incarnation. See Rahner, *Foundations* 179. He aimed to "situate Christianity within the intellectual horizon of people" of his day (*ibid.* xi).

Although it is true that evolutionary theories differ in detail among scientists, the basic idea of evolution itself is not much contested in the scientific world today. See Barbour, *Religion and Science* 221–23; and John F. Haught, *God after Darwin: A Theology of Evolution* (Boulder, Colo.: Westview, 2000) 2–3. Even the Roman Catholic Church, which has been cautious about evolution, began to recognize it as a plausible theory rather than as a mere hypothesis. See John Paul II, Truth Cannot Contradict Truth, no. 4, address to the Pontifical Academy of Science, October 22, 1996, *L'Osservatore Romano*, Eng. ed., October 30, 1996.

¹⁵ See Thomas Aquinas, *Summa theologiae* (hereafter *ST*) 1, q. 8, a. 1.

¹⁶ *ST* 1, q. 44, a. 1.

¹⁷ See Thomas Aquinas, *Summa contra gentiles* 2, chap. 2.4.

human beings is unacceptable.¹⁸ Furthermore, we must understand that distinctive relationships are formed between God and creatures due to the divine presence and creaturely participation according to creatures' respective modes of being. Creatures must be viewed as distinctive in their intrinsic value rooted in their respective relationships to God, and therefore we can distinguish intrinsic value among different kinds of creatures and thereby relate to and act toward them in a properly differentiated way.¹⁹

I will appeal to God's incarnation in Jesus Christ as confirming the intrinsic value of all creatures, considering that it is based on creatures' respective relationships to God and that the incarnation is the most supreme realization of the relationship between God and creatures. Considered too narrowly, however, an incarnational approach could be problematic, for the incarnation has been understood as largely anthropocentric, with its significance restricted to human beings. In that case the idea of the incarnation itself could one-sidedly emphasize the uniqueness of the human person, thereby simply reinforcing anthropocentrism and an instrumentalist stance toward the nonhuman realm. Rahner's evolutionary Christology offers a view of the incarnation that can address this restrictive view and recognize the intrinsic value of all creatures, for Rahner's Christology places and understands the incarnation within the context of the whole cosmos. I will concentrate on how Rahner considers the incarnation to be internally related not only to humankind but also to the whole world, so that we may move beyond an anthropocentric understanding of the incarnation and thereby ground the recognition of the intrinsic value of all creatures and of the whole created world itself. The heightened awareness of the intrinsic value of nonhuman creatures, then, offsets the second aspect of anthropocentrism, an instrumentalist view of nature.

¹⁸ Insofar as one holds, even implicitly, a hierarchical dualistic attitude toward nature, one tends to view nature not as it is but primarily from a human-centered perspective. It then becomes difficult to discover and acknowledge that values are inherent in nonhuman creatures as well as in humans; rather, their values tend to be seen as created according to human needs. Some thinkers hold that anthropocentrism is inevitable because we cannot "avoid any reliance on human location or bearings in the world, any taint of human interest, perception, values or preferences," and so forth. The argument goes on to assert that "nature itself is not something which can intelligibly be valued independently of human interests," or that "constraints on human conduct can take into consideration only human interests" (Plumwood, "Androcentrism and Anthropocentrism" 329–32).

¹⁹ This stance on intrinsic value is different from that of deep ecologists. While the former acknowledges different intrinsic values among creatures, the latter in principle ascribes equal intrinsic value to all beings.

THE PRINCIPLE OF INTERCONNECTEDNESS IN LIGHT OF RAHNER'S EVOLUTIONARY CHRISTOLOGY

Rahner's evolutionary Christology helps us perceive and affirm the interconnectedness of creatures in the world. He first affirms the world's fundamental unity as based on faith in the one God who created all that exists. All things form a "unity in origin, self-realization and determination: *one* world."²⁰ Given the common origin of all things, spirit and matter are not to be viewed as unrelated but as interrelated. The human being is the place where the mutual relationship between spirit and matter is reflexively observed. When we reflect on ourselves, we realize that we are beings of spirit and matter, but always a unity. Of the two, spirit is understood to refer to transcendence; matter is what we, even in transcendence, experience as unavoidably given to us.²¹ Spirit and matter in the human being, although they differ essentially from each other, are intrinsically interconnected; indeed they form a profound unity.

