

Biophilia hypothesis

Biophilia hypothesis, idea that humans possess an innate tendency to seek connections with nature and other forms of life. The term *biophilia* was used by German-born American psychoanalyst Erich Fromm in *The Anatomy of Human Destructiveness* (1973), which described biophilia as “the passionate love of life and of all that is alive.” The term was later used by American biologist Edward O. Wilson in his work *Biophilia* (1984), which proposed that the tendency of humans to focus on and to affiliate with nature and other life-forms has, in part, a genetic basis.

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biophilia; nature

The human appreciation for the physical beauty of the natural world is often invoked as evidence of biophilia.

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The human relationship with nature

Anecdotal and qualitative evidence suggests that humans are innately attracted to nature. For example, the appearance of the natural world, with its rich diversity of shapes, colours, and life, is universally appreciated. This appreciation is often invoked as evidence of biophilia. The symbolic use of nature in human language, in idioms such as “blind as a bat” and “eager beaver,” and the pervasiveness of spiritual reverence for animals and nature in human cultures worldwide are other sources of evidence for biophilia. Such spiritual experience and widespread affiliations with natural metaphors appear to be rooted in the evolutionary history of the human species, originating in eras when people lived in much

closer contact with nature than most do today. Human divergence from the natural world appears to have occurred in parallel with technological developments, with advances in the 19th and 20th centuries having the most significant impact, fundamentally changing human interactions with nature. In its most literal sense, this separation was made possible by the construction of enclosed and relatively sterile spaces, from homes to workplaces to cars, in which modern humans were sheltered from the elements of nature and in which many, particularly people living in more-developed countries, now spend the majority of their time.

Some of the most powerful evidence for an innate connection between humans and nature comes from studies of biophobia (the fear of nature), in which measurable physiological responses are produced upon exposure to an object that is the source of fear, such as a snake or a spider. These responses are the result of evolution in a world in which humans were constantly vulnerable to predators, poisonous plants and animals, and natural phenomena such as thunder and lightning. Fear was a fundamental connection with nature that enabled survival, and, as a

result, humans needed to maintain a close relationship with their environment, using sights and sounds as vital cues, particularly for fight-or-flight responses.

Biophilia and conservation

Genes that influence biophilia have not been identified, and it is suspected that the increased dependence of the human species on technology has led to an attenuation in the human drive to connect with nature. Wilson and others have argued that such declines in biophilic behaviour could remove meaning from nature, translating into a loss of human respect for the natural world. In fact, the loss of desire to interact with the natural world, resulting in a decreased appreciation for the diversity of life-forms that support human survival, has been cited as a potential factor contributing to environmental destruction and the rapid rate of species extinction. Thus, reestablishing the human connection with nature has become an important theme in conservation.

In *Biophilia*, Wilson introduced a conservation ethic based on multiple dimensions of the innate relationship humans share with nature. His notion of environmental stewardship drew on various concepts, including the practical dependence of humans on nature, which centres on the ecological services (e.g., clean water and soil) nature provides; the satisfaction derived from direct interaction with nature, such as through exploration and development of outdoor skills; the physical appeal of nature, evident in its role as a source of inspiration and peace; and the human attachment to nature in the form of emotional connections to landscapes and animals.

Biophilia and technology

Biophilia has been explored by researchers in a wide range of fields, and, as a result, its meaning and significance have been variously interpreted. Juxtaposed to the notion that biophilia competes with the human technological drive is the notion that technology is in itself an extension of human evolution and biophilia. Both perspectives were offered in *The Biophilia Hypothesis* (1993), a work coedited by Wilson and American social ecologist Stephen R. Kellert. Among the collection of views the work presented were those of American biologists Lynn Margulis and Dorion Sagan and Indian ecologist Madhav Gadgil, who considered the possibility that the human attraction to other life-forms is reflected in the diversity of technological developments that exist in the world today. Some of these technologies, including those employed in molecular biology and genetic engineering, have enabled scientists to develop entirely new forms of life, with which humans are wholly fascinated. The idea that technology feeds the human biophilic drive also finds support in the search for life on other planets (*see* extraterrestrial life).

Nature and health

Regardless of the extent to which individuals feel or perceive biophilia, research has indicated that simply spending time in nature is beneficial for human health. In one study, persons who spent even just two hours per week interacting with nature reported greater satisfaction and better health than persons who spent less time in

natural environments. Among adults, spending time in natural environments is associated with improved mental and spiritual health; for children, being out in nature has been found to encourage physical activity and play.

Kara Rogers

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