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Bernard E. Rollin

*Colorado State University*

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# Animal Pain: What It is and Why It Matters

Bernard E. Rollin  
Colorado State University

## KEYWORDS

animal pain, animal distress, animal happiness, negative mattering, positive mattering, scientific ideology

## ABSTRACT

*The basis of having a direct moral obligation to an entity is that what we do to that entity matters to it. The ability to experience pain is a sufficient condition for a being to be morally considerable. But the ability to feel pain is not a necessary condition for moral considerability. Organisms could have possibly evolved so as to be motivated to flee danger or injury or to eat or drink not by pain, but by “pangs of pleasure” that increase as one fills the relevant need or escapes the harm. In such a world, “mattering” would be positive, not negative, but would still be based in sentience and awareness. In our world, however, the “mattering” necessary to survival is negative—injuries and unfulfilled needs ramify in pain. But physical pain is by no means the only morally relevant mattering—fear, anxiety, loneliness, grief, certainly do not equate to varieties of physical pain, but are surely forms of “mattering.” An adequate morality towards animals would include a full range of possible matterings unique to each kind of animal, what I, following Aristotle, call “telos”. Sometimes not meeting other aspects of animal nature matter more to the animal than does physical pain. “Negative mattering” means all actions or events that harm animals—from frightening an animal to removing its young unnaturally early, to keeping it so it is unable to move or socialize. Physical pain is perhaps the paradigmatic case of “negative mattering”, but only constitutes a small part of what the concept covers. “Positive mattering” would of course encompass all states that are positive for the animal. An adequate ethic for animals takes cognizance of both kinds. The question arises as to how animals value death as compared with pain. Human cognition is such that it can value long-term future goals and endure short-run negative experiences for the sake of achieving them. In the case of animals, however, there is no evidence, either empirical or conceptual, that they have the capability to weigh future benefits or possibilities against current misery. We have no reason to believe that an animal can grasp the notion of extended life, let alone choose to trade current suffering for it. Pain may well be worse for animals than for humans, as they cannot rationalize its acceptance by appeal to future life without pain. How can we know that animals experience all or any of the negative or positive states we have enumerated above? The notion that we needed to be agnostic or downright atheistic about animal mentation, including pain, because we could not verify it through experience, became a mainstay of what I have called “scientific ideology”, the uncriticized dogma taught to young scientists through most of the 20th century despite its patent ignoring of Darwinian phylogenetic continuity. Together with the equally pernicious notion that science is “value-free”, and thus has no truck with ethics, this provided the complete justification for hurting animals in science without providing any pain control. This ideology could only be overthrown by federal law. Ordinary common sense throughout history, in contradistinction to scientific ideology, never denied that animals felt pain. Where, then, does the denial of pain and other forms of mattering come from if it is inimical to common sense? It came from the creation of philosophical systems hostile to common sense and salubrious to a scientific, non-commonsensual world view. Reasons for rejecting this philosophical position are detailed. In the end, then, there are no sound*

*reasons for rejecting knowledge of animal pain and other forms of both negative and positive mattering in animals. Once that hurdle is cleared, science must work assiduously to classify, understand, and mitigate all instances of negative mattering occasioned in animals by human use, as well as to understand and maximize all modes of positive mattering.*

## 1.

The basis of having a direct moral obligation to an entity is that what we do to that entity matters to it. We do not have direct moral obligations to rocks, wheelbarrows, tables, chairs, cars, diamonds, and other non-sentient entities. To be sure, we are morally obliged not to wreck tables, chairs, cars, and diamonds, but that is because what we do to them can matter to a human, not to them. It is wrong to wreck a table because it belongs to someone who is negatively impacted by its destruction. If one wrecks an un-owned table, one has wronged no one, unless perhaps some person who could have used the table.

Another way to state the same point is to affirm that only a sentient entity can have intrinsic value. Intrinsic value, in my view, means that what happens to an entity matters to it even if it does not matter to anyone or anything else. Because it is capable of valuing what happens to it, either in a positive or negative way, such valuing is inherent in it. Rocks, tables, hammers may have great instrumental or use value to others, but what happens to them does not matter to them. It is for this reason that one does not transgress against a table or a hammer when one destroys it or throws it away. Similarly, it is for the same reason that we are held morally blameworthy when we treat another human simply as a tool. If one owns the hammer, it is morally permissible to throw it away when one is finished with it. But it is not morally permissible to throw away the carpenter, even if one has hired him to do a job now completed. Any being capable of caring about what happens to it, then, has intrinsic value by virtue of such caring, even if we focus only on its instrumental value for us.

