

Konrad Lorenz

From Wikipedia, the free encyclopedia

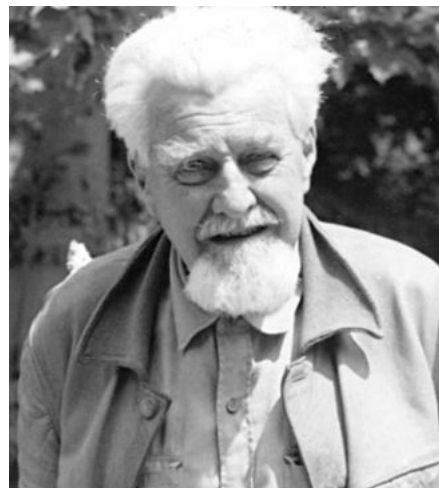
This article incorporates information from the equivalent article on the German Wikipedia.

Konrad Zacharias Lorenz (7 November 1903 – 27 February 1989) was an Austrian zoologist, ethologist, and ornithologist. He shared the 1973 Nobel Prize in Physiology or Medicine with Nikolaas Tinbergen and Karl von Frisch. He is often regarded as one of the founders of modern ethology, developing an approach that began with an earlier generation, including his teacher Oskar Heinroth. Before the outbreak of World War II he joined the National Socialist Party, many of whose views he shared. During the war he worked as a military psychologist doing studies of racial hygiene in occupied Poland. In 1944 he was sent to the Eastern Front where he was captured and spent 4 years as a Soviet prisoner of war. After the war he regretted his membership of the Nazi party, although he continued to espouse views in his writings that have been described as anti-democratic and having racist overtones.^[1]

Lorenz studied instinctive behavior in animals, especially in greylag geese and jackdaws. Working with geese, he rediscovered the principle of imprinting (originally described by Douglas Spalding in the 19th century) in the behavior of nidifugous birds. In later life, his interest shifted to the study of humans in society.

He wrote numerous books, some of which, such as *King Solomon's Ring*, *On Aggression* and *Man Meets Dog* became popular reading. His last work "Here I Am - Where Are You?" is a summary of his life's work and focuses on his famous studies of greylag geese.

Konrad Lorenz



Born	November 7, 1903 Vienna, Austria-Hungary
Died	February 27, 1989 (aged 85) Vienna, Austria
Nationality	Austrian
Fields	Ethology
Notable awards	Nobel Prize in Physiology or Medicine (1973)

Contents

- 1 Biography
- 2 Politics
- 3 Contributions and legacy
 - 3.1 Lorenz's vision of the challenges facing humanity
 - 3.2 Philosophical speculations
- 4 Honours and awards
- 5 Works
- 6 See also
- 7 References
- 8 External links

Biography

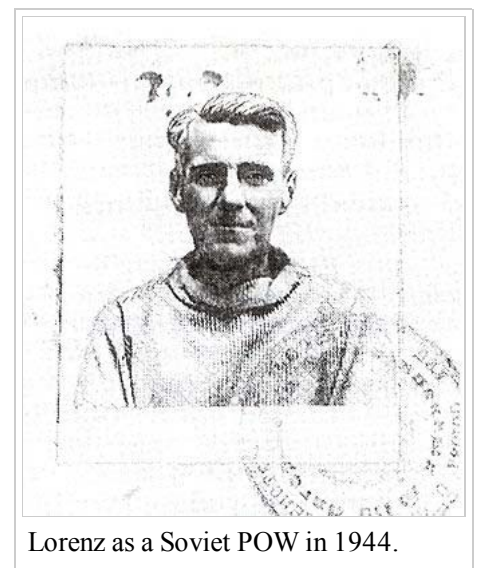
In his autobiographical essay, published in 1973 in *Les Prix Nobel* (winners of the prizes are requested to provide such essays), Lorenz credits his career to his parents, who "were supremely tolerant of my inordinate love for animals," and to his childhood encounter with Selma Lagerlof's *The Wonderful Adventures of Nils*, which filled him with a great enthusiasm about wild geese.

