

our own society has suffered from a too exclusive and too narrow absorption in the *present*. It is an immersion that is only now beginning to manifest its limitations (in the form of indebtedness, profligacy, pollution, destruction of the environment, etc.). Fortunately, there is a growing awareness of the need for fundamental reflection upon the direction, processes and structures of the global society. These need to include thought about such fundamentals as time and eternity. Attitudes towards time and duration underly the pattern of decision-making in a society. The durational basis for prudent judgments is provided for by a sort of dialectical balance between the moments of time. It seems to me that a conception of eternity as transcendent duration can provide a "fulcrum" from which to measure time itself and to keep in balance the moments of time. Without it, temporal "astigmatism" may foreshorten the present, or sacrifice it to a specious future, or retreat into a reactive past. With an understanding of eternity that nourishes transcendence, personality, dynamism and fidelity we can place time itself within an infinitely larger vision of reality, at once dwelling intimately at the heart and mind, the center and the surface of the world, while giving ourselves over to its everlasting source. □

Cosmology, eschatology, ecology: Some reflections on *Sollicitudo Rei Socialis*

Stratford Caldecott

The intelligence by which we exercise dominion over the world should be a pure light which unites the interior and exterior cosmos by revealing the divine intentions that generate both.

In his 1988 encyclical on social justice and development, *Sollicitudo Rei Socialis* (henceforth *SRS*), Pope John Paul II writes of "the need to respect the integrity and the cycles of nature and to take them into account when planning for development" (no. 26). He goes further, to emphasize that behind this statement lies a cosmological vision. Development cannot exclude "respect for the beings which constitute the natural world, which the ancient Greeks—alluding precisely to the *order* which distinguishes it—called the 'cosmos'." Such realities also demand respect, by virtue of a threefold consideration which it is useful to reflect upon carefully" (no. 34). They demand respect, not just for what they are in themselves, but for their relationship to ourselves and each other:

The first consideration is the appropriateness of acquiring a *growing awareness* of the fact that one cannot use with impunity the different categories of beings, whether living or inanimate—animals, plants, the natural elements—simply as one wishes, according to one's own economic needs. On the contrary, one must take into account the *nature of each being* and of its *mutual connection* in an ordered system, which is precisely the 'cosmos'.

The *second consideration* is based on the realization—which is perhaps more urgent—that *natural resources* are limited; some are not, as it is said, *renewable*. Using them as if they were inexhaustible, with *absolute dominion*, seriously endangers their availability not only for the present generation but above all for generations to come.

The *third consideration* refers directly to the consequences of a certain type of development on the *quality of life* in the industrialized zones. We all know that the direct or indirect result of industrialization is, ever more frequently, the pollution of the environment, with serious consequences for the health of the population.

The Pope's statement represents a breakthrough in the Church's official teaching on ecology.¹ We must no longer ignore, even for the most pressing of economic reasons, the effect of our actions on the environment. In an implicit rebuke to those Christians who, since the Industrial Revolution, have taken the command of God in Genesis to "subdue" the earth as a license to exploit and ruin the environment, the Pope concludes that

development, the planning which governs it, and the way in which resources are used must include respect for moral demands. One of the latter undoubtedly imposes limits on the use of the natural world. The dominion granted to man by the Creator is not an absolute power, nor can one speak of a freedom to "use and misuse," or to dispose of things as one pleases. The limitation imposed from the beginning by the Creator himself and expressed symbolically by the prohibition not to "eat of the fruit of the tree" (cf. Gen. 2:16-17) shows clearly enough that, when it comes to the natural world, we are subject not only to biological laws but also to moral ones, which cannot be violated with impunity.

What follows is a series of cosmological and ecological reflections, inspired by SRS, on the themes of dominion, eschatology, woman and nature, and the moral law.

¹Previous statements have lacked either detail, or the authority of an encyclical. In the past year, bishops' conferences in the third world (Philippines, Haiti, Dominican Republic) have begun to issue urgent documents on this theme.

