BIBLIOGRAPHY

- "Antarctic Treaty." 1959, 1961. *United States Treaties and Other International Agreements*, vol. 12. Washington, DC: U.S. Government Printing Office, 794.
- "Antarctic Treaty, Agreed Measures for the Conservation of Antarctic Fauna and Flora." 1964. *United States Treaties and Other International Agreements*, vol. 17. Washington, DC: U.S. Government Printing Office, 996.
- "Antarctic Treaty, Convention for the Conservation of Antarctic Seals." 1972, 1978. *United States Treaties and Other International Agreements*, vol. 29. Washington, DC: U.S. Government Printing Office, 441.
- "Antarctic Treaty, Convention on the Conservation of Antarctic Marine Living Resources." 1980, 1982. *United States Treaties and Other International Agreements*, vol. 33. Washington, DC: U.S. Government Printing Office, 3476.
- "Antarctic Treaty, Convention for the Regulation of Antarctic Mineral Resource Activities." 1988. *International Legal Materials*, vol. 27. Washington, DC: American Society of International Law, 859.
- "Antarctic Treaty, Protocol on Environmental Protection to the Antarctic Treaty, Madrid." 1991, 1998. *International Legal* Materials, vol. 30. Washington, DC: American Society of International Law, 1455
- Hall, Colin Michael, and Margaret E. Johnston, eds. 1995. Polar Tourism: Tourism in the Arctic and Antarctic Regions. New York: John Wiley.
- International Association of Antarctica Tour Operators. 1996. "Code of Conduct for Visitors to the Antarctic." Available from http://www.iaato.org.
- Johnson, Michael. 2006. "Liability for Environmental Damage in Antarctica: The Adoption of Annex VI to the Antarctic Environment Protocol." Georgetown International Environmental Law Review 19: 33–55.
- Joyner, Christopher C. 1998. Governing the Frozen Commons: The Antarctic Regime and Environmental Protection. Columbia: University of South Carolina Press.
- National Research Council, Polar Research Board. 1993. Science and Stewardship in the Antarctic. Washington, DC: National Academy Press.
- Roberts, B. B. 1977. "Conservation in the Antarctic."

 Philosophical Transactions of the Royal Society of London, Series
 B 279(963): 97–104.
- Rolston, Holmes, III. 2000. "Environmental Ethics on Antarctic Ice." *Polar Record* 36(199): 289–290.
- Rolston, Holmes, III. 2002. "Environmental Ethics in Antarctica." *Environmental Ethics* 24: 115–134.
- Rudolph, Emanuel D. 1970. "Conserving the Antarctic Terrestrial Ecosystem." *Biological Conservation* 3: 52–54.
- Sánchez, Rodolfo Andrés, and Ewan McIvor. 2007. "The Antarctic Committee for Environmental Protection: Past, Present, and Future." *Polar Record* 43: 239–246.
- Stonehouse, Bernard. 2000. The Last Continent: Discovering Antarctica. Norfolk, UK: SCP Books.

Holmes Rolston III

ANTHROPOCENTRISM

Literally defined as "human-centeredness," anthropocentrism is for many environmental philosophers the ethical attitude the field was created to overcome. The critique of anthropocentric assumptions and moral judgments and their supplementation with nonanthropocentric (i.e., biocentric or ecocentric) commitments have driven much environmental ethical theorizing since the academic founding of the field in the 1970s. The critique of anthropocentrism, however, is not seen as a purely intellectual task by environmental philosophers. Most theorists identify the militantly and exclusively anthropocentric worldview as the root cause of environmental problems such as species extinction, the loss of natural areas and wilderness, and the general decline of environmental quality. As a consequence, the rejection of anthropocentrism has become the hallmark of environmental ethics since the 1980s, although not all environmental philosophers believe that an exclusively anthropocentric orientation necessarily leads to the destruction of wild species and ecosystems. For these dissenting voices in the field, a sufficiently reformed and enlightened anthropocentrism not only is capable of motivating a strong, effective environmental ethic, it is defensible as a superior approach to moral, ontological, and policy questions. With global climate change eclipsing all other environmental concerns, anthropocentrism became ascendant in environmental ethics early in the twenty-first century.

