

What is more, in the area of environmental ethics, it is especially clear that our modern, scientifically informed, globalized culture differs hugely from that of the biblical writers. Any use of the Bible in contemporary debate must pay attention to this considerable historical gap. This means that Christian environmental ethics cannot simply be based on attempts to interpret and apply what the Bible says, but, like other major developments in theological ethics, must derive from a fresh and critical reading of the Bible and tradition, shaped by the demands and insights of our contemporary context and informed by dialogue with scientists, theologians, ethicists, and others. Through such a dialog, the Bible can contribute significantly to an ecological reconfiguration of Christian theology and ethics.

SEE ALSO *Christianity; Ecotheology; Islam; Judaism; Stewardship; Vegetarianism; White, Lynn, Jr.*

BIBLIOGRAPHY

- Adams, Edward. 2007. *The Stars Will Fall from Heaven: Cosmic Catastrophe in the New Testament and Its World*. London: T&T Clark.
- Berry, R. J., ed. 2000. *The Care of Creation*. Leicester, UK: InterVarsity Press.
- Bouma-Prediger, Steven. 2001. *For the Beauty of the Earth: A Christian Vision for Creation Care*. Grand Rapids, MI: Baker Academic.
- Evangelical Climate Initiative. 2006. "Climate Change: An Evangelical Call to Action." Available from <http://pub.christiansandclimate.org/pub/statement-booklet.pdf>
- Habel, Norman C., ed. 2000. *Readings from the Perspective of Earth*. Sheffield, UK: Sheffield Academic Press.
- Habel, Norman C., ed. 2001. *The Earth Story in the Psalms and the Prophets*. Sheffield, UK: Sheffield Academic Press.
- Habel, Norman C., and Vicky Balabanski, eds. 2002. *The Earth Story in the New Testament*. Sheffield, UK: Sheffield Academic Press.
- Habel, Norman C., and Shirley Wurst, eds. 2000. *The Earth Story in Genesis*. Sheffield, UK: Sheffield Academic Press.
- Habel, Norman C., and Shirley Wurst, eds. 2001. *The Earth Story in Wisdom Traditions*. Sheffield, UK: Sheffield Academic Press.
- Horrell, David G; Cheryl Hunt; and Christopher Southgate. Forthcoming. "Appeals to the Bible in Ecotheology and Environmental Ethics." *Studies in Christian Ethics*.
- Russell, David M. 1996. *The "New Heavens and New Earth": Hope for the Creation in Jewish Apocalyptic and the New Testament*. Philadelphia: Visionary Press.
- Santmire, H. Paul. 2000. *Nature Reborn: The Ecological and Cosmic Promise of Christian Theology*. Minneapolis, MN: Fortress Press.
- White, Lynn, Jr. 1967. "The Historical Roots of Our Ecologic Crisis." *Science* 155: 1203–1207. Reprinted in Berry 2000.

David G. Horrell

BIOCENTRISM

Biocentrism is a life-centered outlook that rejects the view that humanity alone matters in ethics and accepts the moral standing of (at least) all living creatures. It has played a formative role in the development of environmental ethics since the study of this subject became a self-conscious discipline in the 1970s; it was also influential among some key earlier thinkers, including Albert Schweitzer (with his belief in "reverence for life") and Mohandas Gandhi, who regarded even "the destruction of vegetable life as *himsa* (violence)" (Gandhi 1958, vol. 32, p. 43; Gruzalski 2007, p. 230). Not all biocentrists condemn all destruction of life, however, although they all regard the good of living creatures as a morally relevant element in decisions affecting their treatment.

KEY TENETS OF BIOCENTRISM

The common and crucial tenets of biocentrism are the following: (a) all living creatures have a good of their own and, accordingly, have moral standing (that is, they warrant moral attention or consideration for their own sake); and (b) their flourishing or attaining their good is intrinsically valuable. In representing the Deep Ecology movement as "biocentric," Arne Naess probably wanted to go further and include living systems (such as habitats and ecosystems) within the scope of biocentrism (Naess 1973), but the view that such systems have moral standing and a good of their own is nowadays more accurately classified as *ecocentrism*. Characteristically, biocentrists locate moral standing in individual creatures rather than in systems, as holists do; biocentrists respect systems not in themselves but only insofar as they protect or make possible the lives (or the flourishing lives) within them; they view such systems in much the same way that most people regard lifeboats.

