

## BETWEEN THE SPECIES

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# The Ethics of Painism: The Argument Against Painful Experiments

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I have been asked to look at the ethical objections to using animals in research. I shall conclude that what is wrong is the causing of unconsented-to pain.

The objections are the same as the objections to using human beings for the same purpose. If it is wrong to inflict cruelty upon a child, how can it be right to do so to a dog or even to a rat? I ask this question seriously. As rational beings, scientists should also ask themselves this question. I do not think they will be able to find a convincing answer. They may find answers based upon sentiment or self-interest but they will be hard pressed to find an answer that is *just and rational*. As scientists, we believe that we are *all* animals. Why, then, do we believe that we can do to other species what we would not dream of doing to our own? Where is the logic in this? Do we exploit white people because they are white? Should we exploit women because they are female? To exploit an individual because it is of another species is speciesism, which is a very similar sort of prejudice to sexism and racism. It is irrational.

### Consciousness

Just a word about the fashionable and relevant topic of consciousness. Much has been written in recent years, but very little, if any, advances have been made in understanding consciousness. I see consciousness as an emergent phenomenon. It emerges from the activity of a living brain rather as electricity emerges from a coil of wire revolving in a magnetic field or as television messages emerge from glass, plastic and metal. In all these cases, that which emerges is quite different from the basic materials. We need to know more about *emergence* itself. This is where, I think, advances could be made.

I believe that many nonhumans are conscious. We know with reasonable certainty that consciousness emerges from brains, and we know that many other species have similar brains to ours. Although I am never directly aware of anyone else's consciousness, I tend to believe other humans who tell me that they *are* conscious. It is possible they are all lying robots, but then robots, too, may be conscious one day. There is no certainty that neurones rather than silicon chips are necessary for consciousness to happen. However,

let us *assume* that some others are conscious at least some of the time. I see no reason why this assumption should be restricted to our own species. Descartes' reasons were only self-interest; he wanted to vivisect animals without guilt, and he wanted to believe in his own immortality.

### **Pain**

Morally speaking, consciousness is supremely important, and of special relevance is that part of consciousness which is the experience of pain. By "pain," I mean all forms of suffering—that is to say, I include fear, grief, anxiety, distress, the effects of captivity and boredom. I refer to all negative experiences. Sometimes—as in toothache—pain can seem like a pure experience. At other times, it is like an aura—a negative tone which permeates other experiences—a grey tinge to our emotions, perceptions or thoughts. Indeed, I believe that all our experiences are tinged either with pain or with pleasure.

It is our capacity to experience pain—our painience—which is important morally.

There are some strange definitions of pain in circulation. In 1980, the International Association for the Study of Pain defined pain as "an unpleasant sensory and emotional experience associated with actual or potential damage or described in terms of such damage," and in 1987, Zimmermann, as amended by Kitchell, et. al., defined pain as "an aversive, sensory and emotional experience which elicits protective motor actions, results in learned avoidance and may modify species-specific traits of behaviour." Well, these definitions raise as many questions as they answer. However, they at least agree that pain is an experience. But they also say that it is "a sensory and emotional" experience. I tend to look at it differently. Surely, some sensations are painful, and some are pleasant. Likewise, some emotions are painful, and some are pleasant, too. Sensory pain is the thalamic and cortical registration of impulses originating in sensory nociceptors, but it is not itself an emotion. Grief and fear are emotions, and whatever causes them (sensory pain or any other cause), they are, in themselves, unpleasant or, as I would say, "painful." In the case of sensory pain (from a burn, for example), the initial pain is not emotional.

