

# Article

## UNHOLY ALLIANCES: RELIGION, SCIENCE, AND ENVIRONMENT

by *Dee Carter*

*Abstract.* Christianity's relationship with the environment is considered. From the seventeenth century, Christianity contributed to the legitimization of scientific developments that had injurious consequences for the environment. These developments were secularizing; hence the ecological crisis participates in the broader problems of secularization. Under secular hegemony, the normative model of the person as atomistic individual is integral to the problem itself as well as bereft of the spiritual resources to challenge abusive attitudes that profane God's creation. This paper proposes that responses to the ecological situation should be sought in a richer understanding of the human being; an anthropology that is not only part of the Christian legacy but also offered by contemporary sociobiology.

*Keywords:* Francis Bacon; Charles Darwin; René Descartes; Enlightenment; environment; human being; Immanuel Kant; religion-science relation; scientific revolution.

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The so-called ecological complaint against Christianity—that the environmental crisis is heir to the Christian doctrine of Creation (White 1967)—has come effectively to be seen as common stock of knowledge. This complaint is worked out along the lines of Christianity as anthropocentric, as establishing a dualism of humanity and nature, and as responsible

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for fostering science and technology as instruments for the exploitation of nature. Rather than respond directly to this charge, this paper considers the relationship that Christianity might have with particular developments that have been consequent upon seventeenth-century science and the implications of these developments for the environment.

The argument is, first, that the ecological crisis must be understood within the wider secularity crisis: that it is a consequence both of the configuration of nature as object, which has diminished the sense of nature's sacredness, and also of the fact/value dichotomy that limits truth to the empirically verifiable; second, that these developments have been legitimated by Christianity insofar as they have taken place within an accommodating Christian culture whose protagonists were central to the dynamics of that culture; and third, that the now normative model of the human person as atomistic individual—the bequest of mechanistic philosophy and the separation of facts from values—is itself integral to the environmental situation, and therefore ontological questions of what it means to be a human being should be a central problematic in analysis and reflection upon it.

It is a premise of this paper that seventeenth-century science was revolutionary. This is not really contentious: while any interpretation in history is debatable, there is broad agreement that science in this period was revolutionary in its consequences (Porter 1986; Cohen 1985.) This is relevant because, in the final analysis, the scientific revolution was an *intellectual* revolution, that is, a revolution both in the way people thought and in what they thought about, and hence no sphere of enquiry was excluded.

A further premise of this paper is a rejection of the view that the ecological crisis is a *result* of the Christian tradition in any direct sense. Nevertheless, it seems only fair to admit that the Genesis texts and the Christian tradition can be misconstrued through crude analyses such that they may be understood to engender, or at least encourage and perpetuate, anthropocentric attitudes. Thus Lynn White's (1967) account of the history of exploitative attitudes is an account not only of his own misperceptions but also of a history of misperceptions.

Rather than the ecological crisis being the result of the Judaeo-Christian tradition, it is a superficial understanding of the Genesis creation narrative—stripped of its broader theological context, and translated in such a way as to give *adam* (human beings, male and female) dominion over all other beings—which has served to legitimate certain crucial developments. These were, first, the mechanical model of nature as object that emerged from the Cartesian and Baconian philosophy of the Scientific Revolution, which tore nonhuman creation away from God's sight, its existence seen as solely for the benefit of people, and second, the methodology of seventeenth-century science, which itself gave rise to Newtonian philosophy in particular and the intellectual framework for Enlightenment ideas in

general.<sup>1</sup> Isaac Newton's scientific model of universal laws as the rule in nature became the ideal for all thought—philosophical and political. Science's directing role in society has had, therefore, from the outset, an ideological component. In due course it would transform and inform central developments in modern culture within history, society, politics, morality, and technology (Cohen 1985; Hufton 1980). These developments shaped the social and intellectual beliefs that gave rise to the competitive and imperialist philosophy which has itself been fed back as the driving force of the unbridled technology of the last hundred years: the characteristics of the secular world.

Undoubtedly science and technology have brought great benefits, but the legacy of the Enlightenment has been mixed: its bequest of decades of relentless secularism came to a head in the twentieth century, observed as the most violent, most terrible century (Hobsbawm 1994; Steiner 1997). Eric Hobsbawm sees the place of the ecological situation as a part of a broader and disturbing picture of secular hegemony.

