

Sociobiology

Robert A. Wilson

Sociobiology developed in the 1960s as a field within evolutionary biology to explain human social traits and behaviours. Although sociobiology has few direct connections to eugenics, it shares eugenics' optimistic enthusiasm for extending biological science into the human domain, often with reckless sensationalism. Sociobiology's critics have argued that sociobiology also propagates a kind of genetic determinism and represents the zealous misapplication of science beyond its proper reach that characterized the eugenics movement. More recently, evolutionary psychology represents a sophistication of sociobiology that attends to the mind as the "missing link" between evolution and behaviour (Cosmides and Tooby 1992, Pinker 1997).

Origins of Sociobiology

Evolutionary biologists have long been interested in explaining the social behaviour of animal species. Subsequently, there is (to adapt Ebbinghaus's phrasing) a "long history" of drawing analogies between animal and human social behaviour stretching back in Western philosophy to at least Aristotle, as well as a "short past" of seeking to explain human behaviour from the perspective of ethology, the general biological study of behaviour (Lorenz 1966).

Sociobiology itself arose in the 1960s and is associated particularly with the entomologist Edward O. Wilson's influential book

Sociobiology: The New Synthesis (1975). Wilson's final chapter of that book applied this approach to human behaviour, with his *On Human Nature* (1978) developing this focus on our own species. Central to this and much other sociobiological work was the earlier work of William Hamilton (1963, 1964), which introduced the concept of kin selection, and that of Robert Trivers (1972), which introduced the idea of reciprocal altruism.

The common idea in these works was that otherwise puzzling social behaviours and traits could be explained in terms of natural selection by focusing on benefits that accrue to individuals, and by understanding those benefits in terms of the survival of genes that they carry. Foremost amongst these are traits and behaviours that at least appear to be evolutionarily altruistic in that they seem to systematically reduce the relative fitness of those who engage in them. For example, the existence of sterile castes of insects (e.g., in bees and in ants), or the presence of sentinels in a flock of birds that increase their own chance of falling prey to a predator while offering a benefit to the flock, are both puzzling from the point of view of individual selection. How would genes favouring such traits and behaviours evolve by natural selection? Hamilton and Trivers tackled this problem, typically called the problem of altruism, by appealing to the benefits that such traits and behaviours have for the survival of relatives—those sharing an altruistic individual's genes in proportion to their degree of relatedness—or for the delayed benefits that reciprocal sacrifice have.

Sociobiology and the Levels of Selection

Explanations of social traits and behaviours that appealed to natural selection earlier in the twentieth-century had helped themselves generously to the idea of group selection: altruistic traits and behaviours survive because they benefit the group, rather than the individual. Due chiefly to the growing influence in the 1970s of George

Williams' *Adaptation and Natural Selection* (1966) and Richard Dawkins' *The Selfish Gene* (1976), the accounts provided by Hamilton and Trivers came to be seen as not only antithetical to group selection but as advocating the gene as some kind of fundamental level at which natural selection operated. On this view, behaviours are both caused principally by genes and evolve for the benefit of genes. A renewal of work on the levels of selection over the past decade or so (Sober and Wilson 1998, Wilson 2005, Okasha 2006) complicates this understanding of the relationship between kin selection and genic selection, and thus of the relationship between sociobiology and the multiple levels at which selection operates.

Controversies Over Sociobiology and their Relevance to Eugenics
This complication is relevant to thinking about the relationship between sociobiology and eugenics because of a common view of each. Sociobiology and eugenics are often characterized as meliorative enterprises based on core, basic science, with resistance to their conclusions turning primarily either on a lack a knowledge of the science or some kind of political squeamishness. But like critiques of eugenics, critiques of sociobiology are often in fact based on a sensitivity to a more nuanced understanding of the relevant science—genetics and psychiatry in the case of eugenics, and evolutionary biology in the case of sociobiology.

While sociobiology's proponents view it chiefly as the extrapolation of general evolutionary principles to human social traits and behaviours, critics have viewed sociobiology as a form of scientism, as resting on superficial categories of traits and behaviour, and as reinforcing problematic political views (Lewontin, Rose, and Kamin 1984, Kitcher 1985). Each of these criticisms has also been leveled against eugenics. The specific form of scientism most important in this context is a genetically deterministic vision of human social behaviour. On this

view, human social behaviours are "fixed by the genes", and this misleadingly simplistic view has been taken to imply that social behaviours, roles, and institutions themselves are evolutionarily inevitable. Rather than developing this criticism further here, I want to underscore a general lesson from joint reflection on sociobiology and eugenics (cf. Kingsland 1988).

Homo sapiens is a biological species, and as such, there are general evolutionary principles, such as those concerning natural selection or inheritance, and biological facts peculiar to the species, that constrain the study of human social behaviour and intergenerational human variation. But precisely how those principles and facts constrain the corresponding sciences, of sociobiology or eugenics, is subject to many vagaries. This starts with the very categories we use to individuate the phenomena being studied. For example, in the case of sociobiology, identifying homosexuality and rape in non-human animals and doing so seeking an understanding of human social behaviour, has been theoretically naïve. In the case of eugenics, relying on folk notions of what sorts of people there are—paupers, the feeble-minded, the unfit—to arrive at social policies to improve human populations suffers from the same naivety. It is not simply that we should issue caution in the embrace of sciences that purport to reveal more about human nature and how to improve it or design social policies that are based on that nature. It is that the value-ladenness of the sciences themselves make contentious even the most basic starting points for such inquiry.

Cite this document (APA):

Wilson, R. (2014, April 29). Sociobiology. Retrieved December 31, 2019, from <http://eugenicsarchive.ca/discover/encyclopedia/535eee477095aa000000025b>

References

Cosmides, Leda and John Tooby (eds.), 1992, *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*. New York: Oxford University Press

Dawkins, Richard, 1976, *The Selfish Gene*. Oxford: Oxford University Press.

Hamilton, William, 1963, "The Evolution of Altruistic Behavior", *American Naturalist* 97: 354-356.

Hamilton, William, 1964, "The Genetical Evolution of Social Behaviour I and II", *Journal of Theoretical Biology* 7: 1-16 and 17-52.

Kingsland, Sharon, 1988, "Evolution and Debates Over Human Progress from Darwin to Sociobiology", *Population and Development Review* 14, Supplement: Population and Resources in Western Intellectual Traditions, pp.167-198.

Kitcher, Philip, 1985, *Vaulting Ambition: Sociobiology and the Quest for Human Nature*. Cambridge, MA: MIT Press.

Lorenz, Konrad, 1966, *On Aggression*. London: Methuen.

Okasha, Samir, 2006, *Evolution and the Levels of Selection*. New York: Oxford University Press.

Pinker, Steven, 1997, *How the Mind Works*. New York: Norton.

R.C. Lewontin, S. Rose, and L.J. Kamin, 1984, *Not In Our Genes: Biology, Ideology, and Human Nature*. New York: Pantheon Books.

Sober, Elliott, and David Sloan Wilson, 1998, *Unto Others: The Evolution and Psychology of Unselfish Behavior*. Cambridge, MA: Harvard University Press.

Trivers, Robert, 1971, "The Evolution of Reciprocal Altruism", *Quarterly Review of Biology* 46: 35-57.

Williams, George, 1966, *Adaptation and Natural Selection*. Princeton, NJ: Princeton University Press.

Wilson, Edward O., 1975, *Sociobiology: The New Synthesis*. Cambridge, MA: Belknap Press.

Wilson, Robert A., 2005, *Genes and the Agents of Life: The Individual in the Fragile Sciences: Biology*. New York: Cambridge University Press.