At the request of his father, Adolf Lorenz, he began a premedical curriculum in 1922 at Columbia University, but he returned to Vienna in 1923 to continue his studies at the University of Vienna. He graduated as Doctor of Medicine (MD) in 1928 and became an assistant professor at the Institute of Anatomy until 1935. He finished his zoological studies in 1933 and received his second doctorate (PhD). While still a student, Lorenz began developing what would become a large menagerie, ranging from domestic to exotic animals. In his popular book *King Solomon's Ring*, Lorenz recounts that while studying at the University of Vienna he kept a variety of animals at his parents' apartment, ranging from fish to a capuchin monkey named Gloria.^[2]

In 1936, at an international scientific symposium on instinct, Lorenz met his great friend and colleague Nikolaas Tinbergen. Together they studied geese—wild, domestic, and hybrid. One result of these studies was that Lorenz "realized that an overpowering increase in the drives of feeding as well as of copulation and a waning of more differentiated social instincts is characteristic of very many domestic animals." Lorenz began to suspect and fear "that analogous processes of deterioration may be at work with civilized humanity." This observation of bird hybrids caused Lorenz to believe that interbreeding between different human races might also cause dysgenic effects, and that the Nazi eugenics policies against "race mixing" were therefore scientifically justified.^[3]

In 1940 he became a professor of psychology at the University of Königsberg. He was drafted into the Wehrmacht in 1941. He sought to be a motorcycle mechanic, but instead he was assigned as a military psychologist, conducting racial "studies" on humans in occupied Poznań. The objective was to study the biological characteristics of "German-Polish half-breeds" to determine whether they were psychologically and physically fit to be allowed to reproduce. Those who were judged unfit were sent to concentration camps.^[4]

He was sent to the Russian front in 1944 where he quickly became a prisoner of war in the Soviet Union from 1944 to 1948. In captivity he continued to work as a medic and "got quite friendly with some Russians, mostly doctors." When he was repatriated, he was allowed to keep the manuscript of a book he had been writing, and his pet starling. He arrived back in Altenberg (his family home, near Vienna) "with manuscript and bird intact." The manuscript became his book *Behind the Mirror*. The Max Planck Society established the Lorenz Institute for Behavioral Physiology in Buldern, Germany, in 1950.



Lorenz as a Soviet POW in 1944.

In 1958, Lorenz transferred to the Max Planck Institute for Behavioral Physiology in Seewiesen. He shared the 1973 Nobel Prize in Physiology or Medicine "for discoveries in individual and social behavior patterns" with two other important early ethologists, Nikolaas Tinbergen and Karl von Frisch. In 1969, he became the first recipient of the Prix mondial Cino Del Duca.

Lorenz retired from the Max Planck Institute in 1973 but continued to research and publish from Altenberg and Grünau im Almtal in Austria.

Lorenz died on February 27, 1989, in Altenberg.

Lorenz was also a friend and student of renowned biologist Sir Julian Huxley (grandson of "Darwin's bulldog", Thomas Henry Huxley). Famed psychoanalyst Ralph Greenson and Sir Peter Scott were good friends.

Politics

Lorenz joined the Nazi Party in 1938 and accepted a university chair under the Nazi regime. In his application for membership to the Nazi-party NSDAP he wrote in 1938: "I'm able to say that my whole scientific work is devoted to the ideas of the National Socialists." His publications during that time led in later years to allegations that his scientific work had been contaminated by Nazi sympathies: his published writing during the Nazi period included support for Nazi ideas of "racial hygiene" couched in pseudoscientific metaphors.^{[5][6][7]} After the war Lorenz long denied having been a party member until his membership request turned up, and he also denied having known about the extent of the genocide in spite of having held a post as a psychologist in the Office of Racial Policy.^[8] He also denied having ever held anti-semitic views, but were later shown to have used frequent antisemitic language in a series of letters to his mentor Heinroth.^[9]

In his biography he wrote:

"I was frightened—as I still am—by the thought that analogous genetical processes of deterioration may be at work with civilized humanity. Moved by this fear, I did a very ill-advised thing soon after the Germans had invaded Austria: I wrote about the dangers of domestication and, in order to be understood, I couched my writing in the worst of nazi terminology. I do not want to extenuate this action. I did, indeed, believe that some good might come of the new rulers. The precedent narrow-minded catholic regime in Austria induced better and more intelligent men than I was to cherish this naive hope. Practically all my friends and teachers did so, including my own father who certainly was a kindly and humane man. None of us as much as suspected that the word "selection", when used by these rulers, meant murder. I regret those writings not so much for the undeniable discredit they reflect on my person as for their effect of hampering the future recognition of the dangers of domestication."^[10]

During the final years of his life Lorenz supported the fledgling Austrian Green Party and in 1984 became the figurehead of the Konrad Lorenz Volksbegehren, a grass-roots movement that was formed to prevent the building of a power plant at the Danube near Hainburg an der Donau and thus the destruction of the surrounding woodland.