Neither A-delta nor C fibre pains are emotional in themselves. The emotion comes as a *reaction to the pain*. That emotion could be one of joy in the self-punitive individual who seeks to reduce guilt through the mortification of the flesh. More commonly, however, it will be an emotion such as fear which, because it is in itself painful, adds to the totality of the pain experienced after the burn. Pain, in other words, is not *per se* an emotion; it *accompanies* and is a deep component of some emotions, such as fear and grief. At some point in the brain, painful sensations, painful emotions and even painful thoughts most probably trigger the same mechanism. Where this common mechanism is located, I would not know. I would speculate, however, that at least part of the mechanism is not a million miles away from the frontal lobes, whose ablation characteristically produces an indifference to painful sensations and painful emotions. Other parts of this "common pain system" may be located in the so-called pain centres of the thalamus. The point I am making is that although, for example, the fear of rejection, the pain of a broken leg and an unpleasant thought are very different experiences in many ways, they all share

unpleasantness—or pain—in common. At some level, this similarity is probably reflected in the activation of the same system in the brain. The aversive quality of pains, which gives them their reinforcement value in learning, can be remarkably similar regardless as to whether the pain is sensory, emotional or cognitive. This is further evidence, surely, that all painful experiences, involving many different cerebral systems as they do, nevertheless share painfulness in common.

Let us leave psychology and return to the ethics. My remarks will apply to all ethics and not just to our concern for laboratory animals.

Why, one might ask, is pain to be considered evil? Well, what property is it that all bad things share? The answer is that they all cause pain (in its broad sense). Most examples of killing, lying, cheating and stealing are bad because they cause pain.

Injustice, inequality, and lack of liberty are bad because they, too, cause pain. Neglecting and rejecting are bad for the same reason. Pain is the common feature of all bad things. A bad thing is that which causes pain.

There are, of course, many mysteries about pain and consciousness generally. One is, why is my consciousness mine?<sup>1</sup> Or, why am I me? I mean, why is my consciousness so tied to *my brain*? *There have been millions of other brains much like mine.* Why did I never become conscious before? What is it about my memories that has caused this me-ness to emerge? How is this sense of “me” rooted in this way? One feels one’s consciousness ought to be able to float off and join other consciousnesses, but there is no convincing evidence that it does so. This strangely material limitation to consciousness nevertheless underlines the importance of the *individual*. Consciousness, and that part of consciousness with which we are especially concerned, the experience of pain, are strictly individual. What happens to a conscious individual is the universe for that individual. Many moral schemes overlook this. Utilitarianism is an example.

### **Aggregation of Pains and Pleasures**

Utilitarian theory argues that the pains of one individual can be traded off against the aggregated benefits to others. This is the situation we have in the Animals (Scientific Procedures) Act of 1986. This means that Utilitarianism will justify torture if it leads to advantages to others that are considered to be “greater” in total than the pain inflicted. This must be wrong; around each individual is the boundary of its own consciousness, and so, surely, such aggregations make no sense. There exists a barrier between individuals through which consciousness cannot pass. However much I empathise or sympathise with your pain, I can never feel that *same* pain.

So, if there are a thousand painients each suffering  $x$  amount of pain, the significant pain score is  $x$  and not  $1000x$ . If there is one painient suffering 20 units of pain and one suffering 5 units of pain, the meaningful pain score is 20, not the sum total of 25. In other words, the morally significant measure of pain in a group of painients is the *maximum* felt by any one of them.<sup>2</sup> So the moral imperative is to try to reduce the pain of the *maximum*

*sufferer* in each case. You can aggregate or add up pains and pleasures *within* the same individual but never between several individuals.

### Trade-Offs

Please note that aggregation and “trade-off” are not the same. I am saying you cannot add up or aggregate the pains and pleasures of *several* individuals. This is not the same as saying that the pain of one individual cannot be justified by the benefit to another single individual. Imagine, for example, causing mild inconvenience to individual A in order to reduce the extreme agony of B. Is not this justified? Imagine you see a very heavy man unwittingly sitting upon a child, causing that child intense pain as bones and organs are damaged and broken. For the sake of argument we shall say that the fat man is brain damaged and so does not even realise what he is doing. Are you not justified in giving the man a gentle shove, causing him trivial inconvenience as he topples sideways? Common sense suggests that you are. Yet, here we are deliberately causing slight suffering to an innocent individual in order to save a child from agony. In other words, we are prepared to trade-off the little pain of the fat man against the reduction in the great pain of the child.

