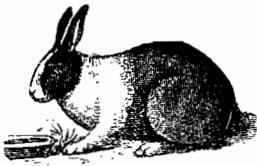


# Common Sense and Nonsense

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A review of Bernard E. Rollin's  
*The Unheeded Cry: Animal  
Consciousness, Animal Pain,  
and Science* (New York: Oxford  
University Press, 1989)



**Most of the world looks away from the pain  
and murder of the weak.**

Arthur Hertzberg (New York Review  
of Books, 6 May 90, p. 40)

**It's better to know nothing than to know  
what ain't so.**

Josh Billings (19th century)

The irrepressible Bernard E. Rollin has written a lively, provocative, and scholarly book on several pivotal bioethical issues in nonhuman animal research. Professor Rollin of Colorado State University asks — and answers — whether nonhuman animals think, feel, and suffer. Rollin asks whether the prevailing scientific justification for harming nonhuman animals is based on rational assessment of the issues or is simply ideological blindness. He offers a rousing and contemptuous “yes” to the latter view. Jane Goodall, in the book’s forward, notes that scientific ideology [like all ideology, including philosophical ideology] is susceptible to social, political, and economic pressures. Rollin pleads for integrating

rational morality and ethics into scientific ideology and methodology.

Rollin examines the philosophical and ideological background for current views on these subjects. In doing so, he covers a wide range of primary sources. Early in *The Unheeded Cry*, Rollin explores a perception to which he returns again and again: the conflict between popular common sense and scientific common sense as regards the subjective states of nonhuman animals. Indeed, a major concern of the book is the rejection of popular “common sense in twentieth-century science, most especially in psychology, as regards the existence and knowability of consciousness in animals.” He suggests, quite rightly, that scientific knowledge and its ideology are usually devoid of historical perspective. He asks and tries to answer the question “can common sense ever correct science?”

Rollin attacks the notions that science is value-free, that ethical questions are outside the proper purview of science, and that one cannot scientifically know that what we do to nonhuman animals matters to them. He argues, correctly I believe, that “value notions and philosophical issues in general are part and parcel of science, and not merely frosting which may or may not be added later.” He refers to “the common sense of science” as a system of thought which includes the belief that one “cannot know that animals experience



## REVIEW



pain, fear, suffering, distress, anxiety, and all other subjective states of consciousness which are so essential to our moral concern for and deliberations about our moral obligations to other people." He proposes that denying mentation and subjective experience to nonhuman animals is not essential to scientific teaching but is "rather a contingent, historical aberration" which can — and must — be changed "to make science both coherent and morally responsible." Clearly, The Unheeded Cry is a book about animal rights written by an advocate.

Rollin discusses the concept of nonhuman animal consciousness as an object of scientific study. He observes that anthropomorphism is actually a presupposition of nonhuman animal research. For example, to study anxiety, pain, pleasure, or sensory deprivation in nonhuman animals makes sense only if one assumes that human mental states exist in nonhuman animals in some relevant form or other. However, animal research advocates usually use the term 'anthropomorphism' only when trying to put down — rather than logically confront — an anti-animal research argument.

Rollin argues persuasively that it makes biological and evolutionary sense that human subjective states of mind (e.g. hunger, taste, sexual desire, fear) exist in nonhuman animals — "certainly in those animals in which physiological, behavioral, and contextual similarities to humans are apparent.... Evolution entails continuity, and molecular biology has elegantly underscored the continuity at the cellular, subcellular, and biochemical levels. It would be evolutionarily odd if consciousness had emerged solely in humans, especially in light of the presence in other creatures of brains, nervous systems, sense organs, pain behavior, problem-solving, and so on.... [If] we do not allow appropriate animal behavior to count as evidence of feeling and mentation, what right do we have to allow appropriate human behavior to serve as such evidence?" Rollin proposes working criteria for the existence of mentation: the ability to adapt to new situations and to learn from experience. He also notes that apparent intentionality, plasticity, flexibility, and choice are objective signs of subjective awareness, whatever the species of actor.

