

A [sample entry](#) from the

Encyclopedia of Religion and Nature

(London & New York: Continuum, 2005)

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Indeed, similar to other philosophies (cf. Schelling or Bergson), it is the *becoming* and not the *being* which is essential for Prigogine's theory. Therefore, he is critical of the belief in cosmic harmony or eternal laws and looks at the universe as always endangered, fragile, and uncertain. This attitude brings Prigogine in opposition both to scientists, who strive for a simple structured "Grand Unified Theory" (Steven W. Hawking, for instance, whom Prigogine sees as clinging to the old paradigm of "being"), and to teleological models prominent in New Age science. There is no "telos," Prigogine argues: instead of being a simple consequence of the present, future must be addressed as a lively process with a cornucopia of possibilities.

The theory of dissipative structures and the interdependence of natural and social subsystems – hence, the entanglement of mind and matter in self-organizing systems – leads to the assumption that small systems are able to influence the overall structure of nature and the universe. Humankind and even the individual are no longer passive objects but acknowledge their responsibility and power to influence the whole system. This in particular has attracted New Age thinkers who at the same time played down the more disconcerting features of Prigogine's theory, like his refutation of teleological or causal assumptions, which goes along with his notion of contingency and the possibility of failure. Hence, Prigogine has gained a selective reception by authors like Erich Jantsch, Fritjof Capra, David Bohm, and even Marilyn Ferguson, all of whom brought into his theory a more mystical and teleological understanding.

Kocku von Stuckrad

Further Reading

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See also: Bohm, David; Capra, Fritjof; Chaos; Complexity Theory; New Age.

Primate Spirituality

On 14 July 1960 I arrived, for the first time, on the shores of Gombe national park (it was a game reserve then) to learn about the behavior of wild chimpanzees. Little did I think as I snuggled into my tiny camp-bed on the first night, that I was launching what is today the longest

uninterrupted study of any group of animals, anywhere. Or that the chimpanzees would provide me with information that would help us to redefine our relationship with the rest of the animal kingdom and to redefine what it means to be human.

The great apes (chimpanzees, bonobos, gorillas and orang-utans) have brains more like ours than those of any other living creatures. They are capable of intellectual performances that were once thought unique to us, including recognition of the self, abstraction and generalization, and cross-modal transfer of information. They have a sense of humor. They can experience mental as well as physical suffering. They use more objects as tools for a wider variety of purposes than any other creature except ourselves. And they modify objects for specific purposes, thus showing the beginning of tool-making – an ability once thought to differentiate humans from the rest of the animal kingdom. Moreover, across their range in Africa, chimpanzee communities show different tool-using behaviors which, as they are passed from one generation to the next through observation and imitation, can be defined as primitive cultures. Chimpanzees form affectionate, supportive and enduring bonds between individuals, especially family members, which may persist through life – they can live more than sixty years. They are capable of true altruism. Sadly, also like us, they have a dark side. They are aggressively territorial, and may perform acts of extreme brutality and even wage a kind of primitive war.

Clearly, then, there is no sharp line dividing humans from the rest of the animal kingdom. It is a very blurred line, and differences are of degree rather than kind. This leads to a new respect for the other amazing animal beings with whom we share Planet Earth. We *are* unique, but we are not as different as we used to think. The main difference is, perhaps, our extraordinarily complex intellect, and our ability to communicate ideas by means of a sophisticated *spoken* language, by the use of *words*. It should, however, be noted that apes in captivity can be taught to understand and use more than 300 signs of the American Sign Language as used by the deaf. They can communicate with these signs not only with their trainers but with each other. They can also learn to communicate using a variety of lexigrams and computer symbols. They can use these language skills in many contexts once they have been acquired.

Many theologians and philosophers argue that only humans have "souls." My years in the forest with the chimpanzees have led me to question this assumption. Day after day I was alone in the wilderness, my companions the animals and the trees and the gurgling streams, the mountains and the awesome electrical storms and the star-studded night skies. I became one with a world in which, apart from the change from day to night, from wet season to dry, time was no longer important. And there

were moments of perception that seemed almost mystical so that I became ever more attuned to the great Spiritual Power that I felt around me – the Power that is worshipped as God, Allah, Tao, Brahma, the Great Spirit, the Creator, and so on. I came to believe that all living things possess a spark of that Spiritual Power. We humans, with our uniquely sophisticated minds and our spoken language that enables us to share and discuss ideas, call that spark, in ourselves, a “soul.” Is not the same true for a chimpanzee? Or any other sentient, sapient being? It is most unlikely, however, that any animals other than ourselves care – or are capable of caring – as to whether or not they possess immortal souls!