Philosophically, anthropocentrism may be understood in ethical, ontological, and epistemological terms. As an ethical view anthropocentrism refers to the explicitly stated or implied claim that only human beings have intrinsic value; all other natural beings and things have only instrumental value, and human interests thus always trump the interests of nonhumans and the environment. This is an evaluative and priority judgment that many nonanthropocentric philosophers believe reflects an arbitrary bias. As an ontological view, anthropocentrism refers to the position, sometimes identified as Aristotelian or Thomistic, in which humans are seen as the center of the universe or the ends of creation. Typically, environmental philosophers conflate the ontological and ethical positions in their critiques as well as in their positive nonanthropocentric proposals even though, as Tim Hayward (1998) pointed out, ethical anthropocentrism does not necessarily entail ontological anthropocentrism and vice versa. Indeed, most secular anthropocentric environmental philosophers, such as Bryan Norton and Andrew Light, are not ontological anthropocentrists, publicly accepting an evolutionary account of human origins in which Homo sapiens is not regarded as an ontologically privileged species. However, many self-identifying Christian, Jewish, and Islamic anthropocentric environmental philosophers are both ontological and ethical anthropocentists, grounding the latter type of anthropocentrism in the former. As an epistemological view, anthropocentrism is tautological: All human values are human values, including the intrinsic value that ethical nonanthropocentrists ascribe to nature. Thus, no ethical nonanthropocentrist can be a self-consistent nonanthropocentrist, although this truism often is overlooked or denied in the heat of the anthropocentrism -nonanthropocentrism debate.

Terminologically, anthropocentrism sometimes is confused with related words that crop up in discussions about the human-nature relationship, especially the terms anthropomorphism and anthropogenic. The first term refers to the practice of ascribing uniquely human attributes to nonhuman beings or entities (e.g., the human traits given to the animal characters in the Disney film Bambi and in Kenneth Grahame's book The Wind in the Willows). The second term simply means "human-caused" rather than produced by natural forces, as in anthropogenic climate change.

Anthropocentrism as it is commonly understood in environmental ethics and philosophy refers to the view in which nonhuman nature is valued primarily for its satisfaction of human preferences and/or contribution to broader human values and interests. Another way to put this is that in the anthropocentric worldview, individual plants and animals, populations, biotic communities, and ecosystems are accorded only instrumental, not intrinsic, value; Eugene Hargrove (1992) and Ben Minteer (2001) have given alternative readings.

ENVIRONMENTAL ETHICS AS ANTIANTHROPOCENTRISM

One of the most significant influences on the rise of the antianthropocentric agenda in environmental ethics has been the 1967 essay "The Historical Roots of Our Ecologic Crisis" by the historian Lynn White, Jr., in the magazine Science. White's article proved controversial mostly because of its harsh assessment of the environmental ethic embedded in the Judeo-Christian tradition. According to White, the creation account in Genesis placed humans in a superior ontological position: Man was created separately from the rest of Creation, and he alone was given "dominion" over the creatures of the earth and commanded to "subdue" them and the earth. White's "despotic" reading of Genesis therefore emphasized the divine sanction of human control and mastery over nature. Furthermore, his provocative remark that except for Zoroastrianism Christianity is "the most anthropocentric religion the world has ever seen" (White 1967, p. 1205) drove home the point that the humancentered outlook of the dominant Western religion was ultimately responsible for overpopulation, species loss, air and water pollution, and other environmental ills. Such dilemmas were ultimately the product of deep cultural

and religious beliefs about the proper place of humans on the earth, White concluded, and only a rethinking of the "axioms" of Western culture (i.e., an interrogation and rejection of ontological anthropocentrism) would enable humans to adopt a more harmonious relationship with the natural world.