Let’s just consider the other great moral school—Rights Theory—for a moment. Although it has drawbacks, the concept of “rights” has become such a popular concept that we ought to look at it. Shoving the fat man is okay in Utilitarianism, but how does Rights Theory regard it? The implications of Rights Theory, although only at *its most extreme*, suggest that it is always wrong to cause suffering (however trivial) to individual A regardless of the benefits (however great) to individual B. So, according to this point of view, we would not be allowed to shove the fat man even if, instead of a child, he was sitting upon a nuclear release button that would, if pressed for a determined period of time, cause the destruction of the world and utmost individual agony. Such an ethical theory is absurd. Surely the trade-off here would be so advantageous that we must accept it.

Of course, I do not want to be accused of misrepresenting those who advocate the rights position for humans or nonhumans. Most do not take the extreme position I have just depicted.

This trade-off problem is really central to all ethical theories. It is not just a problem for those of us with a particular interest in reducing the sufferings of animals in research. Some sort of flexibility in ethical theory has to be accepted. But we can make a rule, and I think it is a good one, *that it is always wrong to cause **pain** to A merely in order to increase the **pleasure** of B*. It is wrong, therefore, to rape. It is also wrong to torture for fun.

However much pleasure is gained, these practices are wrong. However, when we consider causing pain to A in order to reduce the pain of B, then we are in a very grey and difficult area. All I will insist upon is that (i) the rules should not be speciesist and that (ii) there should be no aggregation i.e., no adding up of pains or advantages among

different individuals. In our imagined cost/benefit calculus, B can only ever be one individual, presumably the maximum sufferer.

Animal experiments are sometimes intensely painful, sometimes not at all. Similarly, the benefits are sometimes great, but more often they are negligible. In a few cases, indeed, it can be argued, plausibly, that the results of such experiments bring further suffering and distress.

### **Two Further Problems**

There are two additional problems, first with *deliberately* causing pain which otherwise would not have occurred and, secondly, with the disparity in *certainty* between causing pain now and justifying it in terms of benefits which may or may not occur sometime in the future. In a painful experiment, the pain is certain, but the benefits are always uncertain.

Let us briefly look at these two problems. The first can be put in the form of the question—if it is wrong to cause pain, is it more wrong to do so deliberately rather than inadvertently? Most ethicists, from whichever school, would agree that it is. So this immediately puts the animal experimenter into an even weaker position. He or she has to justify actions which, *prima facie*, appear to be deliberately wrong. As we know, of course, this attempted justification usually takes the form of some version of the “trade-off” argument. That is to say, the experimenter argues that causing pain to A is justified because of the benefit to B. This, incidentally, was the approach used by those defending Nazi scientists after the war. It was claimed that the pain they had caused prisoners used in research was justified by the benefits achieved in terms of the consequent treatments for illnesses and injuries that their experiments uncovered. These defences failed, and they were convicted.

Secondly, there is the added problem—and as scientists, we are especially sensitive to the difficulties of prediction—that the alleged benefits, at the time the research is being carried out, still lie in the future. There is no answer to this. Whereas in the case of the hypothetical fat man, it is almost certain that a shove will dislodge him, it is far less certain that a particular animal experiment will have a beneficial result. We all know this. I believe this makes the case against painful research even stronger.

I am not trying to say that I have settled the trade-off problem. It has plagued ethics for centuries and will continue to do so. Would it be justified to experiment painfully on one human being in order to produce, with absolute certainty, a cure for cancer? If so, how much pain in the experiment would be justified? Would severe agony lasting for weeks? If not, would a short twinge? Of course, humans may be able to understand better what is happening to them than can nonhumans. But sometimes this will reduce their total suffering and sometimes the opposite.

### **Evidence for Painience**

In practice, we condemn *any* involuntary research upon a human being but adopt a much more lax approach toward painient individuals of other species. This is what I mean by speciesism. Can it be justified? For example, is there evidence that nonhuman individuals are less sensitive to pain than are humans? The answer is in the negative. On the contrary, the scientific evidence gets stronger and stronger in suggesting that individuals of other vertebrate species are, more or less, just as painient as we are.