In praising the work of 19th century scientist George Romanes, Rollin excoriates modern behaviorist laboratory psychological research, stating that Romanes' findings are "quite unlike that obtained through subsequent behaviouristic psychological experimen-

tation, which studies animals under highly abnormal conditions, subject to extremely artificial and anthropocentric concerns and strange notions of what counts as 'intelligence' (for example, being able to run the proverbial maze); which isolates behaviour from the normal life-experience of the animal; which employs highly artificial contexts and stimuli; which gives us no clear picture of how the animal's mental processes operate during its life under natural circumstances; and which, in the final analysis, has given us little insight into the 'mind' or even the normal 'behavioural repertoire' of the animal [and even less insight into the mind and behavior of *Homo sapiens*]."

Rollin refers to and quotes extensively from Charles Darwin and other 19th and 20th century science greats. He puts their work in an historical context by relating their work to the (sometimes discontinuous!) evolution of scientific ideology. This historical perspective is one of the fascinating and fun aspects of The Unheeded Cry. For example, Rollin examines in great detail the historical development of values and attitudes in psychological research and how such views of nonhuman animal consciousness/pain became the accepted paradigm in *all* nonhuman animal research. He explores the historical precedents of the prevailing reluctance to treat non-human animal consciousness as a legitimate object of scientific study and discourse.

Rollin gives evidence to show that "science is inevitably bound up with philosophical and valuational assumptions." One philosophical position of science — whose discovery Rollin credits to Paul Feyerabend — is that "a way of knowing which allows us to control and manipulate what is known is a *better* and more valuable way of knowing than an approach which does not increase our control." Rollin continues: "one's notions of science and knowledge rest upon philosophical assumptions which are intertwined with valuational assumptions, both epistemic and moral, concerning what is worth knowing, what counts as knowledge, how it ought to be known, what ought and ought not to be done to acquire that knowledge, and so on."

Rollin makes a thorough search of the history of psychological research from C. L. Morgan and George Romanes to the present. Rollin's *bête noirs* are logical positivism and behaviorism, for it is these schools of thought which have informed (or misinformed) the attitudes and practices of all science pertaining to nonhuman animals.

Rollin cites early 20th century zoologist H. S. Jennings and others who make a case for the existence of "learning" even in protozoa, suggesting that "something like trial-and-error learning occurs even in lower organisms." These scientists propose that the behavior of lower organisms is the sort of behavior that one would expect if they had consciousness and acted from conscious states similar to those experienced by humans. Rollin argues that the notion of awareness in others (humans) is not a fundamental datum but is a theoretical construct based on evidence; i.e., that others of our species *are* aware is the best explanation of certain phenomena, is useful in generating predictions, coheres with accepted evolutionary theory, and is pragmatically justified. This theoretical construct could as easily be applied to the existence of awareness in nonhuman animals. According to pre-behaviorist psychologists the existence of learning in protozoa is evidence of the phylogenetic continuity of mentation. Rollin quotes psychologist E. B. Titchener: "It is difficult to limit mind to [only those] animals that possess even a rudimentary nervous system; for creatures that rank still lower in the scale of life manage to do, without a nervous system, practically everything that their superiors do by its assistance. The range of mind thus appears to be as wide as the range of animal life."

Rollin argues persuasively that there is no gap between our knowledge of physical facts and our knowledge of mental facts. How we study mental facts and how we study physical facts are the same. A person has no "privileged access" to mental facts; statements that a person makes even about his/her own mental states may be right or wrong. All judgements of mental states, whether by subject or by observer, are on a par with each other, and on a par with judgements about physical facts.