Contributions and legacy

Lorenz has been called 'The father of ethology', by Niko Tinbergen.^[11] Perhaps Lorenz's most important contribution to ethology was his idea that behavior patterns can be studied as anatomical organs.^[12] This concept forms the foundation of ethological research.^{[11][13]}

Together with Nikolaas Tinbergen, Lorenz developed the idea of an innate releasing mechanism to explain instinctive behaviors (fixed action patterns). They experimented with "supernormal stimuli" such as giant eggs or dummy bird beaks which they found could release the fixed action patterns more powerfully than the natural objects for which the behaviors were adapted. Influenced by the ideas of William McDougall, Lorenz developed this into a "psychohydraulic" model of the motivation of behavior, which tended towards group selectionist ideas, which were influential in the 1960s. Another of his contributions to ethology is his work on imprinting. His influence on a younger generation of ethologists; and his popular works, were important in bringing ethology to the attention of the general public.

Lorenz claimed that there was widespread contempt for the descriptive sciences. He attributed this to the denial of perception as the source of all scientific knowledge: "a denial that has been evaluated to the status



With Nikolaas Tinbergen (left), 1978

of religion."^[14] He wrote that in comparative behavioral research, "it is necessary to describe various patterns of movement, record them, and above all, render them unmistakably recognizable."^[15]

There are three Konrad Lorenz Institutes in Austria; one is housed in his family mansion at Altenberg [1] (<http://www.kli.ac.at/>), and another at his field station in Grünau.

Lorenz, like other ethologists, performed research largely by observation, or when experiments were conducted, they were conducted in a natural setting. Animal welfare advocates like to point out that Lorenz won a Nobel Prize without ever using invasive techniques.

Lorenz's vision of the challenges facing humanity

Lorenz also predicted the relationship between market economics and the threat of ecological catastrophe. In his 1973 book, *Civilized Man's Eight Deadly Sins*, Konrad Lorenz addresses the following paradox:

"All the advantages that man has gained from his ever-deepening understanding of the natural world that surrounds him, his technological, chemical and medical progress, all of which should seem to alleviate human suffering... tends instead to favor humanity's destruction"^[16]

Lorenz adopts an ecological model to attempt to grasp the mechanisms behind this contradiction. Thus "all species... are adapted to their environment... including not only inorganic components... but all the other living beings that inhabit the locality." p31.

Fundamental to Lorenz's theory of ecology is the function of feedback mechanisms, especially negative ones which, in hierarchical fashion, dampen impulses that occur beneath a certain threshold. The thresholds themselves are the product of the interaction of contrasting mechanisms. Thus pain and pleasure act as checks on each other:

"To gain a desired prey, a dog or wolf will do things that, in other contexts, they would shy away from: run through thorn bushes, jump into cold water and expose themselves to risks which would normally frighten them. All these inhibitory mechanisms... act as a counterweight to the effects of learning mechanisms... The organism cannot allow itself to pay a price which is not worth paying". p53.

In nature, these mechanisms tend towards a 'stable state' among the living beings of an ecology:

"A closer examination shows that these beings... not only do not damage each other, but often constitute a community of interests. It is obvious that the predator is strongly interested in the survival of that species, animal or vegetable, which constitutes its prey. ... It is not uncommon that the prey species derives specific benefits from its interaction with the predator species..." pp31–33.

Lorenz states that humanity is the one species not bound by these mechanisms, being the only one that has defined its own environment:

"[The pace of human ecology] is determined by the progress of man's technology (p35)... human ecology (economy) is governed by mechanisms of POSITIVE feedback, defined as a mechanism which tends to encourage behavior rather than to attenuate it (p43). Positive feedback always involves the danger of an 'avalanche' effect... One particular kind of positive feedback occurs when individuals OF THE SAME SPECIES enter into competition among themselves... For many animal species, environmental factors keep... intraspecies selection from [leading to] disaster... But there is no force which exercises this type of healthy regulatory effect on humanity's cultural development; unfortunately for itself, humanity has learned to overcome all those environmental forces which are external to itself" p44.

Lorenz does not see human independence from natural ecological processes as necessarily bad. Indeed, he states that:

"A completely new [ecology] which corresponds in every way to [humanity's] desires... could, theoretically, prove as durable as that which would have existed without his intervention (36).