This understanding of the unity of spirit and matter enables us to perceive how deeply humans and nature are interconnected. Even when we try to see ourselves as immaterial mind over and against a material world, we cannot but experience the world as something inescapably "given" to what we are; that is, we are necessarily part of it. Seek as we might to cut ourselves off or to distinguish ourselves from the world, our existence is still undeniably mediated by the material world; that is, we experience the world and ourselves in it as matter. We are united with the world as inseparably as spirit is united with matter. As persons we are united with the world in a way analogous to how, as spirit, we are united with our body, in that we experience both our body and the world as matter. Rooted in the unity of spirit and matter, the link of humanity with the world is intrinsic and inescapable. Therefore, we must say that to distinguish and separate humans from the world entirely (as mind from extension), which is conspicuous in an anthropocentric perspective on nature, is fundamentally false. Such a complete distinction would contradict and distort the authentic identity of the human being. The human being is always a unity of spirit and matter, that is, a spiritual being inseparably coupled with matter.

The unity of spirit and matter must be viewed not simply as static but also as dynamic if we are to take seriously the idea of evolution in the world. Rahner understands evolution as "becoming," by which he means active self-transcendence; in evolving, the lower achieves an increase of being and becomes the higher. "Becoming must be understood as becoming *more*, as the coming to be of more reality, as reaching and achieving a

²⁰ Rahner, "Christology" 161.

²¹ Rahner, *Foundations* 183.

greater fullness of being.”²² This “becoming *more*” does not seem to accord with the metaphysical principle of causality wherein the cause must be greater than the effect. However, if we can still speak of “becoming *more*” by active self-transcendence, then we must consider this self-transcendence as taking place by the power of God “as continuing creator.”²³ God—in fact, God alone—can be seen to work within the innermost being of creatures in such a way that God empowers them to achieve a real active self-transcendence while preserving their nature and autonomy.²⁴ For God is at once transcendent over and immanent within the whole of creation. We can then say that creatures transcend themselves with their own power on the one hand and with the divine power on the other. God works within creatures by virtue of divine immanence, while preserving their nature and autonomy by virtue of divine transcendence. As the notion of self-transcendence includes “a leap to something *essentially* higher,” we can say that matter evolves to life, and life to spirit.²⁵ Matter and spirit are united in a dynamically intrinsic manner.

A dynamic understanding of the unity of spirit and matter in terms of active self-transcendence brings into relief the interconnectedness of the world. I note here some implications of this interconnectedness. One may say that creatures are linked to one other divinely, that is, by virtue of God’s immanent power; and also intrinsically, that is, by virtue of their own natural power. On the one hand, the interconnectedness of the world is divinely established, in that it is formed by the immanent dynamism of God that empowers the self-transcending process. Not only creatures but also their interconnectedness originates from God. Relationships among creatures are grounded in God. On the other hand, the interconnectedness of the world is not merely formed by God and then embedded in the world from without; the links between creatures are formed from within their innermost parts due to the intrinsic, active self-transcendence of the world. Interconnectedness thus embedded in the world is not incidental to, but constitutive of, the world. Creatures are perceived to be linked all together at the level of being. They could not come into being at all without this interconnectedness established by this self-transcending process. In short, whether it is conceived as established by God or as intrinsically founded by creatures themselves, interconnectedness deserves our recognition and concern.

²² Ibid. 184.

²³ Karl Rahner, “Natural Science and Reasonable Faith,” in *Theological Investigations*, vol. 21, trans. Hugh M. Riley (London: Darton, Longman, & Todd, 1988) 16–55, at 39.

²⁴ Rahner, *Foundations* 185.

²⁵ Ibid.

Understanding the world in the light of a self-transcending process discloses the historicity of the world and thereby reinforces the close link between humanity and nature. From the perspective of the self-transcendence of matter into spirit, human history and the history of nature are integrated into a single history of the world. Cosmic history and human history encompass and penetrate each other. Obviously, cosmic history involves human history in terms of time. Nonetheless, human history includes cosmic history, in that the whole history of the universe is an expression of the self-transcendence of matter into spirit and can be conceived of as included in the human being as a unity of spirit and matter. Given that it recapitulates cosmic history, humanity is the locus where the cosmos has reached and achieved self-awareness. Rahner calls this aspect "cosmic self-consciousness."²⁶ From the perspective of cosmic self-consciousness, humans are a kind of representative for the entire cosmos. Just as human self-consciousness is regarded as cosmic, so too human corporeality can be viewed as cosmic, in that the body is the means by which humans assume their presence in the cosmos and participate in it. Rahner calls this "cosmic corporeality,"²⁷ in view of which human beings are perceived as members of the cosmos. I suggest that the terms "cosmic self-consciousness" and "cosmic corporeality" awaken us to the intrinsic connection between humanity and nature and, based on this intrinsic linkage, inform our relationship with and actions toward nonhuman creatures.