Let us look briefly at the evidence. It takes four forms—behavioural, physiological, anatomical and biochemical. First, when exposed to a stimulus which would cause pain to you or me, other vertebrates tend to show withdrawal from that stimulus and a tendency to avoid such stimuli in future. They may also vocalise or scream much as we would. The behaviour can be very similar.

Physiologically, the autonomic reactions, for example, to noxious stimuli are those typically associated with any stress—disturbances in heart rate, blood pressure, respiration, galvanic skin response (GSR), and raised levels of cortisol or other hormones. These are broadly similar among a wide range of species.

Anatomically, there is evidence of complex nervous systems in all vertebrate classes (and some non-vertebrates, such as the cephalopods) and of connection between central and peripheral parts of such systems. There is, of course, good evidence that pain is mediated by nervous systems generally.

Finally, there is the growing amount of biochemical evidence that all vertebrate classes release both opioid and specific transmitter substances when exposed to noxious stimuli. Furthermore, they also respond to analgesics and self-administer these if painful experience is unavoidable.

We have known all this since the report to the RSPCA by Lord Medway<sup>3</sup> some seventeen years ago, and it has been powerfully reinforced recently by others, such as Steven Kestin<sup>4</sup> in 1994. In a word, there is less doubt now than there has ever been in the past that many other animals are painient. This is true, too, for painful emotions, such as fear.

### **Double Standards**

A concern for the individual is often a basis for laws protecting humans but not for those protecting nonhuman animals. The latter are almost invariably based upon Utilitarian principles where the suffering of an individual can be justified in the name of a greater benefit. Hence the typical offence is to cause “unnecessary” suffering. In most laws protecting humans, however, each *individual* is protected absolutely. For example, it is considered wrong to experiment upon a human being without consent, even if that experiment may bring some advantage to others. Of course, with human subjects, the likelihood of achieving useful results would certainly be higher. Why is there this speciesist double standard? Clearly, because of human self-interest.

### **Rights and Duties**

Roger Scruton has recently criticised my position.<sup>5</sup> Furthermore, he attacks the idea that animals have rights on the grounds that only those who can observe duties deserve rights. This is clearly a wrong argument. He is confusing moral agency with moral community. What about babies? What about certain adults who are handicapped? They cannot observe duties. Are they, therefore, to be without rights? What about Roger Scruton himself if, when he falls off his horse while hunting, he hits his head and becomes temporarily incapable of observing duties? Is he thereupon stripped of his rights? Scrutonite theory seems to say—"I will only care for you if you are potentially able to care for me." This strikes me as cynical, unsatisfactory and simply, unethical.

As far as I am concerned, rights and duties are the opposite sides of the same coin. It seems to me that people who tend to feel confident and powerful prefer to use the term "duty," while others, less secure, prefer the word "rights." The former identify with the do-er, while the latter identify with the victim or the done-to. Both "duties" and "rights" are human inventions. "Rights" can sound peevish, while "duties" can sound patronising. There is an element of condescension about the "duties" attitude to animals. The Scrutonite seems to say—"I might help you or I might not, depending upon whether or not I own you." Indeed, duties-people appear sometimes to be more concerned about the virtue of the do-er than the fate of the sufferer. Thus, Scruton also argues that it is the do-er's *motive that matters*. Carried to extremes, this type of argument might justify rape and murder provided they were carried out in a spirit of selfless sincerity!

Personally speaking, I talk usually of speciesism and so avoid the argument over rights. But I do approve of the "protective fence" around painient individuals which the "rights" approach encourages.

We are not, of course, talking of active or legal rights, like the right to vote. In the case of animals' rights, people are talking about the passive right not to be caused pain. Since Darwin, we have all known we are animals. To go on putting our own species into a completely separate moral category is illogical and pre-Darwinian. There is no intelligent reason for it. It is sheer speciesism.