In the nineteenth century of bourgeois improvement and progress, continuity and gradualism dominated the paradigms of science. . . . Twentieth-century science has developed a very different image of the world . . . [in which] ecology [has] acquired its now familiar quasi-political meaning [expressing] worries . . . in the form of debates about the need for practical and moral limitations on scientific enquiry. Never since the end of theological hegemony had such issues been seriously raised. (1994, 549–50)

Furthermore, Hobsbawm has seen a direct connection between what he considers a return to barbarism (in terms of human behavior in the twentieth century) with the secular worldview: “after about 150 years of secular decline, barbarism has been on the increase for most of the twentieth century, and there is no sign that this increase is at an end” (Hobsbawm 1997, 253). These observations are perhaps all the more interesting given that they come from a historian with a Marxist perspective.

The ecological crisis, wrought by exploitative attitudes toward nonhuman life (and, in a wider sense, to some human life) and by the careless despoliation of God's world, is surely a manifestation of the broader problems of secularism: a loss of the sense of the sacred and a lack of respect for divine law. Arguably a consideration of the scientific ideas and the account of the human person emerging from the modern period provides a key to its prime causes: the development of an educated mindset in otherwise seemingly civilized people convinced that humankind is the measure of all things and whose knowledge claims include a monopoly of saving values.

#### THE THIN END OF THE WEDGE

The modern world is in large measure the product of the Renaissance scholar and the clever capitalist, whereas the medieval world was in the main bequeathed by Roman imperialism and Christianity (Green 1985). But secular

humanism was in some measure the creation of a certain dualistic theology: the autonomous individual of the Enlightenment invented first by theologians. The turning point of change began in the sixteenth century. It can be claimed that the Reformations of that century, which tore the seamless robe of Christendom, planted not only the seeds of secularization but also of privatized religion and extreme individualism. Henri de Lubac's historical analyses (cited in Kerr 1997, 168) suggest that it was the grace/nature dualism in Catholic theology—itsself a response in order to protect, on the one hand, nature against Lutheranism, and on the other hand, grace against Enlightenment humanism—that effectively led to deism and atheism.

But the culmination of this change was effected through the Scientific Revolution.<sup>2</sup> “Almost everything that distinguishes the modern world from earlier centuries is attributable to science, which achieved its most spectacular triumphs in the seventeenth century” (Russell [1946] 1991, 512). Observation and experimentation gave rise to new instrumentation and methods and promoted science's claim to objective truth, on the basis of its unique property of empirical verifiability. One consequence was increased confidence in human mental capacity, and as this optimism led to the use of mechanical models in other fields, science became the paradigm of intellectual authority while theology and metaphysics were marginalized. Science was understood as the engine of progress in all things—indicating science's directing role in society and hence also its ideological component (Porter 1986).

Central to seventeenth-century science were “two outstanding codifiers of method,” René Descartes and Francis Bacon (Cohen 1985). It was “Descartes who enshrined Reason as the presiding god of modern culture” (Carroll 1993, 118), where reason would reconstrue the world via categories of mind. Rational thought consists only in clear and distinct propositions. The only thing that can be known clearly and distinctly is one's own consciousness: Descartes' first principle of method (Descartes [1637] 1968). Consciousness enables thought: to doubt, understand, will, imagine, and sense. As Descartes conceived it, “I doubt, therefore I think, therefore I am.” It was the consequences of this philosophy that determined attitudes to nonhuman life, for the innate capacity to reason came to be seen as the defining feature of the human in contradistinction to the nonhuman. A century earlier, animals had been construed as machinelike, not creatures of God. Descartes made this acceptable; its wide acceptance provided a Christian rationalization for harsh treatment of animals (Thomas 1983).<sup>3</sup> Christianity functioned here to legitimate particular practices, founded on a principle that robbed nonhuman life of its status as part of God's creation. But Cartesian thought was not atheism; rather, Descartes saw his work as the proper investigation of the nature of God. Nevertheless Cartesian method watered the seeds of secularity. Later, Newton, a Unitarian who devoted a half of his working time to biblical study, would continue

to nurture them. And when reason shaped the understanding of all things and this study of facts excluded any import of values, only human presence was seen to embody any meaning within the world (Carroll 1993).