Cosmic self-consciousness accentuates the linkage between humanity and the cosmos. Because of its vastness and despite its beauty, the cosmos often appears so indifferent to us that it is not easy to claim our close relationship with it. However, when we attend to the spiritual dimension of the cosmos, or of nature, the sense of cosmic self-consciousness stimulates us to be aware of our belonging to the cosmos as its representative. This sense will remove or at least relieve the feeling that we are simply strangers who happen to have appeared on earth,²⁸ and it will support and enliven our sense of interconnectedness even in the immensity of the universe. Moreover, as representatives of the cosmos we are expected to have a heightened concern and care for the universe and its individual

²⁶ Ibid. 188–89. Rahner made it clear that he would try to avoid evolutionary theories of Teilhard de Chardin and work purely as a theologian. They seem, however, to have reached the same interpretation using different expressions regarding the appearance of humanity in the cosmos: cosmic consciousness for Rahner and the noosphere for Teilhard. See Rahner, "Christology" 159–60; and Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York: Harper & Row, 1959) 200–203.

²⁷ Rahner, *Foundations* 189–90.

²⁸ Ibid. 188. See also John F. Haught, *The Promise of Nature: Ecology and Cosmic Purpose* (New York: Paulist, 1993) 39–65.

members. The awareness of this caring responsibility suggests how we are to live and act in the world we represent.

Cosmic corporeality also accents the linkage between humanity and the cosmos. Because we are spiritual, we seem, despite our corporeality, to be vastly different from the cosmos we inhabit. However, when we attend to the material aspect of the human being, we also affirm our own membership in the cosmic corporeality of the universe. Like cosmic self-consciousness, this sense of corporeality also relieves our feeling of alienation from the vast cosmos and elevates our sense of connectedness with it. Moreover, we as self-reflective, representative members of the cosmos are expected to respect the order and harmony of the universe. The realization of this demand for respectful responsibility will indicate how we are to live and act in the world to which we belong.

The notion of cosmic corporeality highlights a material dimension in the human being, as the idea of cosmic self-consciousness spotlights a spiritual dimension in the natural world. Both the nonhuman natural world and human beings have a spiritual and a material aspect. Therefore, it would be incorrect to regard nature and humans as wholly disparate. On the contrary, the human and the material world, like consciousness and body, must be seen as profoundly interconnected, penetrating each other and forming a unity of one world, as consciousness and body form a unity of one human person. In the world, constituted by the self-transcending process of matter into spirit, nonhuman creatures are no more disparate from spirit than human creatures are from matter. We must understand that a spiritual dimension was latent in the material world until spiritual beings finally emerged in the humanity that self-consciously bears both a spiritual and material dimension. In short, human and nonhuman creatures form a single world; humans are merely conscious of the unity present in all the world's beings.

THE PRINCIPLE OF INTRINSIC VALUE IN LIGHT OF RAHNER'S EVOLUTIONARY CHRISTOLOGY

The way Rahner, in his evolutionary Christology, conceives the relationship of God's incarnation in the world helps us recognize and emphasize the intrinsic value of creatures. In the Christian conception of creation, "God creates the *ad extra* in order to communicate the *ad intra* of his love."²⁹ God's motive for creating the world lies in God's loving self-communication *ad extra*. The world is what is brought into being when God, purely out of love, wills to communicate God's self. This self-offering to the world begins with the birth of the universe. This outward self-

²⁹ Karl Rahner, "Incarnation," *Sacramentum Mundi* 3:110–118, at 111.

communication of God—God’s love—is the source of the immanent divine dynamism that propels creatures’ self-transcendence.³⁰ Considering that love by its nature unites, we can say that the world in its self-transcending process empowered by the divine self-communication is invited from the beginning to union with God. Given that an invitation requests a response, God’s self-communication can be completed only when spiritual creatures with self-consciousness and free will—human beings—appear in the world.

Rahner envisages here a historical moment when God’s self-offering to the world and human beings’ acceptance of it culminate. He calls this moment the appearance in history of the “absolute savior,” a person in whom the self-communication of God to the world and the self-transcendence of the world to God occur irrevocably and irreversibly.³¹ This historical person is called the absolute savior, for it is in this person that the world’s primordial longing for union with God and God’s self-communication to the world reach an unsurpassable, perfect unity. The incarnation is the actualization in the world of the notion of the absolute savior.