Dominion

The Christian vision affirmed by the Pope in this encyclical places "man"—meaning of course, human beings²—at the center of the world, entrusted with responsibility for the well-being of the planet. Little evidence for this is needed, beyond the fact, admitted by the most secular-minded ecologists, that it is we who are largely to blame for the ecological crisis. Alone among animals, we can destroy the world. But there is more to it than this. According to the Christian tradition, we are central not merely because we are powerful. We are central because we are *persons*. To be a person is to have reason; it is to have access to truth.

"The name *person* indicates what is most perfect in nature" (St. Thomas). The human being is made in the image of God, to represent the Creator in the creation. The spiritual and material realms, invisible and visible, heaven and earth, are brought together in this being who is a unity of rational soul and physical body. Ours is "a bodily and a spiritual nature, symbolized in the second creation account by the two elements: the *earth*, from which God forms man's body, and the *breath of life* which he breathes into man's nostrils" (SRS, no.29). Humans differ from all animals yet discovered in having a religious sense. Even more than an ability to communicate, to use tools and even to laugh—all of which are present in other animals to some degree—this marks us out as persons. Openness to the transcendent is the sign of a median level between animal and angel.

John Paul II has developed a "theology of the body" based partly on Scripture (especially his exegesis of the first chapter of Genesis) and partly on a profound philosophical understanding of "the acting person."³ Far from being an innovation in Church teaching, this theology represents the latest stage in a developing reflection on personhood that began even before the Council of Chalcedon in A.D. 451. One could with reason claim the notion of "person" to be the characteristic discovery of Christianity. The non-Christian reli-

²A large section of the Green movement is offended by the generic use of "man" and "he," but the issue cannot be discussed in a small space.

³The title of a book by Karol Wojtyła (Dordrecht: Reidel, 1979).

gions of the East tend to locate the unity of the self in quite another direction—in a purely spiritual dimension, and ultimately at the level of universal being, held in common by all creatures. It seems to be Christianity (basing itself partly on Judaism) that has come to recognize in the unity comprising body, soul and spirit a particular entity which God values sufficiently to guarantee an eternal destiny, quite apart from the cosmological fate of its various constituents after death. The discovery of human personhood, in this sense, had to await the revelation of divine Personhood: as soon as it became clear that God is love and contains a community of Persons our own personal relationship to him assumed a completely new importance. It is in the image of God's personhood that we have been created and redeemed.

The theology of the body can serve as the starting point for a new theology of the environment, and also for a new cosmology, once it is seen that the person is the nexus of all cosmic realities. For it is through the human body, which is the "environment" of the soul, that the entire material world is inserted into our spiritual nature. The human person is truly a "little cosmos" (microcosm). Our dominion springs from this fact. "Thus man comes to have a certain affinity with other creatures; he is called to use them, and to be involved with them. As the Genesis account says, he is placed in the garden with the duty of cultivating and watching over it, being superior to the other creatures placed by God under his dominion. But at the same time man must remain subject to the will of God, who imposes limits upon his use and dominion over things" (SRS, no. 29). This task of cultivating the garden "is to be accomplished within the framework of *obedience* to the divine law and therefore with respect for the image received, the image which is the clear foundation of the power of dominion recognized as belonging to man as the means to his perfection" (SRS, no. 29).

It is this "respect for the image received" that is the foundation of our moral duty both towards each other and towards the rest of nature. The moral law, fulfilled only by free consent, is written into our nature. And it is this awareness of *qualified dominion* as a fact of life, rather than a mere "speciesism," that lies behind a statement of Vatican II in *Gaudium et Spes* that man is "the only being God wanted for its own sake." In this one being, man, all the others are contained in

synthesis. Or, one might say, God in fact wants all creatures, but he wants them *through us*, and *in his Son*.⁴