Bacon was a revolutionary scientific ideologue. Influenced by Machiavelli, himself a prophet of the secular and the pragmatic (Trevor-Roper 1985), Bacon continued the tradition that rejected ancient authority as any model for the present. Against the background of a dynamic culture of new discoveries and world travel, Bacon imagined that Utopia was in sight. He wrote with confidence, “[I] will yet, to satisfy and please myself, make a *Utopia* of mine own, a *New Atlantis*, a poetical commonwealth of mine own, in which I will freely domineer, build cities, make laws, statutes, as I list myself. And why may I not?” (Bacon 1627, cited in Trevor-Roper 1985, 251).

But Bacon was also heir to two traditions of his own culture: Protestantism and magic (Hill 1975). The heady combination of these brought about his belief that control of nature would liberate from the Fall: thus the mechanistic view of nature would free Christianity from its association—as he perceived it—with the paganism that deified nature and identified God with creation. While Bacon accepted the Fall, he rejected the full Calvinist doctrine of human depravity; for him, sin was the product of poverty and ignorance, and it was labor—the curse of fallen man—that would be the means through which he could rise again (Hill 1975). English thinkers of the seventeenth century, while disagreeing about the appropriate structures of state and church, agreed on one thing: that the Old Testament gave a valid and comprehensive account of life and the universe. As such, Adam and Eve were the subject of much speculation and fascination, and there was wide consensus that Adam was the first practitioner of the arts and sciences (Almond 1999). Natural philosophers of very different persuasions, including Baconians, could understand themselves as restoring the lost knowledge of Adam. Thus we find Bacon’s disciple, Comenius, aiming to “restore man to the lost image of God, i.e. to the lost perfection of the free will, which consists in the choice of good and the repudiation of evil” (quoted in Hill 1975, 164.)

The popularization of Bacon’s ideas after 1640 thus helped to get rid of the shadow that had dogged humanity for so many centuries: the shadow of original sin. What alchemy and Calvinism had in common was that salvation came from without, from the philosopher’s stone or the grace of God. Bacon extracted from the magical-alchemical tradition the novel idea that men could help themselves—mankind, not merely favored individuals. (Hill 1975, 164)

This new science was understood as socially progressive and liberating; it was a case of “learn the methods, do the experiment.” It presented nature as law-governed and mechanical; all activity was still attributed to God, but God was distanced from nature in order for nature to be available for experiment. Bacon’s approach became axiomatic: that is, an increasing

sanction for “man” to enact a particular understanding of dominion over nature—“to conquer nature,” as Bacon would interpret part of the Genesis creation narrative.

The invoking of Christian ideas to function as legitimization is everywhere apparent. Christianity neither deifies nature nor fails to hold a distinction between Creator and creature. Rather, it holds the natural world as God’s own, and it is this relation that renders an inviolability that Bacon would break down, while simultaneously participating in an apparently proper Christian enterprise: engaging in, indeed shaping, the study of God’s created universe. It was in part Bacon’s mode of expression that wrought dire effects: his language is everywhere replete with lurid sexual imagery, as Mary Midgley (1996, 77) amply demonstrates:

Bacon had dismissed the Aristotelians as people who had “stood impotent before Nature, destined never to lay hold of her and capture her.” Aristotle, said Bacon, being a mere contemplative, had “left Nature herself untouched and inviolate.” By contrast, Bacon called upon the “true sons of knowledge” to “penetrate further” and “to overcome Nature in action,” so that “passing by the outer courts of Nature, which many have trodden, we may find a way at length into her inner chambers.” Mankind would then be able, not just “to exert a gentle guidance over Nature’s course,” but “to conquer and subdue Nature, to shake her to her foundations” and to “discover the secrets still locked in Nature’s bosom.” Men (continued Bacon) ought to make peace among themselves so as to turn “with united forces against the Nature of Things, to storm and occupy her castles and strongholds.” By these means scientists would bring about the “truly masculine birth of time” by which they would subdue “Nature with all her children, to bind her to your service and make her your slave.”

And rather depressingly, so it goes on: “[N]ature must be tortured into revealing her truth; her beautiful bosom laid bare; she must be held down and finally penetrated, pierced and vanquished.” These are words that recur constantly. Given that Bacon was inside contemporary culture and given that such talk was common currency, it must be conceded that the use of feminine pronouns for Nature and the portrayal of women as seductive and troublesome was not entirely new. Examples from ancient literature spring to mind: Gomer and Dame Folly as Israel playing the harlot, and of course the maligned Xanthippe, are examples of women taken to be in great need of the corrective influence and control of male reason.