Often I am asked if the chimpanzees show any signs of religious behavior. I think perhaps their “elemental” displays are precursors of religious ritual. Deep in the forest are some spectacular waterfalls. Sometimes as a chimpanzee – most often an adult male – approaches one of these falls his hair bristles slightly, a sign of heightened arousal. As he gets closer, and the roar of falling water gets louder, his pace quickens, his hair becomes fully erect, and upon reaching the stream he may perform a magnificent display close to the foot of the falls. Standing upright, he sways rhythmically from foot to foot, stamping in the shallow, rushing water, picking up and hurling great rocks. Sometimes he climbs up the slender vines that hang down from the trees high above and swings out into the spray of the falling water. This “waterfall dance” may last for ten or fifteen minutes.

It is not only waterfalls that can trigger displays of this sort. Chimpanzees “dance” at the onset of a very heavy rain, reaching up to sway saplings or low branches rhythmically back and forth, back and forth, then moving forward in slow motion loudly slapping the ground with their hands, stamping with their feet, and hurling rock after rock. Twice I have seen them perform thus during the first violent gusts of wind, presaging a storm. And sometimes a chimpanzee charges slowly along a stream-bed, picking up and throwing rocks as he goes.

Is it not possible that these performances are stimulated by feelings akin to wonder and awe? After a waterfall display the performer may sit on a rock, his eyes following the falling water. What is it, this water? It is always coming, always going – yet always there. What unseen strength suddenly produces the great claps of thunder, the torrential downpour, the savage gusts of wind that bend and sway the chimpanzees clinging to their nests at night? If the chimpanzees had a spoken language, if they could discuss these feelings among themselves, might not they lead to an animistic, pagan worship of the elements?

When I arrived at Gombe I had no scientific training beyond A-level biology. Louis Leakey, who had proposed the study, wanted someone whose mind was “unbiased by the reductionist thinking of most ethnologists” of the early 1960s. Thus it was not until I was admitted to a Ph.D.

program at Cambridge University that I learned that one could only attribute personalities, minds and emotions to *human* animals. It was acceptable to study similarities in the *biology* of humans and other animals, but comparisons should stop there. How fortunate that I had been taught otherwise, throughout my childhood, by my dog, Rusty! The challenge was to express my findings in ways that would, eventually, change the view of human uniqueness that was held not only by scientists, but also by Western philosophers, theologians – and a vast percentage of the general public.

It has been a hard battle, and it has by no means been won. There are still pockets of resistance – resentment even, mostly from those who exploit animals. Because once we accept that we are not the only beings with personalities, feelings, and minds that can know suffering – that there are other sentient, sapient beings out there – all manner of ethical concerns clamor for our attention. If animals have feelings and can suffer, what about those subjected to intensive farming, trapped for fur, hunted for “sport,” experimented on for medical research and the pharmaceutical industry, used in the circus, advertising, and other forms of “entertainment,” the pet industry, and so on? That we also inflict massive suffering on other human beings does not lessen the suffering of the animals, nor does it lessen the cruelty of our behavior toward them. Instead it brutalizes us. How did the world come to be this way?

One explanation for cruel behavior is ignorance. So often people simply do not realize the suffering endured by millions of animals. Other people are brainwashed into accepting cruel practices because, they are told, that is the way it has to be. They become numbed, “all pity choked by custom of fell deed.” Others try to deny what they suspect is going on because they cannot bear the suffering but they lack the will to try to do anything about it, or feel helpless. Or they are inhibited by social pressure, or they do not want to be classified along with “crazy” animal activists.

There is a deeper and more disturbing reason underlying the prevailing view of animals as “things” rather than as individual beings whose lives have value in and of themselves, beyond their potential value to humans. In the original Hebrew text of Genesis chapter 1 verse 26 God gave man “v’yirdu” over his creation, and this has been translated as “dominion.” But many Hebrew scholars believe that the true meaning of the word is to “rule over,” as a wise king rules his subjects, “with care and respect.” A sense of responsibility and enlightened stewardship is implied. St. Francis understood. But throughout the Judeo-Christian world today animals are typically regarded as mere *things*, to do with as we will so long as it is for, or might be for, human good.