EARLY BIOCENTRISTS

Naess may also have intended to embody a form of radical egalitarianism in his version of biocentrism, which endorses "biospherical egalitarianism—in principle" involving "the equal right of all creatures to live and blossom" (Naess 1973, p. 95). But many biocentrists have not endorsed this principle. Although some embrace it, others are closer to the very different egalitarianism of Peter Singer, who adheres to the "principle of equal consideration," according to which equal interests should be given equal consideration (Singer 1999); this principle is compatible with according different treatment to creatures with different interests, whether of the same species or not, thus privileging some creatures over others. Singer is not a biocentrist, because he sets the limits of moral standing at the boundaries of sentience. But there is nothing to prevent biocentrists, whose allocation of

moral standing is much less constrained, from endorsing his equal consideration principle across the broader range of creatures whose standing they recognize. Such biocentrism is not “inegalitarian,” as Alan Carter has suggested (2001, 2005), but it does diverge from Schweitzer’s radical egalitarianism and possibly Naess’s and certainly Taylor’s (1981) and Sterba’s (1998) in such a way as to make biocentrism both egalitarian and more obviously defensible (Attfield 2003b, 2005).

Biocentrism was given a much clearer rationale in Kenneth Goodpaster’s article “On Being Morally Considerable” (1978). To the question, which entities have moral considerability or standing? Goodpaster replies that it is those with a good of their own and that this criterion extends to all living creatures, given the centrality of the concept of beneficence in morality. Here Goodpaster diverges from Feinberg, who partly locates interests in “unconscious drives, aims, goals, latent tendencies, directions of growth and natural fulfilments” or, in summary, in “conations” (1974, p. 49–50), yet he inconsistently restricts the bearers of interests and thus moral standing to sentient creatures. Goodpaster rejects this restriction while incorporating Feinberg’s understanding of interests into his biocentrism. But Goodpaster carefully distinguishes his position from belief in the sentience of all life (for he rejects both this belief and the view that sentience is necessary for moral standing) and equally from the view that all holders of moral standing, sentient or nonsentient, have the same moral significance. On that basis, he suggests, life would be unlivable.

Donald Scherer (1982) furnished crucial support for biocentrism through a thought experiment about the presence or absence of value on the imaginary planets Lifeless, Flora (which has vegetation), and Fauna (which has animals, too); he argues that it makes sense to value the states of Flora and Fauna but not of Lifeless. He also seeks to demonstrate that an ethic can be individualistic without being either egoistic or anthropocentric and can recognize independent value while remaining teleological (or consequentialist). Scherer does not entirely reject ethical holism (any more than Goodpaster does) and may actually come close to such holism when he makes values dependent on ecosystems and their value because the relevant creatures are physically dependent on ecosystems. (To this it could be replied that the dependence of the human passengers in a lifeboat on their vessel does not make their value dependent on either the lifeboat or its value.) Yet Scherer’s stance shows how a largely individual-centered ethic can avoid the assumption that human concerns must be confined to human interests. An environmental ethic can value the good of all living creatures (present and future) without either making them all of equal significance or privileging the common good over the value of individuals, as ecocentrists are

prone to do. Indeed, Scherer’s thought experiment supplements Richard Routley’s last-man thought experiment by locating intrinsic value in all self-maintaining and self-replicating organisms with a good of their own.