Rollin proposes that the view of behaviorism that came to dominate science's perceptions of nonhuman animal consciousness was not the result of new scientific data giving rise to new theories but reflected no more than a change in values and philosophical commitment. J. B. Watson, the father of behaviorism, is seen as "attempting to sell a new philosophical-valuational package...subjective mental states are at best dispensible psychic trash, at worst non-existent." Consciousness came to be ignored as a legitimate object of scientific study. Rollin proposes that behaviorism came into ascendancy, because of science's growing valuation for,

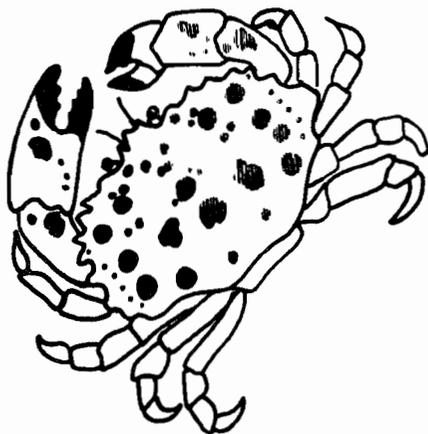
and philosophical commitment to, unity in science and reductionist physicalistic science. Behaviorism continually emphasized that only a "silly commitment to consciousness" stood in the way of psychology becoming a real science. In several key passages, Rollin observes that:

In the absence of moral pressure for concern about animals, ... especially experimental animals in a research programme totally dominated by behaviouristic and positivistic ideology, consciousness did disappear, to be replaced by physical movements, which didn't involve 'hurt' in any subjective sense. All this was tremendously convenient for researchers doing things to animals which ordinary people would find horrible.... [G]iven the behaviouristic *Gestalt*, animals had no feelings, and cries of pain were not cries of pain at all, but rather 'vocalization'.... Thus, moral categories became irrelevant.... In actual fact, the philosophical, valuational assumptions pressed by behaviourism are not very good, even if they are extremely convenient for scientists using animals. High value was assigned to control, rather than understanding. Key moral questions which might have hamstrung or retarded dramatically painful psychological and physiological experiments on animals (and which ordinary common sense of the time, despite its lack of moral concern with animals, would have recoiled from), and which might perhaps have given rise to moral qualms about inflicting pain, fear, anxiety, terror, and so forth on animals were circumvented simply by denying the applicability of the notion of consciousness to animals.... [Nonhuman animal] consciousness was an embarrassment to science. With behaviourism, [consciousness] vanished from science.

Rollin defines what he calls "the common sense of science" which ignores moral and value questions, stresses observables as the only material of science, values control, exalts the "pure" sciences of chemistry and physics, and emphasizes laboratory experiments. Rollin writes that "the common sense of science declared all moral questions to be meaningless ... [and] ...

behaviourism further augmented the compartmentalization between being a scientist and being a [human being], between ordinary common sense and scientific common sense." The common sense of science is seen as providing a clear demarcation between science and other ways of knowing, especially the speculative methods of philosophy and religion. The common sense of science appears to free scientists of any professional responsibility for dealing with moral or other valuational questions; such questions are seen as nonempirical, emotive, and noncognitive. Rollin finds that scientists are generally loathe to admit the existence of legitimate value questions or assumptions of any sort within the fabric of science. As a result, he argues, the implications, consequences, and effects of valuational assumptions which are unconscious but inevitable in science go almost totally undetected and are almost never critically assessed. Scientists *qua* scientists usually claim blindness to value issues of any sort.

A mandate to protect even human research subjects did not exist in the United States until 1966, and it was not enforced until the 1970s. Rules and regulations in nonhuman animal research followed not so much out of a recognition of moral issues but more out of a fear of mounting public pressure. Until recent years, codes of medical and veterinary medical ethics were really codes of professional etiquette and did not address relevant moral questions. Here, too, much of the motivation to change the codes was inspired by widespread media coverage of, and public interest in, biomedical ethical questions.



Rollin notes the contradiction in scientists proclaiming on the one hand that research animals are entitled to "humane" treatment and freedom from "abuse" while at the same time maintaining that the use of nonhuman animals *per se* entails no moral assumptions, is not subject to moral analysis, and is a matter of science, not ethics. These two views are simply incompatible with each other. Another contradiction common in science is the use of nonhuman animals to learn about such things as human pain, analgesics, and anesthesia, while at the same time denying — or claiming that we can't know — whether or not nonhuman animals feel pain or distress. If nonhuman animals don't feel pain, then all that sort of research is rather pointless.