The ability to experience pain is a sufficient condition (as the Utilitarians pointed out) for a being to be morally considerable. Pain is an invaluable biological tool for survival. Though people may wish they did not feel pain when afflicted with it, a moment's reflection reveals that those without that capability do not live a good life. People lacking the ability to feel pain, whether as a result of a genetic malfunction or as a result of a nerve-destroying disease like leprosy, have no alarm system warning of injury or some other harm, and eventually suffer shortened life-spans from disease or infection.

But the ability to feel pain is not a necessary condition for moral considerability. For example, a person or animal unable to feel pain warning of burns or infection resulting in loss of a limb would still be morally considerable, and we would be blameworthy if we did not help such a person or animal preserve their limb, for example, since being able to walk or run or have two arms very much matters to the person.

Or, to take a more forceful example, David Hume pointed out that organisms could have possibly evolved so as to be motivated to flee danger or injury or to eat or drink not by pain, but by "pangs of pleasure" that increase as one fills the relevant need or escapes the harm. In such a world, "mattering" would be positive, not negative, but would still be based in sentience and awareness (Hume 1779).

In our world, however, the "mattering" necessary to survival is negative—injuries and unfulfilled needs ramify in pain. But physical pain is by no means the only morally relevant mattering—fear, anxiety, loneliness, grief, certainly do not equate to varieties of physical pain, but are surely forms of "mattering."

This was recognized in US laboratory animal legislation in its demand for control of “distress”, a catch-all term for modalities like the above, not just “pain” (Rollin 2006).

Indeed, an adequate morality towards animals would include a full range of possible matterings unique to each kind of animal. In my account of animal ethics, I have argued that the basis of our obligations to animals under our aegis is the animal’s nature, what I, following Aristotle, call “telos” (Rollin 2006a). This is the unique set of traits and powers that make the animal what it is—the “pigness” of the pig, the “dogness” of the dog. This is well-recognized in common sense, exemplified in the song affirming that “fish gotta swim, birds gotta fly.” If we raised pigs, for example, under totally natural conditions, satisfying all aspects of pig nature, from nest-building to rooting, we could say we understand “happiness” relative to that animal. When we fail to meet needs flowing from the telos, we harm the animal. While we do not have a word for the mattering implicit in failing to allow a pig to forage, or build its nest, as we keep them in modern confinement agriculture, we can plainly see that each of these failures to meet what the animal is by nature is going to create a harm we are guilty of committing. The word “pain” simply does not capture the myriad of ways different treatments affect animals.

Sometimes not meeting other aspects of animal nature matter more to the animal than does physical pain. R. Kilgour reported that cattle show more signs of stress when introduced into a herd of strange animals than when they are prodded with an electric prod (Kilgour 1978). Chickens will go through electro-shocking grids to get access to the outdoors. Ethologists have given us a myriad of such examples. Whatever a calf and cow feel when they are separated shortly after birth, and the cow will moo for months, it is not physical pain but it clearly causes suffering

There is no simple word to express the many ways we can hurt animals besides creating physical pain; the ways are as countless as the multiplicity of teloi and the interests that flow from them. So in this essay I will introduce a barbarous neologism to express this concept—“negative mattering”. “Negative mattering” means all actions or events that harm animals—from frightening an animal to removing its young unnaturally early, to keeping it so it is unable to move or socialize. Physical pain is perhaps the paradigmatic case of “negative mattering”, but only constitutes a small part of what the concept covers. “Positive mattering” would of course encompass all states that are positive for the animal—freedom of movement, pleasure, a sense of security, and so on.

If our analysis is correct, it is morally obligatory to expand the scope of veterinary medicine and/or animal welfare science to study all of the ways things can matter negatively to animals as well as positively matter, as society grows ever more concerned about animal treatment. In addition, it is necessary to attempt to understand which forms of negative mattering are most problematic from an animal’s perspective. We have seen, surprisingly, that being exposed to a new herd with no preparation has more of a negative effect on cattle experience than does electric shock. The fact that coyotes will chew their leg off to escape a trap attests to the fact that immobilization is more aversive to a coyote than is significant pain. Obviously the challenge is to study these without hurting the animal subjects. An excellent example of this arises from research into “learned helplessness”. Research in this area is so barbaric it has been banned in the United Kingdom for some time. Absurdly alleged to be a model for human depression, learned helplessness is achieved by subjecting an animal in a cage to inescapable electric shock regardless of what it does. Eventually the animal assumes a fetal position and does nothing. This horrible state rarely if ever arises in nature, and once again, there is no name for the feeling engendered. Ironically, now that we know about it, we can assume that it occurs in animals housed in severely restrictive environments such as sow stalls.