Nevertheless, Bacon was “something of a trail-blazer” in this matter (Midgley 1996). This language cannot be dismissed merely as typical of the crude manners of the seventeenth century but otherwise innocuous, for it takes all of God’s gifts of creation, including time, and perverts and profanes them. It speaks of the brutalization by men and of men: rather than sons, lovers, husbands, and fathers, men are portrayed here as potential rapists, misogynists, mercenaries, and pedophiles. It is no surprise that some see the ecological situation as a part of the same set of issues with feminism—a matter of mutual degradation (Ruether 1993; McFague 1993).<sup>4</sup> Elisabeth Schüssler-Fiorenza (1989, 10) observes the wider point

that “liberation theologians of all colors have insisted on the oppression of peoples due to racism, sexism, class exploitation, homophobia, militarism, and colonialism as the practical and ideological condition of nuclear mentality.” The implied separation of divinity, humanity, and nature has had revolutionary consequences for the whole ecosystem in making permissible the “subduing” of nature by “man,” and holding nature outside the realm of the sacred.

Seventeenth-century science was revolutionary not just in methods and concepts but also in the way it became embedded within culture and consciousness (Porter 1986). Two critical developments in the social location of science took place. First was the founding of societies in Western Europe specifically for science; there was patronage, of course, but also a certain autonomy, which resulted in some independent public presence. The motto of the Royal Society, *Nullius in Verba* (On the Word of No Man), emphasizes the insistence on the centrality of empirical verifiability. Second was scientific publishing, which gave rise to a social community of science. The scientific establishment was a part of Christian culture, and so again Christianity can be seen as providing legitimation for scientific activities, and indeed activities with a marked ideological, coercive component. Those who opposed scientific developments were characterized as “sophisters” of various types (Porter 1986): occultists and Freemasons—certainly impious and deeply anti-Christian (that is, distinctly socially unacceptable).<sup>5</sup> These developments in the social location of a powerful establishment proved to be profoundly significant, for they combined to form a most resilient and robust power base, a fundament of civil society.

The ecological consequences of these developments should not be underestimated, precisely because this establishment enshrined and “traditioned” on the values of the new science. Descartes bequeathed the method—the dualism of mind and body—while Bacon prescribed through a battery of metaphors both the theory and the practice. It is “easier to see . . . [what went wrong] if we notice the way in which the pioneers of mechanism went about reshaping the concept of Nature” (Midgley 1996, 76).

It has been my intention in this essay so far to raise three particular points. First, the ecological crisis is a consequence of the loss of the sense of the sacred in nature, which has been reconfigured as object to function in a mechanical way for the benefit of humanity. Nonhuman creation is seen as merely the stage and scenery for human actors in a world where to live in God’s sight is determined by the possession of faculties of reason. Second, this mindset was established by the seventeenth-century revolution in scientific methodology, which designated empirical verifiability through observation and experiment as the only means to know. Facts became separated from values, and truth was associated with facts, from which no values could be derived: the fallacy of Locke’s Naturalistic Fallacy, which holds that factual statements about the world do not furnish

the ground for values, and hence prescription cannot be derived from description. That the concept of truth straddles both the world of facts and the world of values was not considered; that factual truth is a very unimportant form of truth compared to the truths by which we live was not part of the values of the ruling intellectual force that was heir to the new method. Third, the ecological crisis of late modern times must be seen as an aspect within the broader “secularity crisis.” Christianity has served to legitimize these developments and therefore, albeit unwittingly, has colluded with them. Legitimization can be both idolatrous and ideological, and in this context Christianity has functioned as a religion of society; that is, it acquiesced in the vested interests of particular power groups. Such an ideology is “the powerful distortion . . . [in which] the claims of a class and institution are identified with the truth of God” (Brueggemann 1989, 111). The God of ideology functions as an idol, a concept of God that has been construed by persons for their own purposes—a “man-made” God who can be pushed around to suit and serve particular interests.