As Rollin would not be surprised to learn, I was taught by scientist mentors that nonhuman animal pain was an oxymoron, because pain is a subjective response which requires words to communicate its existence from the sufferer to the observer. I was taught, in other words, that only humans can be properly said truly to experience pain, because only humans have the capacity to translate the feeling into words such as "that hurts;" *ergo*, as nonhuman animals can't speak, what they experience can't be called pain. Over the years, I disabused myself of that notion. I came to wonder how I could have been so naïve and stupid as to believe it. Rollin does a masterly job of thoroughly trashing traditional scientific common sense attitudes toward nonhuman animal pain. He correctly proposes that science has generally regarded concern for nonhuman animal pain as largely sentimental and unwarranted anthropomorphism. He calls upon Kant, Hume, and Wittgenstein and notes:

[Inasmuch as] animals have perceptions of objects and causal relations, animals must be doing something other than merely sensing.... [T]he senses supply only momentary, ever-changing fragments. To experience, to perceive, one must tie these particulars together — synthesize them.... [S]ensory atoms [must] end up being organized into wholes.... [A]nimals access the world via sense-organs which are extremely similar to ours, and which, in and of themselves, can provide only fragmented atoms of experience.... [Therefore, animals must] possess concepts fairly similar

to our own. And since they learn from experience, ... they must surely possess a mechanism for generating empirical concepts. After all, an organism with no power of generalization and abstraction, which could experience only particulars, could neither learn nor survive.... [A]nimals must be able to realize that an event is happening to them in order to learn from it. We are surely licensed to assert that animals have a sense of self as distinguished from world.... [A]nimals do anticipate and remember, and that is how they learn and fear. And if this entails having concepts, as surely it does, then animals have concepts, which should come as no surprise if they are to deal with the world.

Even if nonhuman animals were indeed inexorably locked in the here-and-now, we would be even *more* obliged to relieve their suffering, inasmuch as they would not be capable themselves of anticipating its end or even of remembering its absence. If they are incapable of conceptualizing their suffering, then when they are in "pain," their whole universe is pain; there is no horizon; they *are* their pain." Under this view nonhuman animal suffering is even more terrible to contemplate. So, laboratory animals may suffer *more* severely than do humans if only because nonhuman animals cannot deal intellectually with suffering as we do. The nonhuman animal hasn't the cognitive ability to moderate his/her fear and suffering. So the experience is likely rendered even more extreme by its total incomprehensibility. In a word, Rollin argues, nonhuman animals must hurt *more*.

Rollin discusses a number of inconsistencies in the nonhuman-animals-don't-feel-pain argument. Why use nonhuman animals in pain research on the one hand while denying them the ability to feel pain on the other? Why would nature endow nonhuman animals with endogenous opiates if the animals experienced no pain? If the neurophysiologic mechanisms of pain are essentially identical in higher nonhuman animals and humans, why would evolution reserve the "experience of pain" for humans only? *Feeling* pain — and responding appropriately — is essential to survival. If pain works well as a purely mechanical system in nonhuman species without a subjective dimension, why should only *Homo sapiens* have a subjective dimension?