Also necessary to study is the way in which quality of negative (and positive) experiences change with cognitive states of the animal. As both Jay Weiss (1972) and John Mason (1971) have shown in their

pioneering and classic work, the animals' mental and cognitive states regarding negative experience modulate the degree to which the animal experiences the event in question as negative. Mason's work demonstrated that elevation of ambient temperature of mice to well above the comfort zone varies in the degree to which the animal is disturbed in accordance with whether the elevation is gradual (and thus is cognitively processed by the animals as predictably rising) or sudden, where the animal has not had the ability and time to adjust its expectations to the advent of unpleasant ambient temperature or "heat stress."

Similarly, Weiss showed that monkeys who are taught to anticipate and predict an electric shock, for example by a bell sounding prior to the shock, have far less of a negative reaction to that stimulus than do those who do not know when the shock is coming. These studies have profound implications for the non-pharmacological control of pain. It has long been known that laboratory animals subjected to an invasive procedure that is followed by a reward have less of a negative reaction to the procedure than those who are simply restrained. In some cases, researchers train animals to a procedure. In one instance, my friend was drawing blood from dogs daily for a vaccine study. She would enter the facility, play with each dog, draw the blood, and give the dog a treat after the draw. On one occasion, one of the dogs set up such a howl as she was leaving that she raced back to see if his paw was caught in the cage door. It turned out she had forgotten to draw blood from that dog, and he had missed his play and his treat, which bothered him more than the blood draw.

An August 2010 story in Science Daily described research showing that pigs who lived in enriched environments tended to treat an ambiguous stimulus as a positive one, while those who lived in impoverished environments treated the same ambiguous stimulus as negative. (Science Daily, July 28, 2010) This eloquently illustrates how good and bad living conditions can color quality of life in major ways. This sort of research is paradigmatic of what we need to know to take both negative and positive mattering seriously.

It follows from what we have argued that all aspects of negative matters should enter into the field of pain control. Nonetheless, physical pain has been called "the worst of evils". At first blush, this appellation seems wrong, since we are inclined to believe that death is the worst of evils. But careful reflection reveals the falsity of such an assertion. In the first place, even among humans, people will readily choose death over prolonged or intense physical pain, and even over emotional pain. This is evident in the world-wide thrust for assisted suicide on the part of those suffering intractable physical pain and/or mental anguish. Indeed, many people choose death over helplessness, or total dependence on others, or loss of dignity though incontinence. While there are many cases such as radical cancer treatment where people undergo prolonged and horrible pain in order to live, there are also very many where death is chosen to forestall suffering.

Since my topic is animal pain, the question arises as to how animals value death as compared with pain. This is an increasingly important conceptual/ethical issue in a world where ever-increasing amounts of highly invasive therapy are being exported from human medicine to animal medicine, resulting in great amounts of suffering. This is particularly true in oncological treatment of pets, where cost is often no obstacle to applying all human treatment modalities to sick animals. As early as 1982, clients at the Colorado State University Cancer Center were spending well over \$100,000 on treating their pets in heroic ways. The question arises, from the animal's perspective, is the chance of extra life worth the significant additional suffering to an animal? This in turn leads to an ancillary question—can an animal value life per se? To answer this question we must consider some conceptual differences between animal and human cognition.

Human cognition is such that it can value long-term future goals and endure short-run negative experiences for the sake of achieving them. Examples are plentiful. Many of us undergo voluntary food restriction, and the unpleasant experience attendant in its wake, for the sake of lowering blood pressure or looking good in a bathing suit as summer approaches. We memorize volumes of boring material for the sake of gaining admission to veterinary or medical school. We endure the excruciating pain of cosmetic surgery to look better. And we similarly endure chemotherapy, radiation, dialysis, physical therapy, and transplant surgeries to achieve a longer, better quality of life than we would have without it or, in some cases, merely to prolong life to see our children graduate, complete an opus, or fulfill some other goal.