Several Fathers of the Church, including Maximus the Confessor, describe our dominion over the rest of nature as an exercise in *mediation*, by virtue of an ability to contemplate things in their *logoi* or seminal reasons.⁵ Adam was able to "name" the animals because he could see their inner being. To name something is to exert power over it, to appoint its place and destiny in the world. That power is the very opposite of an arbitrary dictatorship. It goes hand in hand with the deepest respect for the immanent logic and beauty of each animal. Even after the Fall, through the Redeemer grace can restore the primordial relationship between human beings and the "irrational creatures," as we have seen in the case of St. Francis of Assisi, St. Cuthbert and many others. In the state of original innocence, all animals spontaneously obeyed Adam because his will was in harmony with the divine Wisdom. Since the Fall, animals disobey because we are no longer in command of ourselves. "When man disobeys God and refuses to submit to his rule, nature rebels against him and no longer recognizes him as its 'master,' for he has tarnished the divine image in himself. The claim to ownership and use of created things remains still valid, but after sin its exercise becomes difficult and full of suffering" (SRS, no. 29). No longer lord of our own powers and tendencies, we are no longer Lord of the Animals: for the animals, in a sense, *are* our powers and tendencies. They reflect us to ourselves, and they can reflect our collective interior disorder as easily as they once did our interior innocence.

The essence or being of each animal, each creature, lies open to the gaze of Adam in the state of original justice. The intelligence by which we exercise dominion over the world should be a pure light, which unites the interior and exterior cosmos by revealing the divine intentions that generate both. "For every creature is by its very nature some kind of image

⁴See C.S. Lewis, *The Problem of Pain* (London: Bles, 1940), chapter on "Animal Pain."

⁵See especially Lars Thunberg, "The Human Person as Image of God: Eastern Christianity" in *Christian Spirituality*, ed. Bernard McGinn et al. (New York: Crossroad, 1986). Also Thunberg, *Man and the Cosmos* (Crestwood, N.Y.: St. Vladimir's Seminary Press, 1985).

and likeness of the eternal Wisdom," writes St. Bonaventure, "because God is the origin, exemplar and end of every creature, and the effect is the sign of the cause, the thing exemplified of the exemplar, and the way of the end to which it leads."⁶ To the exact degree each being is a unity, created and sustained by God, that being is a *theophany*, a revelation of its Creator to the eyes of the heart. "The earth needs the sky, the body needs the spirit, all things created by Him are in communion, all at all times are necessary to one another" (Clausel).⁷ We find the animals within ourselves, along with all the elements of nature. We cannot understand ourselves without at the same time understanding other creatures, and we cannot respect ourselves without respecting them. *They are our exterior*. Von Balthasar writes, "To be sure, it is only in man that nature raises its countenance into the region of eternity; and yet, the same *natura naturans* that in the end gives rise to man is also the *natura naturata*, and the whole plenitude of forms that the imagination of the divine nature has brought forth belongs analytically to the nature of man."⁸

Every creature has its own mission and its own beauty. The contemplative gaze of Adam revealed the correspondences between these and the facets of his own nature, made in the image of God. By working on the garden, cultivating and subduing the earth, he was working on and transforming himself, and at the same time leading each and every creature to the fulfillment of its own destiny in Christ, to the marriage of earth and heaven.

Eschatology

In our attempt to "think with the Church" on this topic, we need to relate each point to the revealed mysteries of Incarnation and Communion. Like the vertical and horizontal axes of the Cross, these encompass everything we need to know. In considering the foundations for our concern for ecology, they enable us to deepen and broaden our conception of human nature. It is no wonder many Greens object to the el-

evation of the human race by Christianity, when what has been elevated turns out to be no more than man as conceived in the 19th century. Man is the "rational animal," but if reason is conceived on an Enlightenment model, it cannot serve to distinguish us so radically from the rest of creation. A *clever* animal is still just an animal: only a *wise* animal can be God's steward on earth. Wisdom is the inner structure by which all things are related one to another. We need to recapture a sense of the human microcosm. Perhaps it is no coincidence that the school of modern philosophy in which the Pope was trained seems to provide a new way to approach this perennial intuition.

The most amateur phenomenological analysis of the human condition reveals the artificiality of abstracting the "lived body" of a conscious subjectivity from the environment around it. My flesh and bones, my skin and organs of sense, my lungs, liver and heart, are instruments of relationship. My life is interwoven with the lives of others. What I eat and breathe becomes a part of me. I am embodied not only by my flesh but by the clothes I choose to wear, by the gestures I make, and above all by the moral and immoral actions for which I am responsible. Romano Guardini asks: "And what are the limits of a man's body? Surely his clothes belong to it since they performed the double function of protection and expression. What of his work tools, the articles he kept about him, his house, his much-loved garden; what of the whole sphere of his life? Let us not be too fanciful, yet it is certain that the body goes beyond its mere anatomical limits."⁹ Indeed, my embodiment extends to the utmost reaches of the universe, which penetrates me with its rays, to whose total mass I contribute my minuscule percentage, on which I am dependent and to which I give a voice. If it is hard to conceive of myself without a body, it is equally hard to conceive of myself without a context or environment: the one seems to entail the other.

