

Nature Red in Tooth and Claw

Sherrie Lyons revisits *Evolution and Ethics* by Thomas Henry Huxley, Darwin's most energetic defender and the coiner of the word 'agnostic'.

Calling himself 'Darwin's bulldog', Thomas Huxley claimed he was prepared to go to the stake if necessary to defend Darwin's theory of evolution. Nevertheless, he did not think the doctrine of evolution could give us an ethics to live by. Huxley maintained that even if one accepted that evolution has produced creatures with a moral sense such as ourselves, it does not follow that we can look to evolution to define the content of morality. I will argue that Huxley's thoughts on evolution and ethics must be understood in their historical context. Examining Huxley's full body of work demonstrates that understanding nature is key to living a just and moral life. At the same time, he has provided us with one of the clearest articulations of the problem of evolutionary ethics:

"The propounders of what are called the 'ethics of evolution', when the 'evolution of ethics' would usually better express the object of their speculations, adduce a number of more or less interesting facts and more or less sound arguments in favor of the origin of the moral sentiments... by a process of evolution... But as the immoral sentiments have no less been evolved, there is so far, as much natural sanction for the one as the other. The thief and the murderer follow nature just as much as the philanthropist. Cosmic evolution may teach us how the good and the evil tendencies of man may have come about; but, in itself, it is incompetent to furnish any better reason why what we call good is preferable to what we call evil than we had before." (*Evolution and Ethics*, 1893, Barnes & Noble edition, p.47).

Huxley clearly seemed to think it was not possible to develop a system of ethics based on evolution. However, one must look at the development of Huxley's views to fully understand why.

Competing Darwinian Ethics

After the publication of *The Origin of Species* Huxley promoted and defended Darwin's theory more energetically than any other person in the English-speaking world. He was optimistic about the possibilities that evolutionary insight could provide for human society. In the 1860s he argued that the key to successfully playing the game of life was learning the rules of the game, and that those rules were the laws of nature. The game of life was infinitely more difficult and complicated than chess, and the other player was hidden from us, although her playing was always "fair, just, and patient." To learn the rules one must turn to the teacher, who was Nature herself. If people directed their affections and wills "into an earnest and loving desire to move in harmony with [Nature's] laws" this would lead to a just and fair society (*Collected Essays* vol.3, 1898).

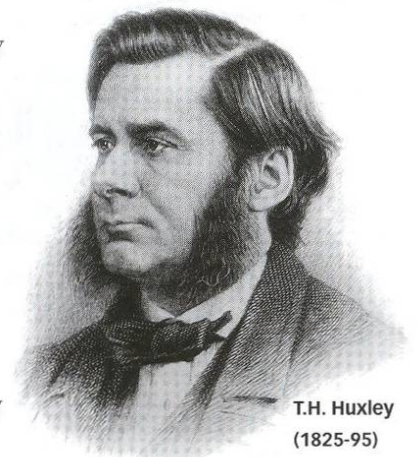
Herbert Spencer also suggested that society should follow nature's laws, but they led him to a very different conclusion – one that was morally repugnant to Huxley. Spencer had articulated the advantages of applying evolutionary theory to social behavior, espousing an ethic that became known as Social Darwinism [see article on p.20]. He also coined the phrase 'survival of the fittest', which Darwin later adopted to encapsulate the

ongoing struggle for existence that resulted in natural selection. Spencer and his followers argued that one's moral obligation should be to promote this struggle for survival in the social realm. Thus, they were against any sort of welfare safety net, such as the Poor Laws, for this only contributed to the survival of the least fit. In a similar vein, William Sumner maintained that struggle and competition was the law of nature: "Nature is entirely neutral: she submits to him who most energetically and resolutely assails her. She grants her rewards to the fittest." (*The Challenge of Facts and Other Essays*, 1914, p.293, ed. A.S. Kelle). If we try and artificially redistribute those rewards, we may lessen the inequalities, but we are rewarding and promoting the survival of the unfit, which will result in the deterioration of society. Here was an ethic that grounded its validity in Darwin's theory. Needless to say, many people could not abide an ethic that, contrary to all common decency, claimed society had no obligation to its less fortunate members.