In the case of animals, however, there is no evidence, either empirical or conceptual, that they have the capability to weigh future benefits or possibilities against current misery. To entertain the belief that “my current pain and distress, resulting from the nausea of chemotherapy or some highly invasive surgery, will be offset by the possibility of an indefinite amount of future time,” is taken to be axiomatic of human thinking. But reflection reveals that such thinking requires some complex cognitive machinery. For example, one needs temporal and abstract concepts, such as possible future times and the ability to compare them; a concept of death, eloquently defined by Martin Heidegger as “grasping the possibility of the impossibility of your being” (Heidegger 1996, p. 120) the ability to articulate possible suffering; and so on. This, in turn, requires the possibility to think in an if-then hypothetical and counterfactual mode; that is, if I do not do X, then Y will occur. This mode of thinking, in turn, seems to necessitate or require the ability to process symbols and combine them according to rules of syntax.

I have argued vigorously elsewhere against the Cartesian idea that animals lack thought and are simply robotic machines (Rollin 1989). I strongly believe that animals enjoy a rich mental life. It is also clear that animals have some concept of enduring objects, causality, and limited futural possibilities (probably learned by association), or else the dog would not expect to get fed, the cat would not await the mouse outside of its mouse hole, and the lion could not intercept the gazelle. Animals also clearly display a full range of emotions, as Darwin famously argued (Darwin 1872).

But it is also equally evident that an animal cannot weigh being treated for cancer against the suffering treatment entails, cannot affirm a desire (or even conceive of a desire) to endure current suffering for the sake of future life, cannot understand that current suffering may be counter-balanced by future life, and cannot choose to lose a limb to preclude metastases.

To treat animals morally and with respect, we need to consider their mental limits. Paramount in importance is the extreme unlikelihood that they can understand the concepts of life and death in themselves rather than the pains and pleasure associated with life or death. To the animal mind, in a real sense there is only quality of life, that is whether its experiential content is pleasant or unpleasant in all of the modes it is capable of, for example whether they are bored or stimulated, fearful or not fearful, lonely or enjoying companionship, painful or not, hungry or not, or thirsty or not. We have no reason to believe that an animal can grasp the notion of extended life, let alone choose to trade current suffering for it.

This, in turn, entails that we realistically assess what they are experiencing. We must remember, for example, that an animal is its pain, for it is incapable of anticipating or even hoping for cessation of that pain. Thus, when we are confronted with life-threatening illnesses that afflict our animals, it is not axiomatic that they be treated at whatever qualitative, experiential cost that may entail. The owner may consider the suffering a treatment modality that entails a small price for extra life, but the animal neither values nor comprehends extra life, let alone the trade-off this entails (Rollin 2006c).

A very important corollary emerges from our discussion. We have argued that animals have no concept of death (or life) and consequently cannot value it more than pain. We have also indicated that people

sometimes value death over pain, as a way of ending pain. If this is true of humans, it would be a fortiori true of animals, who cannot value life at all. Thus, in a sense, pain may well be worse for animals than for humans, as they cannot rationalize its acceptance by appeal to future life without pain. As I have stated in other writings (see for example Rollin 1989), a traditional argument affirms that human pain is worse than animal pain because humans can anticipate and fear pain very imaginatively before it happens, as when we plan to visit the dentist. Aside from the fact that animals too can fear imminent pain (e.g. when they cringe before a threatening upraised hand), the same logic decrees that animals cannot look forward to a time without the pain; their entire universe is the pain, they can have no hope!

## 2.

An obvious question coming from scientists but not ordinary people arises here. How can we know that animals experience all or any of the negative states we have enumerated above? Are we not committing the dreaded sin of anthropomorphism, a potentially career-ending infraction among scientists? How do we know that animals that appear to us to have a rich range of mental states, and particularly pain, are not simply “cuckoo clocks” as Rene Descartes argued? Such agnosticism about animal feeling is not simply abstract speculation; it was in fact assumed by Descartes’ biologist followers as a justification for doing horribly invasive manipulations—including genuine vivisection, cutting of live animals without anesthesia! The notion that we needed to be agnostic or downright atheistic about animal mentation, including pain, because we could not verify it through experience, was pervasive in subsequent European science and philosophy, and in the US became a mainstay of what I have called “scientific ideology”, the uncriticized dogma taught to young scientists through most of the 20th century despite its patent ignoring of Darwinian phylogenetic continuity (Rollin 2006b). Together with the equally pernicious notion that science is “value-free”, and thus has no truck with ethics, this provided the complete justification for hurting animals in science without providing any pain control (Pain was also neglected in human medicine).