Rollin places laboratory animal pain in the context of today's science: how rules and regulations really affect laboratory animal research, how research science appears to be beginning to change in response to changes in societal attitudes toward science in general and nonhuman animals in particular. He contends that "as moral questions about animal use become pervasive in the culture generally, scientists are helped to recollect many of their common-sense intuitions about animal consciousness, and reappropriate some of the reservations and moral questions about invasive animal use which they [scientists] buried when learning the common sense of science years before.... In a climate in which moral concern for animals is expected, its expression becomes permissible, and the hold of ideology begins to weaken." According to Rollin, many scientists respond less to the ethics of animal abuse issues and more to changes in societal attitudes toward nonhuman animals. He believes that many scientists still hold that ethical questions are irrelevant to science; placating society to keep the funds coming is what motivates many scientists. (Whether those indictments are or are not correct is, I believe, much less important than the fact that responsiveness and change *is* occurring, however slowly. After all, he/she who does the right thing for the wrong reason still does the right thing.) A few pages later Rollin seems to contradict those accusations when he writes that "research animal issues are being considered morally, not merely scientifically and pragmatically, and this change in perspective must be salubrious." And again, "scientists have become more and more willing — though this is by no means universal — to admit that animals suffer in various ways." Perhaps, Rollin is of two minds on this question. In either case, I agree with him that good things are happening, although change is slow. One captivating example is the moral guideline suggested in *Pain* (the journal of the International Association for the Study of Pain) that an animal researcher try a procedure on himself/herself before calling it "minor."

*The Unheeded Cry* has an excellent section on how ignoring research animal mental states in any experiment calls into question the scientific results of that experiment. Research animal distress is a complex matter and can be induced by such often ignored — but simple — things as rough handling, absence of contact with others of the species, absence of *kindly* human contact, too small a living space, overcrowding, lack of exercise, and on and

on. To paraphrase Rollin, our growing understanding of research animal awareness increases and deepens the moral questions which we are obliged to address.

The last three chapters of the book are devoted to an exploration of animal consciousness. Rollin traces the historical development of our perception of animal consciousness and how that perception has been influenced — for better or worse — by the disciplines of psychology and ethology. He argues persuasively that “the tentative return of consciousness to psychology and ethology was precipitated by a variety of factors, social, scientific, and valuational.” He gives many examples of animal awareness. He devises an experiment — an experimental method — which demonstrates that “even the most private of experiences [i.e., what an animal is thinking] is open to experimental examination.” The chapters on animal consciousness are Rollin’s kindest toward science: “animal consciousness is alive and well in science.... [B]ehaviour, automatically and arbitrarily dismissed under the ideology of science as purely mechanical, may now be more sympathetically viewed as evidence of genuine mentation.”

In this book Rollin makes a number of important and compelling propositions. Researchers doing harmful experiments on nonhuman animals need a defense mechanism to allow them to do what they do to their research subjects — things that if done, say, to the family dog would be regarded as monstrously sadistic. To believe that nonhuman animals have consciousness and mentation and suffer pain and distress — and have a moral value — would force a profound re-evaluation of a researcher’s life. Such fundamental challenges to how one lives one’s life can be most threatening and, consequently, likely to be denied. However, such valuational and moral presuppositions are part-and-parcel of science. Science must incorporate philosophical thinking into science education so that, for example, animal researchers see as primary a responsibility to recognize and alleviate pain or distress. Until science wholeheartedly addresses value issues, change within science regarding such subjects as animal pain and the moral status of animals will likely come about only via external pressures. Failure to account for laboratory animal pain and distress leads to scientific results of questionable validity.

With *The Unheeded Cry* Rollin set himself an ambitious task and successfully carried it off. The book is a smooth synthesis of moral philosophy and biomedical

science history. A literate and lively work, it is especially noteworthy because of the author’s gift for making important connections. The book deserves a prize. However, I do have some quarrels with it.

Rollin clearly intends the book to be read by more than philosophers. Indeed, I am sure that he would be delighted if it were widely read by, say, biomedical scientists and animal rightists. Thus, a glossary would have been especially useful. Concepts like “positivism,” “logical positivism,” “classic empiricism,” and so on deserve definition in a book with an interdisciplinary framework and a potential for wide readership. Also, he has the philosopher’s penchant for convoluted and over-long sentences. Shorter, clearer sentences would have made the book even more readable.