White's argument, especially his identification of anthropocentrism as the cause of the ecological crisis, had a strong influence on the work of environmental ethicists in the subsequent decades. Indeed, nonanthropocentric environmental philosophers have focused most of their attention since the appearance of White's paper on discrediting both ontological and ethical anthropocentrism as a philosophical attitude toward nature and constructing an alternative worldview and ethical system that would recognize the intrinsic as well as the instrumental value of nature (Rolston 1975, 1986, 1988, 1994; Taylor 1986; Callicott 1989, 1999; Katz 1997). Many in the field presumably would agree with the nonanthropocentric philosopher J. Baird Callicott, who observed that White's essay is the "seminal paper in environmental ethics" and that after its publication in the late 1960s the "agenda for a future environmental philosophy thus was set" (Callicott 1999, p. 31).

The antianthropocentric (and prononanthropocentric) movement in academic environmental ethics received an early boost in 1973 when Richard Routley (later Sylvan) published the first essay on environmental ethics by an academic philosopher, "Is There a Need for a New, an Environmental Ethic?" in 1973. Just as White attacked primarily ontological anthropocentrism, Routley attacked primarily ethical anthropocentrism. Routley presented his well-known "last man" thought experiment, which became a kind of ethical litmus test separating ethical anthropocentrists from nonanthropcentrists. It was also an exercise that, at least in Routley's and many nonanthropocentrists' view, exposed the failure of conventional anthropocentric ethical systems (e.g., utilitarianism, deontological ethics) to account for environmental harm, especially harm to nonsentient parts of the environment.

Routley claimed that according to the traditional moral principles of the European and North American philosophical tradition, the last man surviving the collapse of the world system would be committing no wrong if he set about destroying every species of animal and plant on the earth that he could. Because only humans (or the satisfaction of human preferences or the fulfillment of human interests) have intrinsic value in traditional Western ethics and no other human is left to be harmed (or have his or her preferences frustrated or interests adversely affected) by the actions of the last man, that man's destructive actions would not run afoul of conventional ethical codes. In other words, if the last

man goes about destroying all nonhuman life on the planet, Western moral philosophy provides no good reason why such wanton destruction could be deemed wrong. To Routley's mind, and similar to White's arguments about the Judeo-Christian tradition, standard Western ethical theory reflects a clear "human chauvinism." Routley was thus able to answer the question posed in his essay's title: A new ethics is needed if people want to be able to condemn individuals and communities morally for driving species to extinction and despoiling natural areas. In addition to a thorough rejection of ontological anthropocentrism, a critique of ethical anthropocentrism—with its exclusive emphasis on human preferences and well-being—is called for, along with the mounting of a nonanthropocentric complement.

Although a strong strain of both ontological and ethical nonanthropocentrism took hold in environmental ethics after the early essays of White and Routley and became the dominant approach in the field in the last quarter of the twentieth century, not all environmental philosophers were convinced that a new "nature-centered" ethic was necessary. John Passmore's Man's Responsibility for Nature (1974), published a year after Routley's paper, was the first book-length treatment of environmental ethics and is significant in part for its rejection of the emerging view that traditional Western philosophical thought is adequate for the resolution of environmental problems. The established (anthropocentric) ethical tradition, Passmore claimed, with its sensitivity to the consequences of human actions and its array of moral principles directing the promotion of genuine and enduring human interests (i.e., those beyond immediate physical and material enjoyment), had far more ethical resources at its disposal than the new environmental "mystics" and "primitivists" understood or appreciated. Among other things, Passmore's early work in the field suggested that environmental ethics might not be synonymous with nonanthropocentrism.

WEAK ANTHROPOCENTRISM AND ENVIRONMENTAL PRAGMATISM

Passmore's denial of the need to inject nonanthropocentric principles into the ethical discussion of humannature relations would gain further play in the field over the ensuing decades. In the 1980s the philosopher Bryan Norton introduced to the discussion what he termed weak anthropocentrism, a broadly humanistic project that distinguished between strong anthropocentrism and a weaker (i.e., less consumptive) variant of instrumentalism. In Norton's project human contact with nature (e.g., outdoor recreation, environmental education, ecotourism) could prompt individuals to question their own and others' ecologically irrational commitments and shape normative ideals affirming human harmony with the environment (Norton 1984). Although a strong anthropocentrist would regard the biological richness of a forest as little more than a storehouse of raw materials to be harvested and measured only in commercial terms, in Norton's view a weak anthropocentrist would value that landscape differently, recognizing its present and future beauty, cultural expressiveness, therapeutic and recreational value, and ability to inspire individuals and communities to care for and protect nature (Norton 1987).