That felt pain was denied or ignored for much of the 20th century is easy to evidence objectively. As an architect and public advocate of federal legislation in the 1970s and 1980s that required control of pain in research animals, and which ultimately passed in 1985, I repeatedly came up against the denial of pain by the scientific community in both objectively documentable ways and in personal experiences, both sets of which are valuable to document.

On the objective front, the International Association for the Study of Pain (IASP) definition of “pain” until very recently required language as a necessary precondition for the ability to feel pain (shades of Descartes), thereby creating a belief that animals and neonatal humans (who until the 1990s were subjected to open heart surgery without anesthesia, restrained by paralytic drugs) could not be said to feel pain, i.e., did not. In essence, the same people who used animals as “pain models” for research turned around and denied that animals felt pain. Perfectly in harmony with this view was the complete failure of the first textbooks of veterinary anesthesia published in the US in the 1960s to even acknowledge felt pain in animals or to raise any discussion of analgesia.

Finally, when I was asked by the United States Congress to evidence the need for a law requiring pain control for research animals, I did a literature search on “laboratory animal analgesia” and then on “animal analgesia”, and was amazed to find only two papers, one of which said, in essence, that there ought to be papers! (A detailed set of anecdotes personally experienced by the author illustrating the denial of felt pain by the scientific community can be found in Rollin 2007).

Happily, the laws have worked, and the use of analgesia is much more routine, though not in farm animals. And the literature on pain control has proliferated, evidencing a “reappropriation of common

sense” by the scientific community. A Pubmed literature search executed on August 13, 2010 turned up 11,968 citations for a search under “animal analgesia.” Ordinary common sense throughout history, in contradistinction to scientific ideology or Descartes, never denied that animals felt pain. Indeed, no recorded thinkers before Descartes denied animal pain. Less pervasive is the notion that since animals felt pain, they were owed moral concern and attention. That moral bulwark of western civilization, the Jewish Scriptures, was patently clear not only about the fact of animal pain, but also about its moral relevance. The Pentateuch is clear about forbidding practices that not only cause physical pain, but about other notions of negative mattering and about the degree to which bad animal treatment can easily erode human sensitivity. Such passages as the extension of the Sabbath rest period to animals or the forbidding of yoking oxen and asses to the same plow (for reasons of the significant strength differential) display exquisite sensitivity to negative mattering other than physical pain. The passage enjoining not slaughtering an animal along with its young (Leviticus 22:28 “whether it be cow or ewe ye shall not kill it and her young both in the same day”) illustrates the same point, even as the passage about not seething a calf in its mother’s milk (Exodus 23:19 “though shalt not seethe a calf in his mother’s milk”) which worries about the erosion of human sensitivity towards animals, also does. Kosher slaughter involving someone who is anatomically knowledgeable cutting the jugular vein with a razor-sharp knife in a calm environment was intended, in antiquity, as an alternative to bludgeoning, and was indeed, as modern research has demonstrated, a quick route to unconsciousness with little pain (Ironically, when teamed up with the time-pressure of modern slaughter houses, Kosher slaughter becomes grossly inhumane).

The concept developed in the Talmudic and Rabbinical traditions, derived directly from the Pentateuch, is the notion of *tsaar baalei chaim*, the suffering or pain of living things, which Jews are enjoined to avoid, even on pain of desecrating the Sabbath to free a trapped animal. The Rabbis also forbid deriving pleasure from animal suffering, as one does in hunting (Encyclopedia Judaica 8:1111 “Hunting”).

In the Christian tradition, cruelty to animals is similarly forbidden, despite the fact that animals, lacking immortal souls, have no moral status. St Thomas Aquinas, for example, forbids animal cruelty based on the psychological principle that those who abuse animals will “graduate” to abusing humans, an impossibility were not the suffering experienced by animals similar to that experienced by humans. In Thomas’ words : “If in Holy Scripture there are found some injunctions forbidding the infliction of some cruelty toward brute animals ... this is either for removing a man’s mind from exercising cruelty towards other men ... or because the injury inflicted on animals turns to a temporal loss for some man ...” (Thomas Aquinas, *Summa Contra Gentiles* 3, 112, 13).