Huxley had no doubt that humans shared a common ancestor with the apes, but following his general strategy of keeping scientific questions separate from philosophical ones, he did not write on the relationship between ethics and evolutionary theory for many years. However, in 1892 George Romanes endowed a free public lecture to be given by leading intellectuals, inviting Huxley to give the second lecture. Huxley decided to devote his talk to this topic. He responded to the harsh, extreme, individualism of Spencer by claiming that:

"Laws and moral precepts are directed to the end of curbing the cosmic process and reminding the individual of his duty to the community... Let us understand, once and for all that the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it." (*Evolution and Ethics*, p.49)

To put it in terms G.E. Moore would recognize, Huxley attacked evolutionary ethics as committing the 'naturalistic fallacy': just because nature *is* a certain way does not mean nature *ought* to be that way. However, Huxley's critique goes far deeper than this. Implicit in the other versions of evolutionary ethics was the idea that nature ('the cosmic process') is progressive. Huxley denied this. In earlier writings he argued that one of the great strengths of Darwin's theory was that in addition to explaining how organisms change and progress, it also explained how many organisms do *not* progress, and why some even become simpler. Huxley realized that 'fittest'



T.H. Huxley
(1825-95)

did have a (somewhat misleading) connotation of 'best'; but as he correctly pointed out, if the environment suddenly became much cooler, the survival of the fittest would most likely bring about in the plant world a population of more and more humble, relatively stunted organisms. In such an environment, the lichen and diatoms might be the most fit. Furthermore, the strict standard of Darwinian fitness is reproductive success. However, surely no one reasonable would label a mad rapist who successfully impregnated hundreds of women the 'best' member of society. Thus we cannot just assume that applying the principles of evolution to the social realm would result in the progress and improvement of society.

The key to reproductive success is adaptation. The idea of adaptation has been evolutionary theory's greatest strength, but it has also been its greatest weakness, because we can tell an endless number of different adaptation stories. Which explanation should we believe? Cultural biases have strongly influenced the types of stories that have been told, particularly for explaining human evolution. Huxley was simply responding to a particular story of evolution being told at the time. Countering Huxley's hard view of un pitying nature, in *Mutual Aid* (1902) Peter Kropotkin claimed that natural selection promoted group sentiments and characteristics, and that we have a natural sentiment to help each other: "The fittest are the most sociable animals and sociability appears as the chief factor of evolution" (p.58) and "Those mammals which stand at the very top of the animal world and most approach man by their structure and intelligence are eminently sociable" (p.50). Kropotkin's ideas about how to improve society were also diametrically opposed to Spencer's, yet both men claimed that their ethics came

directly out of evolutionary theory. It seems more accurate to say that they read their own social/political views into evolutionary theory. This problem continues to beset evolutionary ethics to the present day, as evidenced by the contentious literature of sociobiology and evolutionary psychology.

Yet the allure of evolutionary ethics is profound. In light of recent work on group selection, altruism, and extensive studies on (non-human) primates, particularly the work of Frans de Waal, the possibility of building an ethics rooted in biology seems more promising. De Waal has argued that we can see the origins of right and wrong in primate behavior. Chimpanzees exhibit such traits as attachment, nurturing, empathy and special treatment of the disabled or injured. Chimpanzee society has its own set of rules, which are internalized and will result in punishment if broken. Chimps have concepts of giving, trading and revenge. They exhibit peace-making behavior and moralistic aggression against violations of reciprocity. Primate behavior not only demonstrates the evolution of ethics, but also shows that the ethics of evolution is not contrary to our own ethical sensibilities (*Good Natured*, 1996).

Huxley also suggested such a possibility in *Man's Place in Nature* as he commented on the commonality of traits between man and beast. He asked, "Is mother-love vile because a hen shows it, or fidelity base because dogs possess it?" (*Collected Essays* vol.3, p.152). Nature is not simply red in tooth and claw, and humans are not fundamentally brutish or noble. We are both – just like our primate cousins and our ancestors, and just as Huxley claimed.

The Ethics In Us

Evolution teaches us that behaviors have evolved to enhance survival, and therefore that our basic ethical instincts are products of the particular natural history of our species. These instincts are deeply rooted: while human behavior is very flexible, it has strong genetic underpinnings. Yet in the ongoing struggle to stay adapted to an ever-changing environment, perhaps our ethical laws might change at the deepest level. Our species might eventually evolve behavioral rules that we now consider morally abhorrent. Does this mean we're doomed to moral relativism: that our principles are neither well-founded or fixed?