THE BIOCENTRISM OF ATTFIELD, TAYLOR, AND VARNER

A corresponding kind of biocentrism to Goodpaster’s was upheld in two works by Robin Attfield: “The Good of Trees” (1981) and *The Ethics of Environmental Concern* (1983). In the former work, Attfield contests the prevailing theories that interests (human, sentient, or nonsentient) are a function of desires and preferences (Feinberg’s eventual position) or of prescriptions (as in Hare), and develops arguments such as the last-person thought experiment in support of the good of trees having intrinsic value, thus supplying a reason independent of their instrumental value for their promotion or protection. In the latter work Attfield integrates biocentrism with a form of rule consequentialism and supplements it with a nonanthropocentric theory about which interests should be given priority in interspecies conflicts. Attfield further developed these views into a theory of interspecies priorities harnessed to practice consequentialism in *Value, Obligation and Meta-Ethics* (1995). Earlier, in the second edition of *The Ethics of Environmental Concern* (1991), Attfield replied to Janna Thompson’s sentience-based argument that biocentrists have no consistent basis for denying intrinsic value to artifacts. Attfield responded that living creatures are capable of health and can be injured or harmed but that artifacts cannot be injured or harmed but merely damaged.

A different kind of biocentrism was presented in 1981 by the veteran ethicist Paul Taylor. Taylor disowns both anthropocentric and holistic positions and advocates instead a life-centered ethic of respect for nature in which agents recognize that each living thing has a good of its own, the realization of which is intrinsically valuable (or worthy of being preserved or promoted) and is to be pursued for its own sake. Respect for nature is comparable with and supplements a Kantian respect for persons. In Taylor’s version of biocentrism, however, not only is human superiority denied, but each living thing is also held to be equally worthy of respect, irrespective of differences of interests, and to have the same moral significance. Accordingly, “biospherical egalitarianism” (the principle propounded, albeit with qualifications, by Naess) here reemerges. Taylor tackles the implications of such egalitarianism in his book *Respect for Nature: A Theory of Environmental Ethics* (1986). In that work he presents defensible practical principles that recognize that human needs have to be satisfied. But these principles are difficult to reconcile with—or to derive from—his

interspecies egalitarianism. A consistent and operational biocentric ethical system probably has to recognize, as Goodpaster does, differences of moral significance among the bearers of moral standing, something that is unattainable in Taylor's radical egalitarianism.

Gerald Paske (1989) later responded to Taylor's views, arguing (cogently) that nonsentient beings lack a point of view and (less cogently) that inanimate objects such as stalactites also have a good of their own, but he conceded that this is metaphorical talk, not to be taken literally in such cases. Thus Paske's claim that talk of the good of plants and of that of inanimate objects having comparable senses is unconvincing, and fails to undermine Taylor's biocentrism.

Some of the biocentrist conclusions of Attfield's "The Good of Trees" were endorsed by Gary E. Varner (1990). Varner added criticisms of Routley's thought experiment but seemed unaware that the version of this argument presented in Attfield's 1983 book was immune to several of these criticisms and that his criticisms of appeals to thought experiments had also been answered in Attfield's article "Methods of Ecological Ethics" (1983). In a later essay (2002) Varner returned to an ingenious defense of the intrinsic value of nonsentient creatures, citing further thought experiments and ably distancing his biocentrism from the versions advocated by Schweitzer, Gandhi, and Taylor. Although Varner has acknowledged problems for these thought experiments (see his 2003 review of Nicholas Agar's *Life's Intrinsic Value*), they are arguably defensible ones.

STERBA'S BIOCENTRISM

James Sterba has defended a different kind of biocentrism that involves a commitment to equality of individual creatures of whatever species (as it does for Taylor). Sterba recognizes that such a stance generates a dilemma, for our practical principles will apparently either be consistent but intolerable through forbidding human self-defense, or will allow human self-defense but will conflict with consistent biocentrism. He advances fundamental species-neutral principles that allow any species to resort to self-defense in certain circumstances. Sterba presents some quite cogent principles that authorize self-defense. But some have doubted whether his thesis coheres without a recognition of the difference made by different interests and capacities of different creatures, or whether, in the absence of a justification through the consequences of action, such principles can be reliably identified merely on a formal basis.

