

# THE NATURALNESS OF CREATION AND REDEMPTIVE INTERESTS IN THEOLOGY, SCIENCE, AND TECHNOLOGY

by Kurt Anders Richardson

*Abstract.* This paper advances ways in which the understandings of “nature” and “creation” can be seen to overlap through specialized relations between humans and their environment. The hope of redemption of nature, united with evidences of grace in the advancements of science, can become helpful guides toward a theological interpretation of technology and the emerging character of human relations with nature.

*Keywords:* altruism; anthropocentrism; cocreator; fallenness; *Imago Dei*; problem solving; redemption; technology.

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## I. TOWARD A MEANING OF REDEMPTIVE INTEREST IN THEOLOGY AND SCIENCE

Christian theological tradition rather forthrightly posits a beginning of the cosmos and the personal God as its Creator, sustaining it in the hope of final redemption and renewal (see Peacocke 1979, 330ff.). This cosmic perspective of redemption, which comprises the core of Christian belief about God’s relationship to creatures, is so comprehensive a vision of reality that only something on the order of a grand unified theory in science could approach it in scope. From the theological perspective, a fundamental aspect of this future redemption is the renovation or reconstitution of nature by the Creator. Of course construing, on the one hand, the unity of the cosmic order and, on the other, the reconstitution of that order comprise quite different perspectives. But as dialogues between science and theology continue, one cannot help but look for ways in which the different angles of approach to nature and the hope of a redeemed creation

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might converge. I would like here to focus on the role played by the hope of redemption in the ways we view nature and the ways our human behaviors form part of the nature that is to be redeemed.

The ongoing exchange between theology and science has been especially fruitful at the point of thinking about nature (e.g., Tilby 1992, 194–205). Recovery of some of the earliest insights of Christian theology has contributed substantively to this exchange. Irenaeus' identification of the Creator and the Redeemer, for instance, made for the very early development of a fully integrated view of nature within the redemptive economy of God, which Santmire has called "creation history" (Santmire 1985b, 35). God is depicted as the primary actor in the one order of creation and redemption, the goodness of which is coextensive with the God/nature relation and not merely determined by the interests of the human party. Redemption is seen both as recovery and amplification of original creation, and mediation of the creation through Christ, based upon the model of the *Imago Dei* and the resurrection of Christ.

The recent surprising shift in theological interests toward an Eastern account of the Trinity, absent the *filioque*, has coincided favorably with relational and holistic models of nature. Furthermore, the interchangeability of the terms "nature" and "creation" is commendable in discussions like Peters's "Cosmos as Creation" (Peters 1989, 101–2). "The naturalness of creation," as a leading expression in this paper, is used to signify the unity of the lawfulness of the natural order, including the dynamic of emergent forms in nature, and the proximate as well as the transcendent purposes of creation. The notion that creation is nature injects into thought about nature an expectation of goodness on the order of a gift, a gift that entails a responsibility for stewardship in accord with its own goodness. Human nature, fashioned according to the *Imago Dei*, acts most in accordance with this goodness when the createdness and divine relatedness of the natural order are kept in view. From a theological perspective, the human person should orient his or her actions in relation to the natural order in such a way that they correspond with God's creative and even redemptive activity. The frequent connection between ethics and eschatology in the biblical texts is strongly suggestive of this correspondence (Ps. 115 : 16–18; Isa. 11 : 10–11; Jer. 33 : 25–26; Matt. 5 : 5; 1 Tim. 4 : 4–5).

Extending this correspondence much further than I can here, Hefner proffers a constructive hypothesis of the human person as "created co-creator"—a unique and active agent who contributes to the "wholesomeness" of the natural order (Hefner 1993, 27; cf. Rust 1971, 128). This hypothesis should not be understood naively, but

with an acute sensitivity regarding human selfishness toward other kinds of life which “we can kill, but not create” (Bratton 1993, 301). The created order is a creative order which encompasses contingently creative agents. In this context, “creative interest” applies to the very wholesomeness which is being pursued. But as open as this created correlation may be, redemption should probably be regarded as operating beyond the parameters of cocreative activity. The vital hope of redemption does not make the human a coredeemer. Perhaps we can say that cocreatorhood is experienced at the rudimentary level of being conscious of the goodness of created nature and acting to nurture it. The hope of redemption, however, could augment such thinking, magnifying the fruitfulness of human cocreativity by introducing “redemptive interest” in the future of the whole created order.