Research in both evolution and neurobiology suggests that the answer is no. Unselfish behavior towards one's offspring and larger family has undoubtedly systematically been selected for. Those who look after their children will generally be more successful in having their genes passed on to future generations. This John Maynard Smith dubbed 'kin selection'. Building on the work of J.B.S. Haldane from the 1930s, in the 1960s W.D. Hamilton provided a rigorous mathematical account of how this altruistic behavior could have evolved. Cooperation turns out to be a good survival strategy, just as Kropotkin argued.

Many sociobiologists argue that such altruism is actually self-ish, merely another way of getting one's genes into the next generation. When someone gives up her life to save her child, this could be genetically described as a selfish act; but at the level of intentions or motivation it is an unselfish act. Thus, describing it as genuinely unselfish is appropriate, even if ultimately why people behave altruistically is rooted in kin selection. Stem-





ming from this impulse, people often sacrificially help non-kin, and act unselfishly with no thought of reciprocity or reward.

In *Descartes' Error* (1994), neurobiologist Antonio Damasio provides evidence for the critical role *empathy* plays in rational decision-making. *Mirror neurons*, discovered by G. Rizzolati, V. Gallase and I. Iacoboni, are particular brain cells located in certain primates which fire not only during the performance of certain actions, but also while viewing those same actions being performed by another individual. For example, mirror neurons fire not only when a monkey reaches for a peanut, but while watching another monkey grasp for a peanut. Neurons in the anterior cingulate region of the human brain will respond to the patient being poked with a needle. Some of them will fire equally strongly when the patient watches someone else being poked. V.S. Ramachandran suggested in *The Neurology of Self-Awareness* that by providing the neural substrate for reading another's intentions, mirror cells could play a crucial role in the development of empathy, and in learning through imitation. Ramachandran dubbed such cells 'empathy' or 'Dalai Lama' neurons. They are "dissolving the barrier between self and others. Notice that in saying this one isn't being metaphorical; the neuron in question simply doesn't know the difference between [self] and others" (quote from *Edge: The Third Culture*, www.edge.org, 01.08.07).

These findings suggest we're all hard-wired for empathy and kindness, that it is an essential part of our nature, and thus could provide a solid basis for building a shared moral code. This in turn suggests the possibility of an evolutionary ethics finally free of the many problems that have plagued it. If Huxley were alive today, he would be thrilled with these new findings.

Committed to empirical investigation, he maintained that one must "follow humbly wherever and to whatever abysses nature leads" (in *Life and Letters of Thomas Huxley* for September 23, 1860); and modern research suggests a way out of the abyss of the dark side of human nature, the discovery of our natural empathy endorsing Huxley's view that humanity learning and abiding by nature's rules would result in a just and fair society.

Evolutionary theory continues to provide tremendous insight in our quest to understand brains and behavior. Moral systems are found in every human society: therefore, the tendency to develop them must be integral to human nature. Any evolution-

ary account of our origins must take morality seriously, and we must build it into our theories about human behavior. However, every human thought and action results from a complex interaction of nature and culture, and importantly, nature must be interpreted. Thus, the attempt to build a naturalistic ethics grounded in evolutionary theory remains problematic.

Evolutionary Ethical Inconclusiveness

Huxley wrote that nature was morally indifferent, and was therefore essentially silent or neutral in terms of providing particular moral codes. In his introduction to an earlier reprint of *Evolution and Ethics* (Princeton University Press edition, 1989, J. Paradis and G. Williams eds), evolutionary biologist George Williams claimed that Huxley was right here, but did not go far enough. According to Williams, nature is "evil, cruel, a wicked old witch": nature is grossly immoral, and Williams' entire essay was essentially one example after another of horror stories from nature.

George Williams was the person most responsible for discrediting the idea of group selection, and his views have dominated the thinking of evolutionists for some time. Unlike most sociobiologists, he was firmly against any kind of evolutionary ethics. He agreed with Huxley that the whole progress of civilization is in combating the brute natural, 'cosmic' process. I've offered a different interpretation of Huxley's views, not only in light of his other writings, but also emphasizing that Huxley was reacting against the social Darwinism of his time. Yet Huxley's fundamental message in *Evolutionary and Ethics* is not historically contingent. It is an eloquent and compelling reminder that great caution must be exercised in evaluating any ethical system.

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- Another version of this essay is my Introduction to the Barnes & Noble reprint of T.H. Huxley's *Evolution and Ethics and Other Essays*.