Understood as the realization of the absolute savior, the incarnation is conceivable in a way consistent with an evolutionary view of the world. The incarnation is regarded within the evolving movement of matter to spirit as “the asymptotic goal of a development of the world reaching out to God.”³² It is the highest actualization of the relationships among God and creatures, which are a critical ground for their intrinsic value. The incarnation, to be sure, occurs actually in a human being, since it presupposes self-consciousness and freedom. However, this in no way means that intrinsic value on the basis of the incarnation is guaranteed to humans alone. While the human being, with its unsurpassed uniqueness by reason of self-awareness and freedom, is recognized as the prerequisite for the incarnation, this uniqueness must always be seen in a wider cosmic context, that is, the cosmos as a web in which all creatures are intrinsically and divinely interconnected. Moreover, the incarnation is seen here to occur from within, not apart from, the whole evolving process of the world. The incarnation is in this sense internally related to the entire world. It is in this cosmic understanding of the incarnation that we are compelled to look to the incarnation to ensure the intrinsic value of nonhuman creatures. The incarnation is grasped within the context of the *universe*, not merely within the *human* context; its significance extends to the whole world. Therefore, all creatures, not only humans, are granted and ensured intrinsic value on the basis of the incarnation.

³⁰ Rahner, “Christology” 173.

³¹ Rahner, *Foundations* 193–94.

³² Karl Rahner, “Christology in the Setting of Modern Man’s Understanding of Himself and of His World,” in *Theological Investigations*, vol. 11, trans. David Bourke (London: Darton, Longman, & Todd, 1974) 215–29, at 227.

While intrinsic value is ascribed to all creatures, establishing intrinsic value on the basis of the incarnation within an evolutionary understanding of the world is in accord with and grounds the premise I have argued, namely, that creatures have distinctive intrinsic value according to their respective relationships to God. This differentiated perspective on intrinsic value may relieve difficulties and ambiguities accompanying a so-called biospherical egalitarianism that holds that in principle all beings possess equal intrinsic value and must therefore be treated equally.³³ In contrast to this claim, our ecological principle of intrinsic value suggests that we must envision all beings we encounter in the cosmos as God's precious creatures, but that at the same time we should relate to and act toward them with due concern properly informed by their differences in intrinsic value.

When seen as linked internally with the whole evolving world, the incarnation can be construed as the ultimate goal of the world, which is also "*causa finalis*, the cause or the moving power" of this evolving process.³⁴ In this conception, the world is in an incomplete phase of the self-transcending process of creation, whereas the incarnation is its completion; the world is an ongoing reality still in process toward its goal, which was, in anticipation, achieved and witnessed in the incarnation. The incarnation reveals God's intention finally to bring the world to completion. In this sense the incarnation is a divine pledge to complete the world. Just as in the humanity of Jesus a tiny portion of creation has been brought to completion proleptically in the historical appearance of the absolute savior, so will the whole world be brought to completion eschatologically.

In sum, I have argued, on the basis of the incarnation, for the intrinsic value of nonhuman creatures since the whole world, not merely humanity, is internally linked to the incarnation. If we recall the full meaning of the world and the incarnation, we can say that eventually both of them tell us one and the same truth: God is love, and God loves the world. The world is what was brought into being when God willed to communicate God's self out of divine love; the incarnation is the unambiguous and irrevocable climactic moment of this self-communication of God to the world. Creation and the incarnation can be read "as two moments and two phases of the one process of God's self-giving."³⁵ The intrinsic value of the world rests in this loving relationship of God to all creatures. It is in virtue of God's self-gift to and for the world that we can affirm and pay due regard to the intrinsic value of the world amid its often chaotic appearances.

³³ Arne Naess, *Ecology, Community, and Lifestyle: Outline of an Ecosophy*, trans. and rev. David Rothenberg (New York: Cambridge University, 1989) 28–29.

³⁴ Rahner, *Foundations* 195.

³⁵ *Ibid.* 197.