In his fifth encyclical, *Dominum et Vivificantem* (1986), the Pope writes that "The Incarnation of God the Son signifies the taking up into unity with God not only of human nature, but in *this human nature, in a sense, of everything that is 'flesh'*: the whole of humanity, the entire visible and material world. The Incarnation, then, also has a cosmic significance, a

⁶St. Bonaventure, *Itinerarium Mentis in Deum*, ch. 2:11 (numerous editions).

⁷Paul Claudel, *L'Annonce faite à Marie*, Act 1, Scene 3.

⁸Hans Urs von Balthasar, *Seeing the Form* (San Francisco: Ignatius Press, 1982), p. 679.

⁹Romano Guardini, *The Last Things* (London: Burns & Oates, 1954), p. 69.

cosmic dimension" (no. 50). From here it is but a short step to eschatology. Matthias Scheeben anticipated the conclusion which is implicit in our tradition: "Not only the human body, but the whole of material nature, is moving toward a state of glorification, in which it is to realize its final purpose and attain its eternal repose. We have to view this transformation according to the analogy of the glorification of the human body, with which it is closely connected. For as the body is the domicile of the soul, material nature is the domicile of the whole man. The human body is derived from material nature and does not abandon its organic connectedness with matter even when united to the spirit."¹⁰ In material nature we must include the animal kingdom: heaven does not post a sign saying "No Pets Allowed."

The fundamental lesson of these texts is a profound one. A Resurrection Body must bring with it a Resurrection Earth. Its appearance remains beyond our capacity to imagine, but we know that the whole of nature, the entire cosmos, has been redeemed, and not a blade of grass will be lost "when the perishable puts on the imperishable" (1 Cor. 15:54). This must surely change our behavior, especially when we reflect that, in Jesus Christ, the Resurrection has already taken place. "Christ entered the cosmos, he was crucified and rose again within it, and thereby all things were made new. The whole cosmos follows his footsteps to crucifixion and resurrection," writes Berdyaev. Thus, "Those who only see in the Church an institution deny its cosmic significance. It is in the Church that the grass grows and the flowers blossom, for the Church is nothing less than the cosmos Christianized."¹¹ Henceforth we must live as citizens of this kingdom, the new creation which is born from the tomb with Christ.

Woman and nature

"Man must become effectively like God by the active realization of his unity in the fulness of creation. Child of the earth by the lower life which it gives him, he must give it back transformed into light and life-giving spirit. If through

him, through his reason, earth is raised to heaven, through him also, through his activity, the heavens must descend and fill the earth; through him all the world outside the Godhead must become a single living body, the complete incarnation of the divine Wisdom."¹² Solov'yev, an important mediating figure between the Eastern and Western Churches, saw Berdyaev's "cosmos Christianized" as a feminine being: self-conscious, morally free, the companion and bride of Christ. Wisdom, Sophia, is the "woman clothed with the sun" in the Book of Revelation. The heart and core of this *cosmos made Church* is the Virgin Mary. Her bodily Assumption into heaven signifies the fulfillment of the promise of the Resurrection to all flesh.

Ecofeminists, too, believe the cosmos is in some sense feminine. One of their profoundest intuitions is that there is a connection between the ways men treat women, the human body, and the earth. In an industrial civilization, discursive, conceptual thought is exalted over feeling, strength over gentleness, mechanism over biology. They talk of the earth as Gaia, violated by man. If this is so, respect for the body of woman ought to be an integral part of the Green perspective. Those who claim it to be often criticize the 1968 encyclical by Pope Paul VI, *Humanae Vitae*, as typifying the anti-body, anti-sex attitude of the Catholic tradition. But here a great opportunity for collaboration has been lost, for in fact the encyclical exemplifies exactly the opposite attitude, as John Paul II has tried to show. Indeed, *Humanae Vitae* will stand as one of the foundational documents of the new ecological theology. Its whole argument presupposes respect for woman and nature. To pollute the waterways of the human body with chemicals, and block its passages with metal and plastic barriers, deliberately to prevent its functioning in a normal and healthy way, is an extension of the industrial mentality to the most private human sphere. It places woman in the hands of the technocrats and the big corporations, totally dependent on them for as long as she wishes to remain the sexual plaything of the men who refuse to take responsibility for her children.