#### RE-PLACING GOD/DISPLACING GOD

God was pushed into the distance by seventeenth-century science, by those who called themselves Christian. “The great thinkers of that time took it for granted . . . [that to study Nature] was simply one of the many ways to celebrate . . . [God’s] glory” (Midgley 1996, 1). Bacon advocated the diligent study both of nature and of Christianity: for him the one did not compromise the other (Young 1974). Descartes was certain he possessed the idea of God, but for Immanuel Kant, we can claim knowledge only of what we have found out personally and appropriated (Murdoch 1993).

Kant was devotional in a practical sense (Michalson 1999), but he brought belief in God to the bar of reason and found it wanting: the key ideas of reason were “the absolute unity of the thinking subject . . . the absolute unity of the series of conditions of appearance . . . the absolute unity of the condition of all objects of thought in general” (Kant [1871] 1933). Thus our knowing was based on appearances only and not taken from “things-in-themselves.” We could not “know” via divine revelation, for knowledge had to be evidenced empirically through objective observation. For Kant, God was a “thing-in-itself,” the object neither of proof nor of disproof, neither ruled out nor ruled in; God transcends the realm of demonstration. Thus, despite Kant’s interest in theism, his rejection of God as the proper object of theoretical enquiry marked the final parting of the ways between morality and scientific research (Murdoch 1993). God’s function was then to be invoked on behalf of our practical reason as an aid to understanding the unity of nature, in which humanity remained separate from nature, free as opposed to determined.

The confident Denis Diderot and his fellow *encyclopaedistes* (writers and contributors to Diderot’s *Encyclopedia*) of the Enlightenment insisted that



all knowledge could be known eventually to “man” and thereafter God would be called upon only to explain what had yet to be explained by science. Another idol was born: the God of the Gaps. William Paley delighted in natural science as biology that revealed God’s wisdom, but his deistic God pales beside the Judaeo-Christian God who creates, sustains, and redeems, and this deistic God was one who certainly would not interfere with the business of human endeavors to know. The Romantic reaction to Enlightenment rationalism gave rise to yet another idolatrous model of God. While rightly rejecting deism, Friedrich Schleiermacher’s private God of subjective experience could never stand over against, or call into question, human claims to objective knowledge. The point is that Christianity accommodated itself to society, by being hospitable to concepts of God shaped by (nontheological) scientific and philosophical discourses. Hence the nineteenth-century decline in trinitarian doctrine, with Schleiermacher—the paradigm example—confining the Trinity to the appendix of *The Christian Faith* ([1830] 1928) and simultaneously offering a restricted notion of divine agency and active providence. His account of “nature’s original immutable course” ([1830] 1928, 179) leaves no room for particular divine acts within and toward the world.

With this accommodation to society Christianity connived with the forces of secularization. This can be exemplified by the way Darwinian theory was received within culture (Young 1986). Charles Darwin effected a paradigm shift by rooting humankind *in* nature as opposed to outside or above it. But despite this uniting of humanity with nature and rendering human beings natural, this was not good news for nonhuman nature, nor indeed for (most) human beings. For it accelerated a trend starting in seventeenth-century science in which mechanized science provided an analogy for a mechanized society, and this had the effect of justifying cruel treatment of the poor and marginalized in society; indeed, they often were treated no better than animals (Thomas 1983).

Darwin was very much a part of the political establishment, inside the thought-world of his culture and class (Young 1986). Darwinian evolutionary theory tends to be presented in terms of challenge to theology—the start of the so-called science-versus-religion debate. Certainly there were many popular controversies, but what mattered historically is what happened among the elite. Pure science and pure theology were not the central issues, and the popular view of polarization is false (Gunton 1998; Moore 1988; Polkinghorne 1988).<sup>6</sup>

Darwin’s “theory, and his originality, is actually an amalgam of a number of ideas which come from traditions which seem on the surface to be opposed to science” (Young 1986, 44). Darwin’s mentors—Paley, Thomas Malthus, and Charles Lyell—were members of the theological establishment, and it is clear that Darwin’s supporters—Frederick Temple, Sir John Lubbock, twenty members of Parliament, and a future Prime Minister—were

members of the political elite. Darwin's theory embodied contemporary theistic views, and his intentions were not anti-theistic or antireligious at all. His framework of ideas was influenced strongly by Paley's reasoning about the harmony in nature, Lyell's time scale, and Malthus's mechanics (Young 1986). Indeed, Darwin showed more awareness and concern than did his successors for the theological and moral ambiguities disclosed by his observations (Gunton 1998). When Karl Marx wrote to Darwin to ask if he could dedicate the English edition of *Das Kapital* to him, Darwin refused, saying he did not wish to be associated with attacks on Christianity and theism (Young 1974). On the contrary, he was "explicitly arguing for a grander view of the Creator . . . the problem was not whether or not God governed the universe, but *how*" (Young 1974, 25; emphasis added).