The philosopher Eugene Hargrove (1992) also proposed a version of weak anthropocentrism, though it differed from Norton's in a critical respect. Like Norton, Hargrove acknowledged that environmental value necessarily originates from a human valuer. In effect, Hargrove brought attention to epistemological anthropocentrism and to its logical necessity. Unlike Norton's weak anthropocentrism, however, Hargrove's version included recognition of the intrinsic value of natural objects. Grounding his approach in the naturalistic traditions of nineteenthcentury landscape painting and field naturalism, Hargrove wrote that people may ascribe intrinsic value to the elements of nature they judge to be beautiful or scientifically interesting—just as one might ascribe intrinsic value to a priceless work of art such as the Mona Lisa—even though that ascription is made from a distinctly human point of view and is intimately related to a complex suite of human values (Hargrove 1989).

The anthropocentric approach in environmental ethics received a boost with the emergence of environmental pragmatism in the mid-1990s, a philosophical movement drawing from both the substance and the spirit of classical American philosophy, particularly the work of Charles Sanders Peirce, William James, and John Dewey, who adamantly opposed the notion of intrinsic value whether ascribed to nature or to anything else (Light and Katz 1996). Ben Minteer (2001), however, has argued that Dewey did recognize a form of noninstrumental value (if not exactly intrinsic or final value) in his overall logic of moral inquiry. Pragmatists in environmental ethics for the most part retain the anthropocentric orientation of the historical American pragmatists and endorse a broad instrumentalism in which nonhuman nature is valued for its contribution to a wide range of human interests, such as those described above in Norton's work. Many environmental pragmatists argue that this reformed or liberal anthropocentrism not only is a more philosophically sound approach to environmental ethics but has greater political and policy appeal inasmuch as most people are unreflectively anthropocentric-indeed, many are unreflectively egocentric and ethnocentric-regarding the value of nature and its direct and indirect uses, including nonconsumptive ones, exclusively in terms of human interests (Norton 1995, Minteer and Manning 1999, Light 2002).

THE DEBATE CONTINUES

Despite the growing number of anthropocentric approaches in environmental ethics and the sobering prospect of the impact on humans and human interests of global climate change, nonanthropocentrism is still the dominant philosophical position in the field. Moreover, nonanthropocentric philosophers remain committed to complementing anthropocentric arguments in ethical and policy discourse with nonanthropocentric arguments. Some seem to take an even more extreme view that anthropocentric arguments for nature preservation should be replaced altogether by nobler (as they see it) nonanthropocentric arguments. For example, Holmes Rolston III, one of the founders of academic environmental ethics, has asserted, "Both anthropocentric and anthropogenic values have to come to an end before we can be the best persons. We have to discover intrinsic natural values" (Rolston 1994, p. 166). Similarly, the philosopher Eric Katz has argued that apparently ontological anthropocentric approaches are not only philosophically suspect, they are "imperialistic" and ultimately devastating to the goals of environmental protection. "An anthropocentric worldview," Katz stated, "leads logically to the destruction of the nonhuman natural world" (Katz 1997, p. 183). J. Baird Callicott, in contrast, also a founder of the field and a staunch defender of the nonanthropocentric approach, recognizes that nonanthropocentric values are also human values—that is, he recognizes that there is no alternative to epistemological anthropocentrism—and that the intrinsic value nonanthropocentrists ascribe to nature often must compete with as well as complement the various instrumental values in nature.