ECOLOGICAL PRINCIPLES FOR THE WORLD AND THE COSTS OF EVOLUTION

A tension exists between a world based on the ecological principles of interconnectedness and intrinsic value and the actual world burdened with the costs of evolution. By my argument, these ecological principles are inherent in the world by virtue of the immanent, divine self-communicating love. These ecological principles may incline us to imagine a harmonious world in which all creatures are intimately related to one another and have distinctive intrinsic value. What, then, about the destructive aspects of evolution such as the extinctions of species as well as the fierce competition for survival that includes pain and death of individual life forms? We must come to terms with this destructive side of evolution if we are to assert that the ecological principles generated from Rahner's evolutionary Christology reflect the real evolutionary world. In fact, his evolutionary Christology is silent regarding evolution's dark side. Jürgen Moltmann, noting Rahner's failure to attend to the costs of evolution, points out that Rahner's evolutionary Christology sees the absolute savior only as "the summit of development, . . . not as the redeemer of that development from its ambiguities. . . . It is hard to see," Moltmann continues, "what redemption this Christ can bring to the graveyards of nature and human history."³⁶

The point in my consideration is whether the principles of interconnectedness and intrinsic value, articulated on the basis of Rahner's evolutionary Christology, are tenable in the context of natural selection. How can God allow the catastrophic phenomena of death, destruction, and waste in the self-transcending process of creatures while sustaining and empowering this process by divine self-communicating love? It seems contradictory. I will address the dark side of evolution in two steps: first, by tackling directly the issue of natural selection from both a scientific and a theological perspective; second, by viewing the ecological principles from the eschatological perspective, at the heart of which are the death and resurrection of Jesus.

In step one, at least two points must be taken into account: the true nature of natural selection, and the way God acts in the world. It is important to remember in the first place that natural selection has nothing to do

³⁶ Jürgen Moltmann, *The Way of Jesus Christ: Christology in Messianic Dimensions*, trans. Margaret Kohl (Minneapolis: Fortress, 1993) 300. Later, however, Rahner mentioned this issue in "Natural Science and Reasonable Faith" 55. For a detailed account of this issue between Rahner and Moltmann, see Denis Edwards, *The God of Evolution: A Trinitarian Theology* (New York: Paulist, 1999) 109–13.

with morality; it is impersonal.³⁷ Like the law of gravity, natural selection is a way of the world; it is an order in nature, neutral regarding good and evil. All living organisms die, leaving room for new ones within the biosphere; existing species will disappear when better adapted ones appear. Death and extinction, which are inevitable parts of the evolving world, do not necessarily deny the ecological principles of interconnectedness and intrinsic value. Natural selection does not deny the principle of interconnectedness in that the struggle for survival and the survival of the fittest may rather imply that creatures are so deeply related to and dependent on one another that they often survive at the unavoidable cost of other creatures. Moreover, scientists recognize the importance of cooperation as well as competition in the struggle for survival, thus indicating more clearly the interconnectedness and interdependence among creatures.³⁸ Nor does natural selection contradict the principle of intrinsic value, since, as I have shown, the intrinsic value is ascribed to creatures not uniformly but distinctively in accord with the differentiated loving presence of God to them. If one misunderstands the essential character of natural selection, one can mistakenly set natural selection in opposition to the God of power and benevolence. This would force upon us a choice between the alternatives of evolution and God, an impasse that derives also from the false theological-anthropological conception that God acts in a creaturely manner, namely, as one cause within a chain of causes.

I come, then, to the second point, the way God acts in the world. Because I cannot enter into all the details of diverse efforts to conceive how God acts in the process of evolution,³⁹ I will restrict myself to observing that the notion of active self-transcendence already indicates an idea about how God acts in the evolving world. The active self-transcendence of creatures propelled by the power of God's immanence in the world accounts for the dynamism of evolution. While evolutionary processes really happen within and through creatures' own intrinsic actions, at the same time they are enabled by the divine dynamism always present in the world. This understanding is in line with the Scholastic, Christian idea that God, as the ultimate ground of all causality—that is, as primary cause—

³⁷ See John F. Haught, *Science and Religion: From Conflict to Conversation* (New York: Paulist, 1995) 60; and Denis Edwards, "Original Sin and Saving Grace in Evolutionary Context," in *Evolutionary and Molecular Biology: Scientific Perspectives on Divine Action*, ed. Robert J. Russell, William R. Stoeger, and Francisco J. Ayala (Vatican City: Vatican Observatory, 1998) 377–92, at 390.

³⁸ See Barbour, *Religion and Science* 222; and Peter Kropotkin, *Mutual Aid: A Factor of Evolution* (New York: Black Rose, 1989).

³⁹ For attempts at this issue, see Russell et al., eds., *Evolutionary and Molecular Biology*.

acts in the world through secondary causes.⁴⁰ This means that God acts in such a way that the full integrity and autonomy of what happens in nature, including natural selection in evolution, are not hampered but preserved and actualized.

