Between the Species

Review of *Science and Ethics*

Bernard Rollin
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Gregory L. Bock
Walters State Community College
greg.bock@ws.edu

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Bernard Rollin is one of the leading voices in the animal rights movement, and while Science and Ethics deals with science more broadly, arguments for the ethical treatment of animals are prominent throughout the book. Of particular interest are the chapters on biotechnology and ethics in which he explores issues ranging from animal cloning to the genetic engineering of Lesch-Nyhan syndrome in mice.

Science and Ethics is an introductory book that would be useful in any science or philosophy course, and it has engaging examples and stories that make it accessible even to lower division undergraduates. For example, Rollin describes the shocking practices once prevalent in veterinary schools like bleeding out dogs and abdominal surgery on cats without anesthesia. When discussing research on humans, he uses several famous cases including the Nazi hypothermia experiments and the Tuskegee syphilis study.

Rollin attacks so-called "scientific ideology," or blind faith in science. As he explains, an ideology is something that hinders critical thinking. He says, "When we refer to a set of beliefs as an ideology, we usually mean that, for the person or group entertaining those beliefs, nothing counts as a good reason for revising those beliefs, and, correlatively, raising questions critical of those beliefs is excluded dogmatically by the belief system" (11). Scientific ideology is, in part, the belief that scientific practices are not subject to ethical evaluation. This is the view that science is value-free, which Rollin fights hard against: "If science is independent of ethics, why not cheat, falsify data, plagiarize, run trials until they come out as you wish them to, fudge, and so on?" (272). Rollin explains that scientific ideology can be traced back to twentieth century logical positivism, which states that only empirically verifiable statements have

meaning. Since ethical statements cannot be tested, ethics is not meaningful on this view, and statements about right and wrong are reduced to statements about the psychological state of the individual uttering them.

Rollin explains how many scientists are blinded by this ideology. They may have never consciously committed to it, but they have imbibed it through the culture. He says, "If one's peer group says uniformly that animal use in research is not a moral issue but a scientific necessity, and one must accept this to receive the requisite education, such a belief becomes incorporated into the cognitive categories one uses to interpret the world" (54). He gives an example of a psychology graduate school requiring its students to break the necks of rats after lab experiments. Objections would be met with the disapproving comment that the student did not have what it takes to be a psychologist. In another example, he describes how at one time most medical schools required students to kill a dog in a lab for the sole reason, apparently, of teaching students to be less compassionate (19).

Scientific ideology conflicts with what Rollin calls "social consensus ethics," which is a set of agreed upon rules that govern social behavior. In general, society leaves professions to conduct their own ethical discussions (professional ethics); however, when a profession fails to do so, society intervenes through legislation. As Rollin says, "Professionals should be zealous in seeking out—and listening to—rational criticisms of their ethics. Failure to do so can put them at loggerheads with social ethics, resulting in loss of autonomy" (43). He gives the example of when society learned that veterinarians were to blame for the increase of drug-resistant pathogens because of

the practice of supplying farmers with large amounts of antibiotics in an extralabel fashion.

To some readers, it may not be clear what role social consensus ethics is playing in Rollin's project. Is it a normative theory or a statement of public opinion? Sometimes he seems to be justifying a moral claim; at other times, he seems to be simply reporting what many people believe. The answer, I think, is a bit of both. Perhaps this can be better understood by examining Rollin's distinction between $Ethics_1$ and $Ethics_2$. $Ethics_1$ is the set of moral beliefs an individual or a society holds. $Ethics_2$ is the critical examination of $Ethics_1$. Social consensus ethics belongs in the category of $Ethics_1$, and he says that $Ethics_2$ can be used to criticize $Ethics_1$ (44). He describes Martin Luther King, Jr. as one who balanced both: he preached $Ethics_1$ and used $Ethics_2$ to critique the principles that were used to support segregation (32). Rollin says, "My purpose is clearly an attempt to get scientists to take $Ethics_1$ more seriously and to abandon the ideology we discussed that affirms that science is 'ethics-free'" (32). So, for Rollin, social consensus ethics is a kind of normative ethics that represents society's current thinking about morality. Consensus ethics is not necessarily a rival to other normative theories and theorists like Kant, utilitarianism, Plato, and the Golden Rule; rather it is "a mixture of consequentialist/utilitarian notions and Kantian/deontological notions" (62).

Social consensus ethics has been instrumental in forcing researchers to take seriously the subjective experience of pain. In the chapter "Pain and Ethics," Rollin explains how scientific ideology kept many researchers from properly identifying and managing pain. For example, he tells how one particular veterinarian reinterpreted obvious signs of post-operative pain in an animal as the "after-effects of anesthesia" (216). In a particu-

larly disturbing section, he discusses the failure to adequately recognize and manage pain in human newborns. Even as late as the 1980s, surgeons were doing open heart surgery on babies without anesthesia, using only paralyzing muscle relaxants.

There are many other notable cases and illustrations that make this book useful in the classroom, like bovine growth hormone usage in the dairy industry, embryonic stem cell research, whistleblowing, and cloning. Rollin does an excellent job with the issue of cloning, addressing the theological objections and arguing that the problem with cloning is not that it is inherently wrong, but that it may have serious negative consequences. Rollin ends his last chapter with this statement: "The failure to teach young scientists to think and reflect about ethics is an intellectual and prudential sin, one punishable by loss of scientific credibility in society" (274). Assigning Rollin's book to future scientists is an excellent way to remedy this problem.

References

Rollin, Bernard E. 2006. Science and Ethics. Cambridge: Cambridge University Press.