Some members of the Green movement have recognized this, but the majority are still caught in a dreadful

¹⁰M.J. Scheeben, *The Mysteries of Christianity* (St. Louis: Herder, 1946), p. 682.

¹¹Nicolas Berdyaev, *Freedom and the Spirit* (London: Bles, 1948), p. 331.

¹²Vladimir Solov'yev, *Russia and the Universal Church* (London: Bles, 1948), p. 174.

inconsistency. Victims of consequentialist ethics, they argue that, because the uncontrolled growth of human populations has placed impossible demands on the earth's ecosystem, the long-term solution to the crisis must be to reduce and stabilize the population by any means that come to hand. Planned parenthood organizations join hands with development agencies and ecologists in making contraceptives widely available in the third world, even withholding economic aid to encourage cooperation. Countries such as China are praised for enforcing a strict quota on births, and for imposing sterilization or abortion on those who exceed it.¹³

A few experts deny that such measures can be effective. They suggest that population will spontaneously reduce with economic improvement.¹⁴ In *SRS*, John Paul II confines himself to making two points in this regard. Firstly, he refers to the problems caused by *falling* birth rates in the developed nations. Secondly, he condemns all "systematic campaigns against birth," and points out that they amount to a new form of oppression. "It is the poorest populations which suffer such mistreatment, and this sometimes leads to a tendency towards a form of racism, or the promotion of certain equally racist forms of eugenics" (*SRS*, no. 25). If populations do need to be "controlled," it must only be by the married couples themselves, in the same process of *self-control* by which they learn genuine respect for each other's bodies, and particularly the woman's cycle of fertility. The body is an intrinsic part of the self. We should not split our minds from our bodies as though we believed that the mind is the true self, and the body merely an object it can manipulate and eventually discard. To break "the personal unity of soul and body," writes John Paul II in *Familiaris Consortio* (no. 32), is to "strike at God's creation itself at the level of the deepest interaction of nature and person."¹⁵

¹³In Munster Cathedral, Germany, on 3 May 1987, the Pope said, "No peace movement deserves the name if it attacks the life of the fetus. No ecological party is to be taken seriously if it closes its eyes to the extermination of countless numbers of children in the wombs of their mothers."

¹⁴The most well known being Julian L. Simon of the University of Maryland. See J. Kasun, *The War against Population* (San Francisco: Ignatius Press, 1988).

¹⁵For one of the best explanations of the intrinsic wrongness of "artificial" contraception, see Grisez, Boyle, Finnis and May, "Every Marital Act Ought to be Open to New Life: Toward a Clearer Understanding," *The Thomist*, July 1988. Contraception, in contrast to NFP, is directed against the individual

The moral law

The same principles apply to ecology as to sexual ethics: we are not the masters but the ministers of God's design (*Humanae Vitae*, no. 13). If the moral law revolves around principles that cannot be violated with impunity, we must not act in a way that is intrinsically wrong even "that good may come of it."

The ecological crisis is linked to a loss of the sense of *reason* as the principle of cosmic order. With the scientific and industrial revolutions in the post-Christian West, we entered the "reign of quantity,"¹⁶ when qualities and values were regarded no longer as objective properties of the world, but as subjective and relative. One tactic of the moral philosophers who have inherited this situation has been to define good and evil in terms of the desirability or otherwise of an action's *consequences*. That approach runs into the problem that the chain of events I initiate by acting is impossible to predict, and will in any case continue until the end of time. How can I judge my act by any one link in the chain? Another tactic is to define good and evil exclusively in terms of the agent's *intention*. Situation ethics, like consequentialism, justifies means by ends, but it places the emphasis on what the subject is *trying* to bring about rather than on what will in fact happen.