If common sense readily acknowledges pain and other forms of mattering, how did science come to be agnostic about animal pain? First, modern science, as opposed to Aristotelian science, feels no need to accord with common sense or ordinary experience. (Hence Descartes’ efforts in the *Meditations* to cast doubt on what we knew through experience.) In many cases, science blatantly contradicts common sense, as paradoxes of relativity and quantum theory plainly evidence.

Scholars pretty much agree that, at least in Western thought, no thinkers denied sentience to animals or affirmed that they did not feel pain before Descartes.<sup>1</sup> What did occur historically was a failure to reckon the full impact of pain and other mattering for the moral status of animals. In other words, animal pain was acknowledged to be real, but not credited with a great deal of ethical importance.

There are a variety of reasons for this. Egalitarian thought was historically quite rare before the Enlightenment, and even though all humans were seen as feeling pain or subjects of negative and positive mattering, some people’s mattering was less important than others. It has often been said that if animals could speak we would consider their pain significant. Yet evidence indicates that even in the 19<sup>th</sup>



century US, when black slaves were subjected to painful medical experiments, no one worried about their pain despite their ability to speak.

Furthermore, the main use of animals has historically been in agriculture—food, fiber, locomotion, and power. The traditional key to success in agriculture (until the industrialization of agriculture in the mid 20th century), was applying good husbandry to the animals you raised: placing them in the optimal environment they were biologically suited for, and then augmenting their ability to survive and thrive by provision of food during famine, water during drought, medical attention, help in birthing, attention during disasters, protection from predation. So powerful is this image of husbandry that when the Psalmist wishes to find a metaphor for God's ideal relationship to humans, he utilizes the Good Shepherd in the 23rd Psalm: "The Lord is my Shepherd, I shall not want. He maketh me to lie down in green pastures; He leadeth me beside still waters; He restoreth my soul." We want no more from God than what the Good Shepherd provides to the sheep under his care.

Good husbandry was essential to agricultural success, and thus was sanctioned by something more powerful than law or ethics—self-interest. Any deliberate harm done to animals diminished their productivity, so good treatment was (at least in theory) the default for agriculturalists. What dairymen knew for centuries for example, that good treatment by herdsman correlated strongly with milk production, has been scientifically confirmed (To be sure, greed plus industrialization relegated good husbandry to a minor role, with animal productivity increasingly unrelated to animal well-being, thanks to technological fixes such as antibiotics and vaccines allowing us to raise productive animals in miserable conditions).

Thus, during the reign of husbandry agriculture, the sanction regarding hurting animals came from self-interest, since hurting them diminished productivity. For those more interested in hurting animals than in profit, there was the anti-cruelty ethic and the laws following in its wake. Indeed, one can argue, as I have elsewhere, that the industrialization of agriculture was essential to calling forth animal ethics from society, because animal suffering could coexist with productivity (Rollin 1995).

Where, then, does the denial of pain and other forms of mattering come from if it is inimical to common sense? I would submit it came from the creation of philosophical systems hostile to common sense and salubrious to a scientific, non-commonsensual world view.

### 3.

We have already mentioned both Descartes and 20th century scientific ideology as the chief culprits in creating agnosticism or even atheism about animal pain. How did this occur?

Perhaps the greatest skeptic in modern philosophy was Hume. Hume's philosophical musings led him to reject the ultimate reality of mind, body, causation, a unified self, mathematical physics, uniformity of nature. Yet the same Hume warns against applying these ruminations to ordinary life. One may be a philosopher, but one must be a man, living in the world of common sense and moral experience. And thus the same Hume who is so trenchant a skeptic about the ultimate nature of reality becomes a common sense thinker about ethics. This, he tells us repeatedly, is unavoidable, regardless of how far abstract philosophy takes us from reality (Norton 1984).

Hume begins with sense experience, deduces therefrom the paradoxicality of metaphysical speculation, and returns to common sense. Descartes, on the other hand, is never compelled to return to ordinary experience after rejecting it. Because, according to Descartes, a false or illusory sense experience is qualitatively identical to a true one, else we could never be fooled by the senses, we cannot make a soundly based distinction between illusion and reality, and therefore must totally reject the senses as a sound source of knowledge. Arthur Danto has pointed out that this amounts to saying that since the

senses can sometimes be wrong, we must always reject their testimony, which is as crazy as pointing out that since the senses can sometimes be right, we must always accept their testimony (Danto 1968).