I think there are basically three ethical positions among us animal welfarists—those of Peter Singer, Tom Regan and myself. I agree with Singer that pain is the crucial issue but disagree with his Utilitarian aggregation of the pains and pleasures of several individuals. I disagree with Regan's view that it is the "inherent value" of an animal that matters. This is a bit too vague for me. I prefer pain (broadly defined) as the basic criterion of what is wrong. But I agree with Regan's emphasis on the importance of the painient individual. It is the suffering of each individual that matters. I call my position "painism."<sup>6</sup>

### Conclusions

In conclusion, scientists must at least acknowledge that there is a serious moral issue here. Not to acknowledge this would, I think, be irrational. Basically, the question is this—what gives me the right to cause pain to others, regardless of their race or species?

The modern generation of scientists has, I am glad to say, begun to face up to this ethical problem. We are also faced with the psychological and social problem of what sort of persons we want to be. In my opinion, animal experimentation, and even dissection, can have grave psychological repercussions. These, in turn, could conceivably have wider social effects.

As regards the animals themselves, there are two main ethical issues—being made to suffer and being killed. Both are very important, although I am inclined to regard the *quality of life* for each individual animal (whether human or nonhuman) as being of greater importance than its *duration*. We all have to die. The question is—*how* do we live, and *how* do we die?

In practical terms, we should never forget the three R's—replacement, refinement and reduction.<sup>7</sup> That is to say, the replacement of painient systems with nonpainient ones, the refinement of techniques so as to avoid the infliction of pain and the reduction in the use of animals generally. Most experimenters, at the very least, must be trained before they qualify for a licence to work with animals; for example, training in euthanasia, analgesia, anaesthesia, general animal care and ethics. They need to understand pain and distress and post-operative care and environmental enrichment. They must also be up to date in their knowledge of humane alternative techniques, and some incentive must exist to help them switch to these techniques as they become available. This means better programmes for training and retraining.

There is a need for proper ethical committees, and these need to be more than mere PR exercises. They need to address the “cost/ benefit” calculations that are now a feature of the British law in this field. How far, for example, can tests of cosmetics *ever be justified*?

We are faced sometimes with the question—is it worse to cause more pain to a few animals or to cause less pain to a greater number? Well, I have, I hope, made it clear that I consider that it is the intensity and duration of pain of the individual that is most important. You cannot aggregate pain scores meaningfully across individuals. It is better, therefore, to inconvenience ten animals than to cause severe pain to one.

*So, reduction in pain is the objective, not the reduction in the total number of animals used.* The trade-off dilemma—central to the 1986 Act (which I played a part in persuading the government to put on the statute book)—remains problematical. But we can at least remove the principle of aggregation from its workings. A further amendment, I would suggest, is that there should be an absolute limit to the intensity or duration of pain permitted under the Act, regardless of expected benefits. Pain which is severe should immediately be prohibited. So also should be milder pain which is prolonged. Again, the *emphasis should be upon the control of PAIN and not on the numbers of animals used.*

The science of animal welfare is a new field and is rapidly developing our knowledge of how to care for animals, satisfy their needs and *enrich their environment*. In the USA last

year, I visited a famous primate laboratory where much has been improved in the way in which the animals are treated. The interesting and technical field of environmental enrichment, however, still needs far greater application. I noticed that as the monkeys left the breeding colony and became experimental subjects, their environment became progressively impoverished. There is no justification for this.

So, to summarise: as scientists we acknowledge that the human species is but one of many species. We know that other animals often behave as we do when in pain and that their nervous systems and their biochemistry are similar to our own. We know that nonhumans are related to us through evolution and that, therefore, it is inconsistent to continue to put our own kind on a moral pedestal entirely separate from all the others. How can it be moral to cause pain or misery to monkeys, dogs or rats if it is immoral to do this to humans? There are no *rational* grounds for asserting this. If it is wrong to experiment painfully upon humans, it must, logically speaking, be wrong to do likewise to nonhumans.<sup>8</sup> We cannot, with consistency, argue that nonhumans are so like us that they produce valid experimental results and then claim that they are morally entirely different.

As scientists we should remember simply this: pain is pain regardless of species. Pain, not numbers of animals, is the central issue.

We cannot escape the conclusion that to deliberately cause pain is a very serious matter morally. Indeed, it is just about the only serious moral matter.

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