However, the principle of competition, typical of Western societies, destroys any chance of this:

"The competition between human beings destroys with cold and diabolic brutality... Under the pressure of this competitive fury we have not only forgotten what is useful to humanity as a whole, but even that which is good and advantageous to the individual. [...] One asks, which is more damaging to modern humanity: the thirst for money or consuming haste... in either case, fear plays a very important role: the fear of being overtaken by one's competitors, the fear of becoming poor, the fear of making wrong decisions or the fear of not being up to snuff..." pp45–47.

In this book, Lorenz proposes that the best hope for mankind lies in our looking for mates based on the kindness of their hearts rather than good looks or wealth. He illustrates this with a Jewish story, explicitly described as such.

Lorenz was one of the early scientists who recognised the significance of overpopulation. The number one deadly sin of civilized man in his book is overpopulation, which is what leads to aggression.

Philosophical speculations

In his 1973 book *Behind the Mirror: A Search for a Natural History of Human Knowledge*, Lorenz considers the old philosophical question of whether our senses correctly inform us about the world as it is, or provide us only with an illusion. His answer comes from evolutionary biology. Only traits that help us survive and reproduce are transmitted. If our senses gave us wrong information about our environment, we would soon be extinct. Therefore we can be sure that our senses give us correct information, for otherwise we would not be here to be deceived.

Honours and awards

- 1964 Austrian Decoration for Science and Art
- 1969 Kalinga Prize for the Popularization of Science
- 1972 Gold Medal of the Humboldt Society
- 1973 Nobel Prize in Physiology or Medicine
- 1984 Grand Cross with Star and Sash of the Order of Merit of the Federal Republic of Germany (*Großes Verdienstkreuz mit Stern und Schulterband*)
- 1984 Bavarian Maximilian Order for Science and Art

Works

Lorenz's best-known books are *King Solomon's Ring* and *On Aggression*, both written for a popular audience. His scientific work appeared mainly in journal articles, written in German; they became widely known to English-speaking scientists through the descriptions of it in Tinbergen's 1951 book *The Study of Instinct*, though many of his papers were later published in English translation in the two volumes titled *Studies in Animal and Human Behavior*.

- *King Solomon's Ring* (1949) (*Er redete mit dem Vieh, den Vögeln und den Fischen*, 1949)
- *Man Meets Dog* (1950) (*So kam der Mensch auf den Hund*, 1950)
- *Evolution and Modification of Behaviour* (1965)
- *On Aggression* (1966) (*Das sogenannte Böse. Zur Naturgeschichte der Aggression*, 1963)
- *Studies in Animal and Human Behavior, Volume I* (1970)
- *Studies in Animal and Human Behavior, Volume II* (1971)
- *Motivation of Human and Animal Behavior: An Ethological View*. With Paul Leyhausen (1973). New

York: D. Van Nostrand Co. ISBN 0-442-24886-5

- *Behind the Mirror: A Search for a Natural History of Human Knowledge* (1973) (*Die Rückseite des Spiegels. Versuch einer Naturgeschichte menschlichen Erkennens*, 1973)
- *Civilized Man's Eight Deadly Sins* (1974) (*Die acht Todsünden der zivilisierten Menschheit*, 1973)
- *The Year of the Greylag Goose* (1979) (*Das Jahr der Graugans*, 1979)
- *The Foundations of Ethology* (1982)
- *The Waning of Humaneness* (1987) (*Der Abbau des Menschlichen*, 1983)
- *Here I Am – Where Are You? – A Lifetime's Study of the Uncannily Human Behaviour of the Greylag Goose.* (1988). Translated by Robert D. Martin from *Hier bin ich – wo bist du?*.
- *The Natural Science of the Human Species: An Introduction to Comparative Behavioral Research – The Russian Manuscript (1944–1948)* (1995)

See also

- Animal mobbing behavior
- Cuteness
- Mobbing
- Imprinting (psychology)