The move in theology from thinking about nature as created to thinking about nature as something to be redeemed covers only a short conceptual distance. If it is appropriate, then, under certain conditions to correlate human and divine creativity, might we not also posit some human correlate to God’s redemptive activity? At first blush, one recognizes a fundamental difference between participating in creative activity in the present world and participating in the future conditions which will constitute the redemption promised in the Christian gospel. Redemption is unavoidably and categorically an anticipated condition. But the Pauline statement, “All [apostles, world, life, death, present, future] belong to you” (1 Cor. 3 : 22; N.R.S.V.), extends the fundamental consciousness of the stewardship of the created order to include participation in the order yet to come. Although “Set your minds on things that are above” (Col. 3 : 2) traditionally has been interpreted dualistically, the text is more an invitation to act toward nature in a way that is driven by redemptive interests in an as yet unrealized future. Redemptive interests invested in nurturing activity do not bring about the actual redemption of the cosmos, but can be called “redemptive activity” as signs and hopes of that redemption to come. Thus, because of the mutual enfolding of the promise of redemption and an eschatological consciousness within the ethical structures of Christian thought, redemptive interests are inseparable from natural interests in caring for the earth and other creatures and constitute the fulfillment of the basic values associated with the care of nature.

If the correlation of the redemptive activity of God with human activity guided by redemptive interests as a magnifying of creative interests toward nature and other creatures is helpful, one might attempt to make a similar correlation for creative and redemptive

interests in science. This is perhaps a difficult movement—though certainly there are scientists who would acknowledge such guiding interests—but science too can enrich the hope of redemption. In a broad sense I am proposing that human activity which attempts to innovatively ameliorate the living conditions of fellow creatures can be interpreted as redemptive. Here, then, the cosmological dimensions of the hope of life beyond death can become operative in the hopes by which persons live and work (see Birch 1976). What I have in mind here also has scriptural roots: “Strengthen the things that remain” (Rev. 3 : 2; N.R.S.V.), “redeeming the time” (Eph. 5 : 16; N.R.S.V.).

It is now commonplace to think of science, of its research programs and theory building, according to prevailing interests within both the communities of scientists and of society (see Habermas 1971, 314f.). Indeed, we must take care to acknowledge the sheer subjectivity of the scientific enterprise, particularly when we consider its technological goals and interactions with nature. Inclusion of the human factor in our account of nature is vastly complicated by the preponderance of technology. It has been suggested that technology, invested with a caring and nurturing approach to nature, could become a way of “listening and talking with nature” (Klink 1992, 207). That scientific practice is guided by discrete interests and commitments rather than overarching metaphysical systems typifies the “post-modern” impulse in philosophy and theology (Murphy 1990, 201), which goes beyond foundationalist claims and supplies a potential for integrative thinking that in the recent past might not have seemed possible. In such a practice, the ambiguities of technology within nature could be compensated for by real amelioration. The technological ways in which human beings interact with nature and other living populations could become ameliorative rather than pejorative. Tool making, natural to the human, has had an ambiguous technological evolution; it is an expression of humanness (Heidegger 1977, 5) much in need of integrative thinking.

To think more “naturally” about technology one may begin by remembering the toollike ways in which the human body interacts with the environment. The members of the human body—limbs, joints, digits, mandibles—are geared directly to the achievement of certain tasks, some essential to and some vastly exceeding the requirements of survival. Thomasma identifies some “enduring human values”: “sufficient nourishment, interpersonal communication, health, celebration, control of the environment, friendship, personal and sexual fulfillment, freedom of expression, creativity, harmony with others and with nature, living a virtuous life and

finding answers" (Thomasma 1990, 78). The employment of technologies, for a great many of the world's human communities, touches and transforms these enduring values. Given such a fundamental transformation there can be little wonder that the technological environment is an uneven landscape of aid and abuse. But the history of technology, including the biographies of the scientists and inventors, while uneven, is replete with a "common grace" discernible in the well-intentioned innovation and genuine altruism driving many of the research programs by which the technologies were and are developed (see Raines 1990). If this altruism were to become ecologically inclusive and humanly responsible, could there be a "naturalizing" of technology?

The world of human action is now so thoroughly technologized that theologizing about it on behalf of nature to some might seem counterintuitive. But the technologized world and its ongoing development and transforming effects demand theological and ethical reflection, at least in view of many ethical requirements before us (Cole-Turner 1993, 97). A potentially fruitful interpretive model of technology could be based upon the relation of technology to the growth of knowledge in general. This connection is one of the implications of what Popper liked to term "world three" of objective knowledge (Popper 1979, 159ff.). Such a world would be marked by a succession of successful research programs and the full integration of technology into the mediating activity between human beings and nature. Essential to theological reflection on technology would be its integration into the larger, genuinely creative and redemptive activities of the human party. As this integration into theology has a chance to take place, surely a "theology of technology" will emerge (Santmire 1985, 117).