In response to the extreme nonanthropocentrism of Katz, anthropocentrists argue that there is no necessary or inevitable linkage between ethical anthropocentrism and ecological destruction. Instead, they claim that it is human arrogance toward nature and a related myopic view of the effects of human actions and their consequences on a broad range of human interests and values that are the culprit, not human-centered values per se. This distinction, which in essence restates the division between strong and weak anthropocentrism, is implicit in White's "Historical Roots" essay but often is neglected by nonanthropocentric environmental ethicists who have chosen to focus on the perceived philosophical flaws of anthropocentrism as a general theory of value (Norton and Minteer 2002). Although the anthropocentricnonanthropocentric debate continues to divide many philosophers, Norton (1991) has proposed that the most

defensible forms of weak anthropocentric and nonanthropocentric arguments actually "converge" on a similar policy agenda, an argument that would seem to lower the practical stakes of the dispute, if not its philosophical import (Minteer forthcoming). Norton's convergence hypothesis, however, remains contested by nonanhropocentrists, and the debate continues.

SEE ALSO Anthropomorphism; Callicott, J. Baird; Hargrove, Eugene; Judaism; Norton, Bryan; Passmore, John Arthur; Sylvan, Richard; White, Lynn, Jr.

BIBLIOGRAPHY

- Callicott, J. Baird. 1989. In Defense of the Land Ethic: Essays in Environmental Philosophy. Albany: State University of New York Press.
- Callicott, J. Baird. 1999. Beyond the Land Ethic: More Essays in Environmental Philosophy. Albany: State University of New York Press.
- Goodpaster, Kenneth E. 1978. "On Being Morally Considerable." *Journal of Philosophy* 75(6): 308–325.
- Hargrove, Eugene. 1989. Foundations of Environmental Ethics. Englewood Cliffs, NJ: Prentice Hall.
- Hargrove, Eugene. 1992. "Weak Anthropocentric Intrinsic Value." *The Monist* 75: 183–207.
- Hayward, Tim. 1998. Political Theory and Ecological Values. New York: St. Martin's Press.
- Katz, Eric. 1997. Nature as Subject: Human Obligation and Natural Community. Lanham, MD: Rowman & Littlefield.
- Light, Andrew. 2002. "Contemporary Environmental Ethics: From Metaethics to Public Philosophy." *Metaphilosophy* 33(4): 426–449.
- Light, Andrew, and Eric Katz, eds. 1996. Environmental Pragmatism. London and New York: Routledge.
- Minteer, Ben A. 2001. "Intrinsic Value for Pragmatists?" Environmental Ethics 23: 57-75.
- Minteer Ben A., ed. 2009. Nature in Common? Environmental Ethics and the Contested Foundations of Environmental Policy. Philadelphia: Temple University Press.
- Minteer, Ben A., and Robert E. Manning. 1999. "Pragmatism in Environmental Ethics: Democracy, Pluralism, and the Management of Nature." *Environmental Ethics* 21: 191–207.
- Norton, Bryan G. 1984. "Environmental Ethics and Weak Anthropocentrism." Environmental Ethics 6: 131–148.
- Norton, Bryan G. 1987. Why Preserve Natural Variety? Princeton, NJ: Princeton University Press.
- Norton, Bryan G. 1991. *Toward Unity among Environmentalists*. New York: Oxford University Press.
- Norton, Bryan G. 1995. "Why I Am Not a Nonanthropocentrist: Callicott and the Failure of Monistic Inherentism." *Environmental Ethics* 17: 341–358.
- Norton, Bryan G., and Ben A. Minteer. 2002. "From Environmental Ethics to Environmental Public Philosophy: Ethicists and Economists, 1973–Future." In *International Yearbook of Environmental and Resource Economics 2002/2003*, ed. Tom Tietenberg and Henk Folmer. Cheltenham, UK: Edward Elgar.
- Passmore, John. 1974. Man's Responsibility for Nature: Ecological Problems and Western Traditions. New York: Scribner.

Rolston, Holmes III. 1975. "Is There an Ecological Ethic?" Ethics 85(2): 93–109.

Rolston, Holmes III. 1986. Philosophy Gone Wild: Essays in Environmental Ethics. Buffalo, NY: Prometheus Books.

Rolston, Holmes III 1988. Environmental Ethics: Duties to and Values in the Natural World. Philadelphia: Temple University Press.

Rolston, Holmes III. 1994. *Conserving Natural Value*. New York: Columbia University Press, 1994.