Besides furnishing some cogent interspecies principles (Sterba 1998, pp. 363–364), Sterba introduces a valuable discussion of the difficulties involved in extending biocentrism to ecosystems. Given the widespread

abandonment of belief in the balance of nature on the part of ecologists, and a concomitant recognition that disequilibrium is as much the norm as equilibrium, nothing in particular can be recognized as good for ecosystems, even if they can be identified as such in the first place. Yet these problems for ecocentric theories leave biocentrism unscathed. Whether or not Sterba's radically egalitarian ideas are cogent enough, biocentrism in general is more defensible to the extent that it is based on equal consideration for equal interests. Such biocentrism needs to be allied to a defensible interhuman ethic such as practice consequentialism; such an ethical system has been presented and defended in *Value, Obligation and Meta-Ethics* (Attfield 1995) and in *Environmental Ethics* (Attfield 2003).

OBJECTIONS TO BIOCENTRISM

Among objections to biocentrism, Paske's observation that nonsentient creatures lack a point of view was developed by Singer (1993) into the claim that they therefore do not matter in themselves (lack moral standing); Bernard Williams has denied that their interests amount to morally relevant claims (1995). Williams's assertion is hardly an argument, however, and Singer's view accords undue importance to subjectivity as a requirement of moral standing and conflicts with the arguments of Goodpaster, with most people's responses to Goodpaster, and to the thought experiments of Routley, Scherer, and Varner.

Bryan Norton (1991) has argued that nonanthropocentric stances such as biocentrism are redundant because sophisticated anthropocentrism supports the same policies. Biocentrists counter that the recognition of nonhuman interests provides not only stronger reasons for policies of humaneness, compassion, and preservation, but also provides reasons for preserving those species that are of no current concern to humans (for example, those that have not yet been discovered).

The most common objection to objectivist biocentrism (as well as to other forms of objectivist nonanthropocentrism) is the suggestion that all judgments of value, however nonanthropocentric in content, are still anthropogenic (Callicott 1992) because they depend on human valuation, and there can be no value in the absence of valuers; this kind of biocentrism might be labeled "weak biocentrism." Even if argument were granted, it would not affect biocentrism at the normative level but only on the level of human judgments. But there is reason to doubt that things have value only because people decide that they do (Attfield 1991b, 1993a); *valuable* does not mean "valued" but applies to what there is reason to value, whether or not anyone values it; and it is implausible that nothing had value (or, in the case of pain, the

opposite of value) until humanity (or possibly until intelligent vertebrates) first appeared and began making judgments. (Could birds have lacked value in the days of archaeopteryx and acquired it only when first appreciated by primates?) Normative biocentrism claims that the good of living creatures supplies interpersonal reasons for action (some of them nonderivative); such a claim would make it reasonable to treat ethical judgements not as mere expressions of human valuing but as having truth values of the kind widely recognized as belonging both to moral and to value discourse; indeed, there is as much reason to be a realist about intrinsic value as there is for moral matters in general. Hence biocentrists can consistently and reasonably be resolute metaethical realists, even though their normative stance (biocentrism) does not hang upon this affiliation to realism.

SEE ALSO *Animal Ethics; Deep Ecology; Last Man Arguments; Naess, Arne; Norton, Bryan; Singer, Peter; Taylor, Paul.*