## II. THE ORIENTATION OF THE INTEREST-DRIVEN HUMAN PARTY

I have proposed here a continuity of thought between theological and scientific perspectives, using the term "naturalness of creation" along with the innovative-creative and altruistic-redemptive motives of the religious and scientific communities. The "naturalness of creation," a theological way of introducing faith concerns to the dialogue with science, is necessarily bound up with the redemptive interest (Lonning 1989, 75ff.). This binding together of the theology of nature and concerns about redemption arises from a consideration of the problems of technology within the larger framework of problems in nature. I acknowledge that speaking about problems

in nature can communicate a highly prejudiced anthropocentrism, just as speaking about redemption communicates a conspicuous Christocentrism (Lonning 1989, 135). But eradicating anthropocentrism from human thought would not only be a questionable enterprise, it also would again require a certain dualism about the membership of humanity in nature, however artificial technological problems may be over against problems such as sustainability, competition within environments, and catastrophes in nature (Abrecht 1978). Perhaps we are more deeply sensitive to the questionableness of whether the human desire to survive beyond death can be classified a real problem for or of nature at all. Obviously, at this point we are confronted with the necessity for defining the scope of what is natural and what is not. My contention would be that if the human is to be included within the limits of the nature so also must the structures of human belief be included, even those which may prove entirely false.

Quite often, how a theological interpreter regards technology will be based upon a range of hermeneutical positions maximizing at one time and minimizing at others the significance of various phenomena (see Klink 1974). Christian interpreters may use the doctrine or category of human fallenness as a subset of the occasions of brokenness within nature. Fallenness within nature can be similarly perceived, in that left to themselves, various nonhuman living populations undergo many of the same degradations as human populations do. Although technology can radically accentuate the fallenness of human beings and their impact upon the natural environment (see Bauckham 1985; Rotstein 1986), I would propose that, to as great an extent as possible, we reckon this brokenness to be part of the natural continuum in which problems, catastrophes, and degradation of all sorts occur. Certain liabilities of anthropocentric bias, such as some variations of the claim of a divine covenant with humans, exclusive of the rest of nature, can also be overcome by recovering the hope of cosmic redemption original to the structures of Christian belief.

The hope of cosmic redemption possesses a dimension of natural depth for corrected and solved relations, the renovation of life beyond death, and the generation of new orders of cosmic life and wholeness. This hope is rooted in the actual need for survival, healing, and wholeness. Various scenarios about natural processes, whatever their bases in highly extrapolated measurements and conjectures, still indicate the ultimate need for some kind of renovation or regeneration if life is to endure. One future condition which would determine the reality of this redemptive need is best known as heat death—the future condition of cosmic exhaustion and absolute entropy (see

Barrow and Tipler 1986, 166–73). There is also a nexus of activities in nature which, when we observe it in human nature, we reckon to be most lamentable. This is the way in which animal life and other forms of life seem to be both self-nurturing and self-destroying. When viewed from the paleontological record, indeed, the self-destroying aspect predominates. The ambiguity of life enhancement and the destruction of life through animal behavior and other natural processes, when considered side by side, can strike us as an *aporia* comparable to mixtures of affection and cruelty in human relationships. As human beings observe the natural world with concern for life, the ambiguity of nurturing and destroying at times becomes intolerable, particularly when extinction is a threat. A profound sense of responsibility for the human role in the extinction of species pervades much ecological thought, but it extends beyond concern over destruction caused by humans to a highly generalized concern for all species. The desire to assume responsibility for nature as nurturer is a highly conspicuous contemporary human quality.

The way in which human interests and innovations are mixtures of creativity and destructiveness leads theology from the doctrine of fallenness on to the doctrine of sin. There is a high liability to ignoring the Pauline assertion that human beings are “inventors of evil” (Rom. 1 : 30). With or without technology, humans have attacked, squandered, and eviscerated the goodness of the total environment, victimized it through “deformed desire” (Hamerton-Kelly 1992, 90–111) and in the pursuit of ill-conceived ends. Although there is virtually no sustained human interaction with the environment that does not alter the environment, the ambiguities of the concern for personal survival are radically downgraded in view of human evil. The hope of redemption finds powerful impetus in the acknowledgement that sin is prevalent in the fulfillment and accomplishment of human interests. Here theologians are confronted with the divine will to overcome sin by grace and the ultimate redemption of nature (Mitcham and Grote 1984). Given the reality of sin, of self-destructiveness, especially human, in nature, Christian theology intently posits the neediness of nature. Although this need for redemption can be fulfilled only by God, Christian activism is informed by it and experiences it as a compelling interest in addition to the interest in nurturing the created goodness of nature.