Routley, Richard. 1973. "Is There a Need for a New, an Environmental Ethic?" Proceedings, Twelfth World Congress of Philosophy 1: 205–210.

Taylor, Paul. 1986. Respect for Nature: A Theory of Environmental Ethics. Princeton, NJ: Princeton University Press.

White, Lynn, Jr. 1967. "The Historical Roots of Our Ecologic Crisis." *Science* 155: 1203–1207.

Ben A. Minteer

ANTHROPOMORPHISM

The straightforward definition of "anthropomorphism" is the attribution of human qualities or characteristics to nonhuman entities. While correct, this definition does little to express the significance of the term to environmental ethics. Most often, anthropomorphism (personification) has served as a common literary device. For example, in William Blake's "To Autumn," autumn is portrayed as a man who is enjoined to sit, rest, and sing "the lusty song of fruits and flowers." Anthropomorphism is also strongly associated with religion and mythology, notably in the tales of the ancient Greeks, where, for example, the personification of the earth is the goddess Gaia and the renewal of spring is Persephone. Predictably, literary and religious uses of anthropomorphism impact environmental ethics, both directly and indirectly, culminating in contemporary critiques not only of anthropomorphism per se, but also of how anthropomorphism is linked with racism and sexism.

Within a religious context, anthropomorphism has had currency in both the East and West. The God of the ancient Jews was often described in physically human terms as engaging in human activities, for example, wrestling with Jacob in the book of Genesis. The God of Israel was also characterized as expressing very human emotions, such as anger and vengefulness. Sometimes called "anthropotheism," this attribution of human characteristics to divine figures has been controversial. Significantly, Islam generally forbids such images, regarding them as tantamount to idolatry.

Within Hinduism, anthropomorphism is complex. The conception of Saguna Brahman (the Absolute with qualities) suggests the existence of a supreme being with describable humanlike characteristics. According to this

version of Brahman, it makes sense that Hindu gods, such as Vishnu and Shiva, and goddesses, such as Durga and Parvati, would be depicted in human form. Interestingly, much drama alludes to the notion that Hindu gods and goddesses are not to be understood as ultimately human. Durga, for example, may be presented in the form of a woman, but with eight arms. Ganeshe has the body and posture of a human, but the head of an elephant and also many arms. Krishna is often depicted as a young man, but his skin is blue. By contrast, the conception Nirguna Brahman (the Absolute without qualities) emphasizes the Absolute not as a god per se, but as ineffable ultimate reality, the ground of all being uncapturable by any words or images, human or otherwise.

Another aspect of anthropomorphism can be discerned in Hinduism's understanding of reincarnation. This familiar doctrine allows that one may be reborn in the form of various sorts of animals or even insects. It has often been suggested as an explanation for Hindu vegetarianism and injunctions against harming cows and other animals. One may be discouraged from eating animals or even harming insects on the grounds that, despite appearances, such creatures may be the actual or potential reincarnations of human beings. This reasoning is loosely anthropomorphic in the sense that spiritual potential, the human soul or atman, seems to be projected onto the animal or insect. This anthropomorphism may be merely apparent, because the Hindu perspective includes a more nuanced explanation. One is enjoined from harming animals not so much because animals are thought of as being previous or potential humans, but because humans, animals, insects, indeed all beings, are aspects of one and the same undifferentiated ultimate reality (Brahman).

Anthropomorphism has also figured in Western scientific contexts. The eighteenth-century taxonomist Carl Linnaeus, for example, relied heavily on anthropomorphic metaphors in his elaborate classification schemes for plants, overtly basing his system on human reproductive organs and the language of heterosexual intercourse. Also in the eighteenth century, Anton von Leeuwenhoek adopted the view of preformationism and insisted that the human sperm contained a fully formed human in miniature. This sort of anthropomorphism involves projecting a human form onto a substance emitted by a human being.

Within primatology, not surprisingly, anthropomorphic descriptions have been especially common and the subject of much critique, notably from feminists, who objected, for example, to the use of the word "harem" to describe a group of female gorillas (Haraway 1990). In contrast, humans are often unwilling to see human qualities in animals, a kind of opposite of anthropomorphism.