BIBLIOGRAPHY

- Agar, Nicholas. 2001. *Life's Intrinsic Value*. New York: Columbia University Press.
- Attfield, Robin. 1983. "The Good of Trees." *Journal of Value Inquiry* 15: 35–54.
- Attfield, Robin. 1983. "Methods of Ecological Ethics." *Metaphilosophy* 14(3, 4): 195–208.
- Attfield, Robin. 1991a. *The Ethics of Environmental Concern*. 2nd edition. Athens: University of Georgia Press.
- Attfield, Robin. 1991b. "Postmodernism, Value and Objectivity." *Environmental Values* 10: 145–162.
- Attfield, Robin. 1994. *Environmental Philosophy: Principles and Prospects*. Aldershot, Hampshire, UK: Ashgate.
- Attfield, Robin. 1995. *Value, Obligation and Meta-Ethics*. Amsterdam and Atlanta, GA: Editions Rodopi.
- Attfield, Robin. 2003a. *Environmental Ethics: An Overview for the Twenty-First Century*. Cambridge, UK: Polity Press.
- Attfield, Robin. 2003b. "Biocentric Consequentialism, Pluralism and 'the Minimax Implication': A Reply to Alan Carter." *Utilitas* 15(1): 76–91.
- Attfield, Robin. 2005. "Biocentric Consequentialism and Value-Pluralism: A Response to Alan Carter." *Utilitas* 17(1): 85–92.
- Callicott, J. Baird. 1992. "Rolston on Intrinsic Value: A Deconstruction." *Environmental Ethics* 14: 129–143.
- Carter, Alan. 2001. "Review of Robin Attfield, *Ethics of the Global Environment*." *Mind* 110: 149–153.
- Carter, Alan. 2005. "Inegalitarian Biocentric Consequentialism, the Minimax Implication and Multidimensional Value Theory: A Brief Proposal for a New Direction in Environmental Ethics." *Utilitas* 17(1): 62–84.
- Feinberg, Joel. 1974. "The Rights of Animals and Unborn Generations." In *Philosophy and Environmental Crisis*, ed. William T. Blackstone. Athens: University of Georgia Press.
- Gandhi, Mahatma. 1958. *The Collected Works of Mahatma Gandhi*. Ahmedabad, India: Navajivan Trust.
- Goodpaster, Kenneth E. 1978. "On Being Morally Considerable." *Journal of Philosophy* 75: 308–325.
- Gruzalski, Bart. 2002. "Gandhi's Contributions to Environmental Thought and Action." *Environmental Ethics* 24(3): 227–242.
- Hare, R. M. 1972. *Essays on the Moral Concepts*. New York: Macmillan.
- Naess, Arne. 1973. "The Shallow and the Deep, Long-Range Ecology Movement: A Summary." *Inquiry* 16: 95–100.
- Norton, Bryan G. 1991. *Toward Unity Among Environmentalists*. Oxford, UK: Oxford University Press.
- Paske, Gerald H. 1989. "The Life Principle: A (Metaethical) Rejection." *Journal of Applied Philosophy* 6(2): 219–225.
- Scherer, Donald. 1982. "Anthropocentrism, Atomism, and Environmental Ethics." *Environmental Ethics* 4(2): 115–123.
- Schweitzer, Albert. 1932. *The Philosophy of Civilisation*, trans. C. T. Champion. 2nd edition. London: A. & C. Black.
- Singer, Peter. 1999. *Practical Ethics*. 2nd edition. Cambridge, UK: Cambridge University Press.
- Sterba, James. 1998. "A Biocentrist Strikes Back." *Environmental Ethics* 20(4): 361–376.
- Taylor, Paul W. 1981. "The Ethics of Respect for Nature." *Environmental Ethics* 3(3): 197–218.
- Taylor, Paul. 1986. *Respect for Nature: A Theory of Environmental Ethics*. Princeton, NJ: Princeton University Press.
- Thompson, Janna. 1990. "A Refutation of Environmental Ethics." *Environmental Ethics* 12(2): 147–160.
- Varner, Gary E. 1990. "Biological Functions and Biological Interests." *Southern Journal of Philosophy* 27: 251–270.
- Varner, Gary E. 2002. "Biocentric Individualism." In *Environmental Ethics: What Really Matters, What Really Works*, ed. David Schmidtz and Elizabeth Willott. Oxford, UK: Oxford University Press.
- Varner, Gary E. 2003. "Review of Nicholas Agar, *Life's Intrinsic Value*." *Environmental Ethics* 25(4): 413–416.
- Williams, Bernard. 1995. "Must a Concern for the Environment Be Centred on Human Beings?" In *Making Sense of Humanity and Other Philosophical Papers 1982–1993*. Cambridge, UK: Cambridge University Press.

Robin Attfield

BIOCULTURAL AND LINGUISTIC DIVERSITY

Three interrelated factors—human language, culture, and the inhabited ecosystems—have helped to shape the evolution of the human species. In the 1990s, numerous studies demonstrated correlations between biological and linguistic diversity, and suggested that these correlations provide evidence about the coevolution of human groups with their local ecosystems.

Humans interact with their environment, modifying it and developing specialized knowledge about it. In order to convey ecological knowledge and practices, humans have also developed specialized ways of talking about the flora, fauna, and ecosystems. The continued use of these local, coevolved languages promotes, in turn,