The Christian and Classical tradition locates moral value as an objective property of conscious acts (or of the persons who act).¹⁷ This view corresponds to the intuition of every pre-modern civilization.¹⁸ It even does justice to what is valid in situation ethics and consequentialism. Jesus did say that a man who lusts after a woman has already committed adultery with her in his heart. But if adultery were not wrong, lust would not be wrong either. An intention can be sinful in the absence of an act because it is always the seed or beginning

human person who would otherwise come into being. The wrongness is not in the sexual act, nor even in the intention to avoid having a child. The couple engage in actions that would lead to a child, whilst acting against the being of that child.

¹⁶See René Guénon, *The Reign of Quantity and the Signs of the Times* (London: Luzac, 1953).

¹⁷See, e.g., Alan Donagan, *The Theory of Morality* (University of Chicago Press, 1977); John Finnis, *Fundamentals of Ethics* (Washington, D.C.: Georgetown University Press, 1983); Alasdair MacIntyre, *After Virtue* (University of Notre Dame Press, 1981).

¹⁸See C.S. Lewis, *The Abolition of Man* (London: Bles, 1946).

of an act. As for consequences, clearly they are relevant to moral decisions. But an entire chain of events inheres in the act which initiates it. Thus when my act is judged by its inner moral structure, all its consequences are implicitly taken into account. Whatever the apparent, short-term consequence of an evil act, I can be confident that in the long run its natural result will be to decrease rather than increase happiness.

It was this sense of the universality of the moral law, as an objective structure of values belonging to possible human actions, that led Meister Eckhart to comment that "Do unto others as you would have them do unto you" does not just apply to our fellow men, but to "our relations with beasts, plants and inanimate things." If we treat them "irrationally," they will do the same to us, and "instead of bringing tribute to man they will bring retribution upon him."¹⁹ The rational order of things cannot fail to manifest in the unfolding of cause and effect. Since any causal action brings about an effect like itself, and every effect in some sense rebounds on its cause (as the Neoplatonists saw so clearly), justice and punishment are built into the structure of the cosmos.

We need to give a great deal of thought, therefore, to the way we treat those beings who only participate passively in our moral community: the animals, plants and minerals at the receiving end of human actions. Too often, we forget that persons can act towards non-persons as well as persons in an immoral way.²⁰ To test cosmetics on animals, to raise chickens under the conditions of a battery farm, would seem to be incompatible with the respect we owe them as manifestations of divine Wisdom. But what about testing *medicines* on animals? Where exactly do we draw the line? What about the moral challenge of *vegetarianism*: is this what the Christian tradition would call a "counsel of perfection," an obligation only on those who are called to live out this ideal, or should it also affect the policies of governments? Finally, what are the moral limits of *genetic engineering*? Every animal species has an innate and God-given form (given, most of us would agree, through the process of evolution). But genetic codes can now be mapped by

¹⁹Cited in C.F. Kelley, *Meister Eckhart on Divine Knowledge* (New Haven, Conn.: Yale University Press, 1977), p. 146.

²⁰A thought-provoking introduction to this whole topic may be found in M. Midgley, *Animals and Why They Matter* (Athens, Ga.: University of Georgia Press, 1984).

computer, ready to be tampered with at will. Is it compatible with the respect due to creatures to redesign the animals named by Adam for commercial profit, and to take out patents on a pig?²¹ The new technology, whatever the benefits it offers, comes with strings attached. It brings with it an attitude that is the very opposite of reverence—or rather which ends by giving reverence only to man, the (re)designer of life.

Conclusion

The Muslim philosopher of science S.H. Nasr has called for a reintegration of science and metaphysics, a new *scientia sacra*. He writes, "In the end . . . there is no peace possible among men unless there is peace and harmony with nature. And in order to have peace and harmony with nature one must be in harmony and equilibrium with Heaven, and ultimately with the Source and Origin of all things. He who is at peace with God is also at peace with His creation, both with nature and with man."²² The ecological crisis is, at root, nothing other than the crisis of modernity itself. It concerns the use of power and the failure to exercise responsibility. A mentality of control has been growing in the world ever since Adam yielded to the original temptation, and it has run wild since the scientific revolution desacralized the cosmos. The crisis has no secular, let alone technological, solution. Any actions we take in the spirit of hubris can only make it worse. Resacralization is the answer, and that will be the fruit of a spiritual renewal.