This attitude is so often fostered in our children. I was lucky, for my early fascination with animals, common to

most children, was nurtured by a very perceptive mother. When I was 18 months old she found me in bed with a handful of earthworms. Instead of scolding me she just said quietly, "Jane, if you keep them here they'll die. They need the earth." I gathered up the worms and toddled with them into the garden. Thus her gentle wisdom guided my early exploration of the animal world. And I was taught that most important lesson – respect for all forms of life.

Children quickly learn from those around them, especially from those they love, and those they admire. From an early age children are attracted to animals and easily learn to be kind to them. But they can also learn to treat animals with indifference or cruelty. In most Western households children discover that the animals chosen to share their homes are to be loved but that it is acceptable to kill "pests" – such as insects, rats, and mice. They learn that it's okay to kill animals for food or for their skins. Many learn that it is "manly" to shoot them for sport. And children are often told that animals don't have feelings like ours, that they don't feel pain in the same way. This is how teachers persuade sensitive students to kill and dissect an animal. Thus our children typically come to accept the status quo. Only a few have the perspicacity or the courage to protest the system.

Nowhere is our lack of stewardship seen so clearly as in the way in which we are systematically destroying the natural world. The Western materialistic lifestyle is spreading throughout the planet as a result of globalization. In the wealthier sections of society there is terrible over-consumption, which has led to unprecedented, unsustainable demands on decreasing natural resources. More and more forests are cut down and soil erosion and desertification follow. More and more pollutants are released into the environment – synthetic chemicals, fossil-fuel and methane emissions. The protective ozone layer is under attack. Global climate is changing. The ice is melting at the poles. Animal and plant species that took millions of years to evolve are becoming extinct. Floods and draughts, hurricanes and tornadoes, are getting worse. We are tinkering with the genetic make-up of our foods. The threats of nuclear, biological and chemical warfare are horribly real. And environmental destruction and exploitation by the wealthy has led the economically poor people of the developing world into a vicious cycle of overpopulation, poverty, hunger, and disease. Ancient cultures, which allowed people to live in harmony with their environment, are being swept away.

In this frightening world we are losing our old connections with Mother Earth, connections so important for our psychological development and spiritual well-being. When we destroy or pollute areas of wilderness we are harming not only the ecosystem, but also the individual animal beings who live there. From their perspective we are committing acts of terrorism.

I went past a beautiful wooded area just last week and

saw a sign board announcing that it had been sold. The trees would soon be gone, replaced by houses and tarmac and lawns spread with pesticides, adding to the urban sprawl. Into my head came the words:

This land has been bought by the Developers.
The small creatures go on with their lives,
Not knowing.

As our numbers increase, and as our technology enables us to destroy and pollute with ever-greater speed, we face losing nature itself. God help us then, for in this world everything is interconnected. We are but one part of a complex web of life, each piece of importance in the scheme of things. And, to our own peril, we are destroying piece after piece. In this changing world, thousands have become spiritually sick, stranded with no sense of meaning or self-worth. They have lost their religion; they have lost God; they have lost hope.

We have indeed come dangerously close to the point of no return. Yet there is still hope. It is only recently that people around the world have admitted and faced up to the terrible environmental and social problems. The human brain has created amazing technology – 100 years ago the idea of people on the moon, for example, would have been considered science fiction. So now, faced with the destruction of life on Earth as we know it, human brains are struggling to find ways in which we can live in greater harmony with the natural world. More and more of us are trying to leave lighter footprints as we move through life – we are beginning to realize the difference it will make if each one of us "walks the talk." And nature is amazingly forgiving: places devastated by us can once more become beautiful if we give them a chance, and animal and plant species on the brink of extinction can, with protection and captive breeding, get another chance. Young people, when they understand the problems and are empowered to help, have enormous energy and enthusiasm as they try to make their world a better place.

There is growing determination to do something to improve the lives of those living in poverty, to rectify the horribly unequal distribution of wealth around the world. More and more young people are questioning the value-system of materialism as they search for meaning in their lives. We have begun to realize that human health, both physical and psychological, is dependent on the health of the planet, that only when we reestablish our connection with the natural world and with the great Spiritual Power, can body and mind, heart and soul, once again function as a whole.