In step two, I emphasize that the world that Christians believe God eschatologically intends is consonant with the world depicted by the ecological principles. The actualization of this ultimate divine intention is the total renewal of the world, a renewal that implies and includes the fundamental transformation of the way all creatures relate to and act toward one another. My description will render explicit the ecological principles, which are somewhat obscured due to seemingly grim aspects of the present world, such as the competitive struggle for survival. Yet Christian faith always hopes for the world's eschatological fulfillment, the anticipation and beginning of which is Jesus' resurrection. What, then, may his resurrection imply with regard to the ecological principles? To answer this question, I will look first at the relationship of the resurrection to the incarnation.

The incarnation of God in Jesus Christ is the unsurpassable, supreme moment of the relationships that pertain among God and creatures. Although it appears as the final goal of the world in its self-transcending processes, the incarnation itself is in a sense also only a beginning. What was initiated in the incarnation was yet to be historically actualized in and through the life and death of Jesus, namely, his faithful obedience to and love of God, as well as his loving solidarity with and commitment to all human persons, particularly those in need. There is inherent continuity between Jesus' incarnation and his life and death. His resurrection too must be viewed not merely as what is granted to him afterward as a kind of recompense for his faithful life and death; rather, his resurrection means the final and perpetual determination of his life and death.⁴¹ It is in his resurrection that what was initiated in the incarnation and actualized in his life and death is finally completed. Therefore, his resurrection is an integral and concluding aspect of the incarnation. As his life and death are the faithful unfolding of the incarnation, so his resurrection is the true completion of the incarnation. In the incarnation, the life, death, and resurrection of Jesus are not separate events but different phases of the unsurpassable, supreme moment of God's self-communication to the world and creatures' responses to it. When we place Jesus' resurrection in continuity with the incarnation, the significance of his resurrection, like that of the incarnation, is not confined to humanity but extended to the whole world. As the incarnation is intrinsically related to the cosmos, so is the resurrection.

⁴⁰ See Aquinas, *ST* 1, q. 103, a. 6; Rahner, *Foundations* 86–89.

⁴¹ Rahner, *Foundations* 266.

As an integral and concluding aspect of the incarnation, Jesus' resurrection has an inherent cosmic significance.

The resurrection of Jesus proclaims that the power of death was finally overcome in him. We can assert, in virtue of the cosmic relevance of his resurrection, that the power of death throughout the whole of evolutionary history will be finally overcome. While natural selection has to be viewed as a part of the order of nature, the resurrection, which is intrinsically related to the whole cosmos, implies that what has disappeared in the evolutionary process of the world will not be left abandoned forever. It will be finally saved. In this vision, salvation applies to all creatures that are lost in the evolving world. With this vision of eschatological redemption grounded in Jesus' resurrection, we can clearly perceive and firmly support the principle of intrinsic value despite those bleak actualities of evolution.

The New Testament bears a firm witness that Jesus was totally transformed in the resurrection and thereby came to exist in an utterly new way. Considering that the resurrection is the fulfillment of the incarnation and that the incarnation is the goal toward which the world is oriented, we can anticipate that all creatures in the world and the world itself will be transformed in a way analogous to Jesus' transformation in the resurrection. Eschatologically transformed, creatures will exist in a totally new way, both in themselves and, therefore, in relation to one another and to God. We cannot comprehend how this profound change will be brought about, and yet we may infer from the resurrection with its sweeping, cosmic significance that God has created the world in a way that such transformation is possible. May we not imagine that this totally transformed way of existing is characterized by the peace Jesus made through the blood of his cross and gave to his disciples (Col 1:18-20)? Then we may also get a glimpse, however dimly, of what the eschatological relations among creatures are like. With this vision of the eschatological transformation rooted in the resurrection of Jesus, we can clearly appreciate and unwaveringly defend the principle of interconnectedness in spite of the stark realities of evolution.

This conception of the eschatological transformation of the world in light of the principle of interconnectedness and intrinsic value seems in accord with what the Judeo-Christian tradition has referred to as *creatio nova* (Isa 65:17; Rev 21:1-4). As Isaiah declares, in the new creation creatures will relate to and act upon one another in an entirely new manner (Isa 11:6-9, 65:25). While the world we inhabit will remain in travail until the moment of its consummation (Rom 8:18-23), the vision of the new creation inspires us with an unquenchable hope for a world in which the ecological principles of interconnectedness and intrinsic value are fully actualized and manifest and where "God may be all in all" (1 Cor 15:28).