Pope John Paul II is doing his best to encourage the signs of this renewal wherever he finds them, as well as keeping open the lines of communication between religion and science. He is particularly concerned with repairing the split between the Eastern and Western Churches. His own philosophical and theological approach is well suited to mediate between the two

²¹The first animal to be patented by man was a mouse, genetically engineered to be predisposed to cancer by Philip Leder and Timothy Stewart of Harvard University. The activist Jeremy Rifkin has tried to force society to confront these issues. See, e.g., his book *Declaration of a Heretic* (Boston and London: Routledge & Kegan Paul, 1986).

²²S.H. Nasr, *The Encounter of Man and Nature* (London: Allen & Unwin, 1968), p. 136. See also his Gifford Lectures, *Knowledge and the Sacred* (New York: Crossroad, 1981).

traditions. The emphasis of the East has tended to be on cosmology and freedom, the emphasis of the West on morality and obedience.²³ In this, as in so much else, the two Churches do not contradict but complement one another. If the East speaks of the saint as perfectly free, and the West speaks of the saint as perfectly obedient, the model for both is Jesus Christ: "My food is to do the will of him who sent me" (John 4:34). At this level, obedience coincides with freedom. To obey the demands of love is to be liberated. It is as a tool of liberation and a demand of love that the moral law imposes itself on us. In dialogue with the East, the Latin Church is at last discovering the depths of her own tradition, where obedience opens out into freedom, and morality into cosmology.

An adequate theological response to the ecological crisis cannot await the formal reunification of Eastern and Western Churches. Fortunately, it does not need to. An ecologically sensitive theology is already implicit in the Latin Church's teachings about eschatology, sexual morality, and social justice, and the dialogue with the East can only hasten its unfolding.²⁴ By integrating ecological concern with concern for world peace and sustainable development, and by acknowledging "respect for the beings which constitute the cosmos," irrespective of their convenience to man,²⁵ SRS has sketched a framework in which the development and application of this theology can proceed. □

²³See Paulos Mar Gregorios, *The Human Presence* (Amity, N.Y.: Amity House, 1987) which contains, among other things, an excellent selection of Patristic texts relevant to the themes of this essay.

²⁴In *The Delicate Creation* (Old Greenwich, Conn.: Devin-Adair, 1972), Christopher Derrick shows how a profoundly Catholic environmentalism can be developed on the basis of the early Church's rejection of Gnostic and Manichaean heresies.

²⁵At an interreligious meeting sponsored by the World Wildlife Fund in Assisi, 1986, the "Christian Declaration on Nature" made this point very clearly: "even in the mutual opposition of the various elements of the universe, there exists a divinely willed harmony because creatures have received their mode of existence by the will of their Creator, whose purpose is that through their interdependence they should bring to perfection the beauty of the universe. It is the very nature of things considered in itself, without regard to man's convenience or inconvenience, that give glory to the Creator." The creation gives glory to God the Father through God the Son: "in him all things hold together" (Col. 1:17).

Theological questions to scientists

Wolfhart Pannenberg

If the God of the Bible is creator of the universe, then it is not possible to understand fully or even appropriately the processes of nature without any reference to that God.

In their discussions with theologians, few scientists seem motivated primarily by theoretical questions. There is rarely much desire for the help of theologians in explaining the world of nature, but rather a widespread awareness that science alone is not sufficient in order to cope with the consequences and side effects of scientific discoveries, especially in their technological application. Frightened first by the development of nuclear weapons and later on by the threat of ecological disaster and by the dangers involved in modern biochemical techniques, a sense of responsibility for the application of their work has led many scientists to look for moral resources that could be mustered in order to prevent or at least to reduce the extent of fatal abuse of the possibilities provided by scientific discoveries. At this point, then, the churches are appreciated once more as moral agencies that should help the human society in responsibly dealing with the potential of science and technology.

The churches should certainly not refuse to face their particular responsibilities in these matters, and theology may be of some assistance here. But in modern society, the moral authority of the churches and of their theologies is limited. It has been seriously weakened, because the underlying