It must nevertheless be conceded that, while Darwin may have been "arguing for a grander view of the Creator," the thrust of his theory is pantheistic. In a way comparable to Schleiermacher's model, divine agency has been limited to disallow active providence within and toward the world. Nature is here replacing God; nature becomes the agent and has power (Gunton 1998). Theologically, this is ultimately "the real threat of Darwinism":

. . . as an all-encompassing dogma . . . it is an alternative to the doctrine of providence. It is . . . a catapulting of the God of deism into time. Previously understood as to make a mechanism and leave it to itself, the shadowy God of modern rationalism disappears further into the background as attention is called away from his action in the beginning not to his providential activity in the present, but to worldly happenings which displace or replace that activity. (Gunton 1998, 186)

Hence, instinctive cruelties to nonhuman life and also to certain human beings can be seen merely as consequences of the general law, along with its concomitant sociopolitical effects: the inheritance of property and the replacement of the so-called "lower" races by the "higher." These were the ideas of the contemporary ruling intellectual elite, a power group that included politicians, scientists, and indeed, also theologians. "Many of these people were both Doctors of Divinity and Fellows of the Royal Society . . . trying to reconcile their Genesis with their geology" (Young 1974, 24).

In hindsight, this elite group formed an unholy alliance: both an idolatry and an ideology that played no small part in generating the conditions for the ecological crisis as well as the furthering of secularized cultural values that hold sway in the modern world. Has not Christianity's legitimating function been in some measure the handmaiden of secularization? And if this was not finally achieved by Darwinian science, which was not atheistic, then how was God pushed over the side?

The ideological myth of the triumph of science over religion was socially rather than intellectually established, by means of the influential English periodicals, which were controlled by atheists and agnostics—wealthy businessmen with merchant interests (Budd 1973; Moore 1988). While there were moral and logical arguments, Victorian religion lost more cred-

ibility through editorial policy than through decisive debate. The efficacy of the power of print as a revolutionary agent of cultural change is well known throughout history, from Luther onward (Eisenstein 1986).

Our present anxieties about the world we live in—the ecological crisis, the injustice and inequalities of rampant capitalism—are in many respects the product of what became the new secular order: interest groups in science, politics, and business allied to the traditional establishment. In this secular view of things, God is not required to be invoked as legitimization, for “scientific truths are statements that have been publicly accepted by the experts” (Zimon 1960, cited in Carr 1987, 61). The secular world has replaced and displaced God: “the Creator has absolutely no job to do [and] can be allowed to evaporate and disappear from the scene” (Atkins 1987, 17). It should be borne in mind, however, that those who have made Darwinism into “an ideology of the escalator” (Gunton 1998, 188) have strayed far from Darwin himself, for whom evolution was more like a many-branched multidirectional tree than an ascending hierarchical series. “Deism represents a kind of cosmic toryism: what is, is right; and in that respect Darwinism as represented by such triumphalists as Richard Dawkins and Peter Atkins is a form of modern rationalist deism” (Gunton 1998, 188).

Such triumphalism is anyway misconceived; indeed, it is merely arrogance. Given Thomas Kuhn’s model of paradigm shifts in scientific thought (Lakoff and Johnson 1999; McGrath 1998), sociological accounts of scientific practice indicate that “far from providing a fixed, objectively verifiable body of knowledge of nature’s workings—through privileged access to essential physical reality—science itself exists as a social construct, a web of conventions, practices, understandings and negotiated indeterminacies” (Grove-White 1992).