References

1. ^ Campbell, Donald T. (1975). "Reintroducing Konrad Lorenz to Psychology". In Evans, Richard I. *Konrad Lorenz: The Man and His Ideas*. New York: Harcourt Brace Jovanovich. p. 106. ISBN 0151472858.
2. ^ Lorenz, Konrad (2007). *King Solomon's Ring* (3rd ed.). London, England.: Routledge. pp. 4–5. ISBN 0-415-26747-1.
3. ^ Klopfer, Peter (1994). "Konrad Lorenz and the National Socialists: On the Politics of Ethology" (<http://escholarship.org/uc/item/50b5r4d6>). *International Journal of Comparative Psychology* **7** (4): 202–208.
4. ^ Deichmann, Ute (1992). *Biologists under Hitler: Expulsion, Careers, Research*. Frankfurt/Main, New York: Harvard University Press. pp. 261–264. ISBN 0674074041.
5. ^ Eisenberg, L. (2005). "Which Image for Lorenz?". *American Journal of Psychiatry* **162** (9): 1760. doi:10.1176/appi.ajp.162.9.1760 (<http://dx.doi.org/10.1176%2Fappi.ajp.162.9.1760>).
6. ^ Sax, Boria (2007). "Konrad Lorenz and the Mythology of Science". In Aftandilian, Dave; et al. *What Are Animals to Us? Approaches from Science, Religion, Folklore, Literature and Art*. Knoxville: U. of Tennessee Press. pp. 269–276. ISBN 157233472X.
7. ^ Sax, Boria (1997). "What is a 'Jewish Dog'?": Konrad Z. Lorenz and the Cult of Wildness". *Society and Animals* **5** (1): 3–21. doi:10.1163/156853097X00196 (<http://dx.doi.org/10.1163%2F156853097X00196>).
8. ^ Klopfer 1994; Deichmann 1992.
9. ^ Klopfer 1994.
10. ^ Autobiography (http://nobelprize.org/nobel_prizes/medicine/laureates/1973/lorenz-autobio.html)
11. ^ ^a ^b Tinbergen, N. (1963). "On aims and methods of ethology". *Zeitschrift für Tierpsychologie* **20** (4): 410–433. doi:10.1111/j.1439-0310.1963.tb01161.x (<http://dx.doi.org/10.1111%2Fj.1439-0310.1963.tb01161.x>).
12. ^ Lorenz, Konrad (1937). "On the formation of the concept of instinct". *Natural Sciences* **25** (19): 289–300. Bibcode:1937NW.....25..289L (<http://adsabs.harvard.edu/abs/1937NW.....25..289L>). doi:10.1007/BF01492648 (<http://dx.doi.org/10.1007%2FBF01492648>).
13. ^ Dawkins, Richard (1982). *The Extended Phenotype*. Oxford: Oxford University Press. p. 2. ISBN 0192860887.
14. ^ Lorenz, Konrad (1979). *The Year of the Greylag Goose*. London: Eyre Methuen. p. 6.
15. ^ Lorenz (1979), p. 7.
16. ^ *Gli otto peccati capitali della nostra civiltà [Civilized Man's Eight Deadly Sins]*. Milano: Adelphi Edizioni. 1974. p. 26. The citation is translated from the Italian version of the book.

External links

- Short Autobiography on the Nobel Foundation website (<http://www.nobel.se/medicine/laureates/1973/lorenz-autobio.html>)
- A chapter from *On Aggression* (1963) (<http://www.marxists.org/reference/subject/philosophy/works/ge/lorenz.htm>)
- Review of Biologists Under Hitler (<http://www.ess.uwe.ac.uk/genocide/reviewstr18.htm>)
- Konrad Lorenz Institutes:
 - Konrad Lorenz Institute for Evolution and Cognition Research in Altenberg
 - Konrad Lorenz Research Station (<http://www.univie.ac.at/zoology/nbs/gruenau>), Grünau im Almtal
 - Konrad Lorenz Institute for Ethology (<http://www.oeaw.ac.at/klivv>)

Retrieved from "http://en.wikipedia.org/w/index.php?title=Konrad_Lorenz&oldid=559798709"

Categories: 1903 births | 1989 deaths | Austrian ornithologists | Austrian Nazis | Austrian Nobel laureates | Columbia University alumni | Ethologists | German military personnel of World War II | Austrian military physicians | Scientists from Vienna | University of Vienna alumni | University of Vienna faculty | University of Königsberg faculty | Austrian zoologists | World War II prisoners of war held by the Soviet Union | Austrian prisoners of war | Members of the Austrian Academy of Sciences | Nobel laureates in Physiology or Medicine | Foreign Members of the Royal Society | Prix mondial Cino Del Duca winners | Members of the Bavarian Maximilian Order for Science and Art | Recipients of the Austrian Decoration for Science and Art | Kalinga Prize recipients | Grand Crosses with Star and Sash of the Order of Merit of the Federal Republic of Germany | Max Planck Society people

-
- This page was last modified on 14 June 2013 at 00:05.
 - Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy.
Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.