There is no good excuse for the sexist language sprinkled throughout the text. An especially egregious example is the reference to pediatricians as “he,” pediatrics being a specialty composed of over 35% female physicians. The words we use reflect how we think and also influence the thinking of those around us. For example, I use “it” and “that” for such things as rocks and trees (as in “it was the tree that was used in the laboratory”) I use “he,” “she,” and “who” to refer to sentient beings (as in “he is the dog who was used in the laboratory”). I wish that Rollin had done the same, especially as he is one of the best friends and fiercest defenders that sentient beings have ever had. To call a sentient being an “it” objectifies rather than ennobles. I also try to use the phrase “nonhuman animal” (rather than simply “animal”) when I refer to animals other than the human animal. Encouraging people, by example, to use the most appropriate language helps them understand and redefine implicit values.

Three other quick caveats: First, I was surprised to find the author using “doctor” as a synonym for “physician” — especially as biophysics-philosophy professor Rollin is a doctor himself who regularly instructs and consorts with other doctors in veterinary medicine. Second, I know that there is ample precedent, but, still, I can’t get over a certain dis-ease at someone writing a foreword to a book in which she herself is sung a paean. Finally, there should be a special place in hell for editors or publishers who insist on (or allow) the particular reference format used in this book. Again, there is precedent, but this format is decidedly user-unfriendly. It makes inconvenient the finding of any particular reference in the reference section at the back

of the book. There are at least three very slight modifications from which to choose that could have made the reference format friendly.

I have only two substantive objections to Rollin's masterful work. First, I found the tone of science-baiting to be gratuitous and a bit off-putting. For example, he writes of "regularly" finding reports in Science magazine of researchers in "all" fields of science "caught in various acts of piracy, theft, falsification, and so on." Rollin surely must mean a "handful" of fields and a "tiny percentage" of the total number of individuals engaged in scientific research. Any fudging or lying in science is outrageous, repugnant, and reprehensible. But the good professor greatly exaggerates the reported cases.

I do not share Rollin's disdain for the concepts of scientific method and objectivity. Why put "good scientific method" in quotes? Why sneeringly refer to scientific method and objectivity as "whatever that may be"? Surely, he knows that the scientific method is a process used to arrive at scientific truths. The method, at its best, includes defining terms, limiting experimental variables to one, using statistically significant numbers of subjects, drawing only those conclusions which the data support, accepting as valid and true only that which has been verified by at least one other independent investigator, subjecting the protocol and results to scrutiny by one's peers, etc. Objectivity in science means being aware of one's biases and keeping them out of the scientific process or, at the very least, explicitly stating them for all to read.

My second major objection is Rollin's apparent respect for (even adoration of) the people and their "ordinary common sense" versus his apparent disdain for scientists and "scientific common sense" regarding sentient nonhuman animals. I would say in this regard the *Volk* leave a lot to be desired when measured by the yardstick of consistency of *behavior* (as opposed to simply comparing attitudes). In other words, the nonscientific public may in general believe in the existence of nonhuman animal consciousness and therefore profess more enlightened (sensitive and compassionate) values toward nonhuman animals than would the average animal researcher. However, the important thing is not so much what we claim to *believe* but what we actually *do*. We are what we do. For me, behavior trumps attitudes and values every time. So, while the people may cry out (and rightly so and bless them) for better treatment of laboratory animals and for

the end to useless and redundant experimentation, the people still eat, wear, hunt, bulldog, race, and otherwise torment and kill other animals and show little inclination to change. However, scientists, by Rollin's own account, are moving to change their individual and collective behavior in everyday life in the direction of less harm to research animals. Consequently, my respect is greater for the scientific community that is moving significantly to begin to correct past injustices than for the *Volk* who decry research animal abuse yet show few signs of bringing a moral concern for animals into their daily lives. When it comes to respect, I'll give it every time to the person(s) beginning to make the wrenching changes rather than to the person(s) big on values and short on action.

The Unheeded Cry will, I believe, prove to be a seminal work. Plus Rollin's good, high spirits — evident throughout — make it an enjoyable read. It is *the* book to give to that biomedical scientist whose consciousness and sensitivity you'd like to raise. There will be no denying the many truths that he/she will read therein. It may convince; it will at least make him/her uncomfortable in the right kind of way. What it teaches will not be easily forgotten.