#### HUMAN BEING/BEING HUMAN

It might be said with some justification that Christianity, with the status of official religion, has contributed historically to further the causes of particular coercive power groups. That is, it has functioned as a religion of society. The ecological crisis is a crisis of modernity, of the secular world in which our development as social beings is not commensurate with developments in technology. But has not our social development been truncated by the particular account of human nature bequeathed to us by the Enlightenment—an inadequate anthropology of the human being as “rational-individualist calculator, whose only authoritative knowledge is that modeled on the natural sciences, positivistically conceived”? (Grove-White 1992, 9). This modern individual is surely recognizable as

a being whose rationality consists overwhelmingly in his/her capacity to calculate where his/her personal advantage lies: an isolated, atomistic individual always able to know in advance and in isolation, what he/she wants . . . ; a being for whom social interaction and mutuality are merely instrumental means for achieving

personal ends, rather than engagements of intrinsic moral importance in their own right; a being whose concern for any deeper mysteries of his or her relationship to reality and/or other natural life is devoid of practical or political significance. (Grove-White 1992, 9)

It is precisely this reductionist account of the person that seminal environmental critics indicate in their analyses of the causal factors of the ecological situation (Grove-White 1992). At the heart of all moral questions lies the understanding of the human subject as a problematic; that is, how we construe the concept *person* is central both to our analysis of a situation and to our attempts to resolve it. Christianity's relevance and distinctiveness reside in its critical stance relative to the status quo. To function as a religion of society is to acquiesce in the lie: "each person is capable, to a greater or lesser degree, of coming to terms with living within the lie. Each person somehow succumbs to a profane trivialization of his or her inherent humanity" (Vaclav Havel, quoted in Grove-White 1992, 16). But Havel goes on to describe a far richer account of human nature—one that holds that the "essential aims of life are present naturally in every person. In everyone there is some longing for humanity's rightful dignity, for moral integrity, for free expression of being and a sense of transcendence over the world of existence."

This richer account of the human person was bequeathed by the classical Greek and the Christian traditions: conceptions of a range of possibilities in human endeavors and relationships that take account of hopes and fears and that accept the realm of mystery and limitations to what can be finally known. This anthropology is offered also by some construals of sociobiology (see Clark 1998)—admittedly, perhaps, a minority strand, but no majority has a monopoly on correctness. This analysis rejects the view that "Nature" selected human beings to be "aggressive, competitive, self-interested and hierarchical" (Clark 1998, 647). Instead it infers that to be fully human means to bond, to need meaning, and to be truly autonomous, which invokes responsibility and commitment to society in the widest sense.

It is this richer noninstrumentalist account of the human being that has been eroded, particularly since the Enlightenment (Voegelin 1956)—eclipsed by the rational-individualist calculator model that has become normative. But the richer conception of human nature not only embodies more than two millennia of reflection and insight, it also offers a language with diverse possibilities in its grammar and vocabulary that may allow us to express crucial ontological realities. It may be the model of self-understanding best suited to address our present crises (see Grove-White 1992).

We continue to see expressions of this richer anthropology, and not only in the Judaeo-Christian tradition. In his Herbert Read Memorial lecture "Is Nothing Sacred?" given before his reconversion to Islam, Salman Rushdie (cited in Midgley 1996, 72) observed,

It is important that we understand how profoundly we all feel the needs that religion, down the ages, has satisfied . . . the need to be given an articulation of our half-glimpsed knowledge of exaltation, of awe, of wonder. . . . The idea of God is at once a repository for our awestruck wonderment at life and an answer to the great questions of existence, and a rulebook too. The soul needs all these explanations—not simply rational explanations, but explanations of the heart.

In concluding that the relationship of Christianity to the ecological situation is one of legitimization, one of functioning idolatrously, it has to be conceded also that in so doing, Christianity has undermined itself through both privatizing its practices and reducing its own resources. Perhaps the single most important move in raging against the dying of the light is to rage against the reductionist account of what it means to be human in this world. This will entail a rejection of dysfunctional understandings of the place of humanity in God's good creation: the false ontological status that raises human beings out of the created order and that both inhibits our self-understanding as creatures and denies the construal of Christian notions such as grace and redemption in ways that establish any commonality of focus within which the goods of the human and the nonhuman might be considered together. Being in the image of God and given "dominion" in creation places humankind in a particular relationship with God's nonhuman creatures. But this is not a relationship of absolute differentiation, and it must be taken alongside ways of understanding that the Earth is the Lord's and everything in it: that is, human and nonhuman beings participate in forms of creatureliness, each called to fulfill God's purposes and each with a good of its own.