Descartes has essentially taken a practical problem of daily life and turned it into an insoluble metaphysical conundrum. In ordinary life, we are indeed sometimes fooled by our senses, as when we see double, or see a wet spot on pavement on a hot day, or are frightened, as W.B. Yeats jokes, by the “vision” of a “coat upon a coat hanger” that we mistake for an intruder. But we correct these misperceptions by more systematic perceptions, and reject them. To be sure, this is in some sense circular—using perception to check suspect perception—but it works, and we have no reason to believe that there really is a wet spot or an intruder or two copies of my house when I stagger home inebriated. Only a madman worries about what is real not being real.

We perceive pain and emotion in others—we do not infer or construct it as positivists would have us believe. A child watching a dog writhe and listening to it yelp after an electric shock or a bee sting immediately understands the presence of pain in the animal. Similarly with a peer who falls on his face and starts to bleed. The only skepticism we have about such situations is if we have evidence that the pained individual is faking—the other child is in a play, for example, or has told his friend to “watch me upset my mother.” Indeed, even after we watch a great actor simulating grief or pain, and know that such dissembling is possible, we still believe that such behavior in a normal context betokens pain. Skepticism under such circumstances is forced and unnatural. If you cut your leg while chopping wood and are screaming hysterically, it is absurd to ask “how do we know he is not faking?” The same holds true with animals. Descartes’ denial of pain (or mind) in animals is based in the above faulty logic. In addition, it allowed biologists of the period to cut up animals while alive without normal feelings of horror, as the animals allegedly only appeared to feel pain, and were just machines.

If someone thrashes a dog, or steps on its foot and an observer asks, “Is the dog hurting?”, we in response point out the dog’s howling, limping, anger, or attempt to get away. This is an appropriate response to a genuine query, and should end the conversation. If the questioner remains skeptical about pain in the animal, we assume there is something wrong with him, in the same manner as a small child may keep asking “why” regardless of what you say. This is exactly how we judge human intentions in ordinary life or courtrooms. Skepticism about pain and other mental states in humans or animals has perfectly legitimate resolutions in ordinary life.

For purposes of ordinary life, it is legitimate to reject unending skepticism about whatever one adduces. If someone is genuinely skeptical about animals feeling pain, it is appropriate to refer them to the congruence of the physiological substratum of humans and animals; to the fact that we study pain in animals and extrapolate to people; to the fact that analgesics and anesthetics work on animals; to the similarities in pain behavior, and to our natural empathy for a creature in pain, and to the fact that such skepticism must extend to humans as well.

Just as Cartesian generalized skepticism should not be taken seriously as a basis for doubting pain in animals, what I have called scientific ideology should be similarly dealt with. Scientific ideology again attempts to separate the realm of science from the realm of ordinary experience. There is no place for ethics or mind or consciousness or pain in a materialistic mechanistic, mathematical universe. Scientific ideology decreed that only what was observable and testable was real to science, thus excluding ethical judgments and judgments regarding subjective experiences.

Clearly this ideology must be wrong, or else self-defeating. In the first place, scientists do make ethical judgments, as when they implicitly affirm that the value of an invasive animal experiment outweighs the pain, other negative mattering, or death of the animal. And scientists cannot deny the relevance of

subjective experience to science. All science is based on subjective experiences of reality, which somehow lead us to an objective or intersubjective world. If we cannot affirm consciousness or perception in other beings, how can we trust or even have reports of empirical data, since the latter are based in intrinsically subjective experiences? In addition, if one is so skeptical as to reject evidence for thought and feeling in others, human or animal, there are many other presuppositions of science the same logic must reject. In addition to the assumption of an objective world that private experiences somehow access, we cannot reject the hypothesis that the world was created long ago, and us with all our memories. In short, the practice of science belies its ideological presuppositions. Further, regarding pain, as we saw earlier, pain and pain killers were studied in animals, and the results extrapolated to people, thereby belying the claims that animals do not feel pain or that we cannot know it if they do.

#### 4.

In the end, then, there are no sound reasons for rejecting knowledge of animal pain and other forms of both negative and positive mattering in animals. Once that hurdle is cleared, science must work assiduously to classify, understand, and mitigate all instances of negative mattering occasioned in animals by human use, as well as to understand and maximize all modes of positive mattering.

<sup>1</sup> Rod Preece, historian of animal ethics, personal communication, May 2010.

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