For much of human history, human interests have been directed toward survival and, for the larger populations, meager sustenance (Spring 1974). The technological advancements which slowly changed this situation for the better also exposed the inadequacy of this interest in view of higher ethical demands. As the technological

world—"world three"—has filled out and survival or survivability has become somewhat more secure, the human beneficiaries of this world have awoken to the need for evaluating their technologies in order to strengthen their commitments to nurture created nature, beginning with assuring the sustainability of ecosystems (Stackhouse 1991; Swanson 1992). The more congenial aspects of technology—medical, informational, and agricultural improvements—must be balanced against advancements on the other side of the scientific ledger: energy, defense, marketing technologies. The comparison reveals a magnification of ambiguity in human behavior and intentionality (Barbour 1993, 223–31). We must at the same time acknowledge that, together with an increased sense of responsibility for created nature, technologies contribute to refinements and amplifications of our commitments to nurture self and others (Corwin 1984).

Concern about the risks of technology, its unintended pejorative effects (e.g., Barbour 1993, 183–87), and even intentional disregard for virgin environments is nonnegotiable necessary. While we maintain a critical dimension to evaluating technology, some pejorative postmodern views which take, for instance, accidental self-destruction (e.g., Hartt, Hart, and Scharlemann 1986, xix) as a rule of reflection on technology, fall short of the requirements for constructive engagement with it. For while it is always correct to critique practice on many levels, pejorative models, such as those which condemn technology and even the human wholesale, cannot generate falsifiable hypotheses which will contribute to the refinement of the technological world three. Happily, there are signs of increasing interest in the capacities and potentialities of technology to nurture. A matured orientation whereby technological creativity is infused with a nurturing, life-enhancing interest could become the point of contact between the natural and redemptive interests of science-based technology and theology. In this way, a reordering of priorities would take place in critical acknowledgement of our "industrial ecosystem" (Silver 1990, 59).

### III. TOWARD INTEGRATING CREATIVE AND REDEMPTIVE INTERESTS

The generation of commitments entailed in creative and redemptive interests applied to science and its technologies is indicative of a broad-based maturation process. What I have come to regard as emergent nature-friendly technology is very well laid out in Barbour's discussion about "appropriate" technology (Barbour



1993, 244–48). Nature-friendly technology has life enhancement as the primary goal of research and development. It is guided by nature-friendly values, and the developmental agenda is set by quality of life goals and not merely productivity and manipulative goals. Although even productivity goals can generate nature-friendly technology through drastic reductions of raw material requirements per technological unit (Barrow and Tipler), quality of life values can be factored in on a systematic basis to the whole process of technical development. The convergence of theological and scientific reasoning can be particularly constructive in this area in times of crisis when the promotion of quality of life may be threatened by priorities of survival.

There is within human intentionality a fund of interests which, when interpreted through the lens of the redemptive interest, can supply motive force to the advancement of intentional nature-friendly technology. I find Popper's evolutionary view of problem solving in nature and science a fruitful insight (Popper 1979, 242–44). With his model, a correlation can be made between life processes and behaviors, their "aim-structure," and the growth of "objective knowledge." Clearly, in modes of existence limited by survival interests, problem solving is rudimentary and even ruthless. But I would contend that, as the open-ended and autonomous aim-structure of the human functions in relation to nature, "error-elimination" takes place, which over generations builds a deposit of experience and scientific practice. As this deposit of experience advances, despite psychological resistance to change, whole scientific communities reveal the increasing capacity for self-correction in the process of problem-solving, which enriches this process even further. This situation, in turn, affords a holistic perspective where nature-friendly technologies can and do emerge.

Yet another and perhaps even more fruitful value impinging upon the development and application of technology is altruistic interest. There is certainly ambiguity in attempting to give any account of altruism in view of anthropocentric biases, aggressiveness (Cole-Turner 1993, 88), and sinfulness. Nevertheless, altruistic interests emerge too often to go unaccounted for and betray what I wish to call the ineradicability of grace in creation itself. Whatever philosophical account of altruism might best explain altruistic interests in science, my attention here is focused upon practice. The history of science-based technology is replete with admixtures of altruistic interests. As altruistic interests come to be affected by an understanding of all life forms as "others" worthy of respect and nurture, they can and do expand their frame of reference beyond the confines

of anthropocentric bias. This is certainly one of the hopes of the biodiversity movement. It is not an overstatement to say that "altruism is an intrinsic value, rooted in the fundamental character of reality" (Hefner 1993, 197). Altruistic interests coupled with problem-solving ones can contribute significantly to the advancement of the general natural-redemptive interests which characterize a mature theological interpretation and engagement with the developments of science-based technology.

#### IV. CONCLUSION

There is warrant for melding together natural with redemptive interests toward nature as creation. The limited resources of nature, indeed, the neediness of nature for respect and nurture can be enhanced by human behaviors which are driven by the hope of ultimate redemption of the entire creation. Until then, hope is not passive but drives a maturation of understanding and intentionality about human relations, particularly technological interactions, with nature and the other-than-human beings that inhabit it. Discussion of technology as a part of the naturalness of the human party in the cosmos within the dialogue between theology and science can prove fruitful. Indeed, it is my hope that through further reflection, a fuller theology of technology can be fleshed out.

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