Recognizing the sacredness in nature is not a matter of invoking intrinsic value concepts and rights claims for, and on behalf of, nonhuman beings. It is not for humankind to confer value on God's creation; this is yet another negatively anthropocentric, surely hubristic, move. God confers value on all creatures by the very work of their creation and God's continuing work of sustaining them. Being in the image of God enables human beings to recognize and respect the sacredness of all of God's living things. Our failure to recognize this is a measure of the extent to which humanity falls short of the ideal presented to us in creation and our failure to respond to the dominion conferred on those made in the image of God—that is, dominion understood rightly as "a calling to be and to act in such a way as to enable the created order to be itself as a response of praise to its maker" (Gunton 1998, 12). Historically, this failure to meet the ideal—this missing the mark—has been the sin of the Christian tradition that calls for repentance. Furthermore, it is not all anthropocentrism that gives rise to this falling short, but the tearing apart of creation and redemption such that redemption is construed purely in terms of humanity.

An adequate response to the environmental situation seeks its ground in wisdom that eludes the rationalist-calculator model of human being. While

any response may be at least an ethical imperative, it is also a response to the broader context of secularization and Christianity's relationship with the wider secularity crisis in which the ecological situation participates. Despite incisive critiques from within science and the alternative perspectives of new science, empiricism and reductionism are deeply embedded and facts remain separated from values: a facade of objectivity that is the mask of ideology. The secular values of modernity have hegemony now, and given that politics are values connected to power (Young 1986), then science, politics, and the secular are intimately entwined and indeed are the expression of a unified ideological position: an unholy alliance with which Christianity has been historically associated.

#### NOTES

1. *Post hoc* rationalization and conceptualization has frequently led to reference to enlightenment ideas under the umbrella of The Enlightenment or The Enlightenment Project. But at the time there was no unified movement as such; there was a wide variety of endeavors, and enlightenment figures did not collaborate in the course of their different enterprises. Therefore it wasn't a 'project' at the time. "Enlightenment . . . was an eclectic phenomenon" (Hufton 1980, 92). The term *enlightenment* itself derives from an essay by Kant in 1784 entitled, "*Was ist Erklärung?*" His response established what was the single unifying factor among the various thinkers, scientists, *philosophes* of the period: the belief in free will, man's [sic] final "coming of age" and maturity as a rational being, all encapsulated in Kant's motto—*sapere aude*, dare to know. Porter has long argued for British thinkers to have a higher profile as leading figures in European enlightenment thought. Against assumptions that it was an essentially Gallic affair—Voltaire, Condorcet, Montesquieu, Diderot, D'Alembert along with Kant and perhaps Adam Smith, Porter (2000) has placed Newton, Hume, and Locke as central influences in his recent and strongest statement yet on this matter.

2. Historians agree that there was a Scientific Revolution, but they disagree about when it was. Most agree broadly on the sixteenth or seventeenth century. Cohen (1975) favors the seventeenth, as does Thomas (1978, 769), who argues persuasively: "The essence of the revolution was the triumph of the mechanical philosophy. It rejected both scholastic Aristotelianism and the neo-Platonism that temporarily threatened to take its place." For present purposes, its precise timing is not important; the periods interrelate, each marked by invention, innovation, and new theory, and these are not revolutionary per se. Ideas do not advance by their own logic; the Scientific Revolution was enabled by the cultural dynamism of sixteenth-century Europe and came to fruition in the seventeenth. It is its consequences that matter.

3. There were objections, for example from Henry More, for whom it was a "murderous doctrine" (Thomas 1985, 34).

4. For example, Rosemary Radford Ruether (1993) argues that oppression of nature is part of a culture: nature dualism that is itself an integral part of a set of interrelated dualisms and determined by an overarching male-female dichotomy. Hence relations between men and women are the ground of culture: nature dualism and thus the oppression both of women and of nature runs parallel.

5. Groups such as the Jacobins were construed as "Sophisters" in three types: of Impiety, of Rebellion, and of Anarchy. Most were claimed to have interests in the occult, essentially associated with Freemasonry; all were understood as deeply anti-Christian. See Abbé Augustin Barruel, *Preliminary Discourse*, vol. 1, in Merryn Williams (1977, 30).

6. There were two main strands of opposition (Moore 1998). First, there was concern about appropriation of the theory in support of racist supremacist ideology, and second, some of Darwin's opponents were not evangelicals as has been thought but were strict literal fundamentalists.

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