It is good news that the indigenous people are coming into their own. They have endured decades of bitter persecution – they were killed by the hundreds of thousands and their traditions brutally suppressed. Yet against all odds, in spite of the risk of punishment and even death,

many of the elders, the spiritual leaders and shamans, the medicine men and women, secretly held onto their cultures and their beliefs. And now they are joining forces around the globe reaffirming the connectedness of all life and the spiritual power of the Creator. They are reminding us that, as St. Francis said, the winged ones and the finned ones and the four-footed ones are indeed our brothers and sisters, that their lives matter too.

As we enter this twenty-first century, theology and science seem to be entering into a new relationship. Some of the latest thinking in physics, quantum mechanics and cosmology are coming together in a new belief that Intelligence is involved in the formation of the universe, that there is a Mind and Purpose underlying our existence. For my own part, the more science has discovered about the mysteries of life on Earth, the more in awe I have felt at the wonder of creation, and the more I have come to believe in the existence of God.

Jane Goodall

See *also*: Animals; Animism; Cognitive Ethology, Social Morality, and Ethics; Earth Charter; Elephants; Environmental Ethics; Francis of Assisi; Goodall, Jane; Paganism – Contemporary; United Nations' "Earth Summits".

Prince Charles (1948–)

Prince Charles, the Prince of Wales, eldest son of Britain's Queen Elizabeth II and heir to the British throne, is also the future head of the Church of England and thus holds the title "Defender of the Faith." He has been described as a super-ecumenist. His strong friendship with the Afrikaner naturalist Laurens van der Post (1906–1996) resulted in the latter becoming godfather to Charles' eldest son, Prince William. Like van der Post, the Prince of Wales has been influenced by the ideas of Carl Jung. He keeps a dream journal and allows himself to be directed by synchronicity. In March 1977, he visited the tropical jungles of Kenya for three weeks in what has subsequently been described as a period of isolated spiritual initiation.

Prince Charles follows in the tradition of the Royal Family's interest in Spiritualism and spiritual healing. He augments allopathic medicine with homeopathy, and, on 14 December 1982, in his role as President of the British Medical Association, he made a critical noteworthy speech to the society that focused on the sixteenth-century German physician Paracelsus in which he stressed the importance of examining the unorthodox but perhaps divinely inspired consideration of cosmic unity. He lampooned science's estrangement from nature and the allopathic view of the human body as a mere machine. In this talk, he advocated the need to understand illness as a disorder of the total person that involved body, mind and

spirit as well as self-image and one's relation to the cosmos. He suggested that "the whole imposing edifice of modern medicine, for all its breath-taking successes is, like the Tower of Pisa, slightly off balance" (in Dale 1986: 206).

Since the early 1980s, Prince Charles has consistently promoted the development of a holistic and sustainable relationship between humanity, ecological preservation, organic and vegetarian or demi-vegetarian diet, architecture, education and spirituality. In his BBC Radio Four address on 10 May 2000, although framing this talk in a more traditional understanding of a "sacred trust between mankind and our Creator," the Prince echoed the salient features of current nature-religion sentiment. He spoke about the need for "a sacred stewardship of the earth," and he deplored "the prevailing approach which seeks to reduce the natural world to a mechanical system." Recognizing that modern science is forced to rule out the existence of the sacred as a nuisance that can be evaded or at least manipulated, the Prince of Wales argued instead that we need, in place of the science of manipulation, a science of understanding – one that sees science as a part of nature and not something opposed to it. He proclaimed, "We need to rediscover a reverence for the natural world and to understand the reciprocity between God, man and creation." This must be founded upon "humility, wonder and awe over our place in the natural order." Since "the earth is unique, and we have a duty to care for it . . . we must restore the balance between the intuitive and the rational scientific mind."

Prince Charles' appeal speaks to the emergent form of popular spirituality that we find not only in nature religion, New Age and goddess spirituality but also in more innovative developments across the Christian mainstream. The central chord in this appeal and the emergent spirituality it reflects is a denial of a civilization and nature opposition. The Prince of Wales has long emphasized that culture is to be situated *within* the natural and not be posited as something antagonistic to it.

Michael York

Further Reading

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See *also*: Holism; Jung, Carl Gustav; New Age; van der Post, Laurens; World Wide Fund for Nature (WWF).

The Process

The Process Church of the Final Judgement emerged in London in the 1960s, oriented toward four gods: Jehovah, Lucifer, Satan, and Christ. Each represented a different psychological orientation toward nature. Founded by two former Scientologists, Robert and Mary Anne de Grimston,