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Animals Suffer Too — A Response to Akhtar's "Animal Pain and Welfare: Can Pain Sometimes Be Worse for Them than for Us?"

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In her chapter, Akhtar (2011) suggests that animals experience worse physical pain than humans because animals are not endowed with self-consciousness or with consciousness of the passage of time. In this article, I dispute this idea. Instead, I develop a fear/pain criterion of rational behavior that reveals that rats do behave rationally whereas humans in many cases do not. A human applies his or her higher intellectual capability such that at times it increases suffering and at times it decreases suffering.

Keywords: pain and fear, suffering in humans and animals, rationality

Who feels greater pain and who suffers more — humans or animals? The answer to this question may determine our approach to animals: if it turns out that they suffer at least as much as humans, perhaps they should be treated more humanely. Sahar Akhtar (2011) develops her approach to pain and suffering in animals and humans, which I call the "increased suffering approach," in comparison to the "decreased suffering approach" that opposes hers. I shall briefly review the decreased suffering approach; then I shall describe Akhtar's increased suffering approach; and finally, I shall offer my own approach, based primarily on observations and laboratory experiments. I call my own approach the "rational behavior approach," since it seeks to answer the question "Who suffers more?" by first asking a slightly different question: Who behaves more *rationally* in fear/pain situations — humans or animals?

The decreased suffering approach maintains that animals experience pain and suffering to a lesser degree than humans because they have neither self-awareness

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nor awareness of the passage of time. This approach posits that animals (e.g., mice, rats, cats, dogs, monkeys) consciously experience physical pain but are not endowed with the capacity for self-awareness (e.g., awareness of the awareness of pain) or the ability to understand the passage of time (e.g., future expectation). The decreased suffering approach also distinguishes the sense of physical pain (e.g., an electric shock to the hand or foot) from a feeling of suffering connected with pain. The latter kind of suffering is based on the activity of "higher-processes," that is, higher cognitive and consciousness processes. For example, a person who is terminally ill with cancer may experience both the severe physical pain of the cancer as well as a sense of suffering due to the agonizing state of knowing that one's illness is incurable and that one's life will be cut short. The decreased suffering approach, then, proposes that animals are not aware of the suffering that, in humans, arises from the higher-processes. Akhtar summarizes this position as follows:

> There is a widely held view in philosophy and the biological sciences that the amount and ways in which an animal can experience pain as compared to us is limited to the feeling of sensory pain. The primary reason for this view is the belief that animals are less cognitively sophisticated than we are, and in particular that animals lack awareness of self and sense of the past and the future. If pain is inflicted on animals, it is thought that while animals may be able to feel pain itself, they are not capable of the higher order suffering that may accompany the feeling of pain in us. This view suggests that pain for animals is not as bad as pain for us. (2011, p. 495)

Thus, the decreased suffering approach holds that, because animals lack the higher-order processes possessed by humans, they are free from the layer of cognitive suffering that is added to the human experience of physical pain.

In contrast, Akhtar argues that the dominant effect of these higher-order processes in humans is one of relief, not of greater suffering. This position, the increased suffering approach, proposes that higher-processes help humans cope with and attenuate the experience of pain. For example, a person who has sustained a blow to her leg can turn her mind away from the pain, ignore it, and continue with her purposeful activity, perhaps, for instance, to run a certain distance in a given time. Or a person in pain may comfort himself by imagining a better and more enjoyable situation than the present moment, while an animal cannot do so. That is, the feeling of pain is influenced by the individual's attitude toward the pain.

Akhtar writes:

> I will argue that due to the same reasons for which animals are thought to be incapable of sophisticated forms of suffering — namely, a lack of self- and time-awareness — a given amount of pain may actually be worse for animals in certain respects than many have thought and may even be worse for them than

> the comparable amount of pain is for us. . . . The first [reason for this] is that the intensity of pain for us can often be mitigated through expectations, memories, and the consideration of and attention to other interests. The second and main reason is that we are able to engage in inter-temporal calculations with respect to our interests and frequently discount pain in order to achieve other, higher order or longer term interests. (pp. 495–496)

The increased suffering approach thus argues that the higher cognitive processes, which the decreased suffering approach claims exacerbate human pain, actually serve to attenuate the experience of pain, leaving non-human animals in a worse position by comparison.

The Rational Behavior Approach to the Problem of Pain and Suffering

The main difference between the decreased suffering approach and the increased suffering approach lies in the way the higher-processes are used in humans. On the one hand, one may present arguments and examples that support the hypothesis that the absence of these processes in animals only eases the animal's suffering and their presence increases it in the human. For example, an individual may believe that the pain in his leg signifies that he has a malignant tumor. On the other hand, arguments and examples can be presented supporting the hypothesis that these processes can be used to reduce and even to dispel the pain-suffering in the person but not in the animal. For example, a person can concentrate on watching a soccer match on TV instead of on the pain in his leg.

In the present article, I do not intend to undermine the one approach and reinforce the other. Rather, I intend to show that animals, although not endowed with the higher-processes that humans are endowed with, do possess cognitive and mental tools that allow them to treat pain and suffering appropriately by applying means based on learning and rationality. I shall call this the "rational behavior approach."

The main argument of the present approach is that animals have memories of the past and expectations for the future, that is, they are able to learn and to change their behavior according to circumstances, and some of their behavior may be understood as rational. I shall now describe two observations and an experiment. I shall start with an observation of a dog at my residence (see Rakover, 2011). I call this observation "The dog and the elevator."

The dog and the elevator. A description of the place where the present observation took place is important. My apartment is located in apartment complex A, situated on a hillside. Above this complex there is apartment complex B, in which the apartment of the dog's owner is located; the dog is the hero of this observation. Below complex A is a parking lot, from which a corridor leads to an elevator that connects the parking lot level to a level with a small garden, from where one can reach the apartments in both complex A and complex B. The elevator ascends

and descends nonstop between the parking lot level and the garden level, so that occupants of the two complexes can benefit from its service.

The dog customarily lies all day in the parking lot, looking out onto the street from which cars enter the parking lot. One day, after I parked my car and was walking toward the corridor that leads to the elevator, the dog began following me, then running ahead of me, turning its head around from time to time be sure that I was continuing to walk toward the corridor. This behavior continued while I strode along the corridor to the elevator. After some time, the two of us found ourselves waiting for the elevator after I had pressed the elevator's button. When the elevator doors opened, the dog quickly went inside, and I followed behind. I pressed the ascent button and when the elevator arrived at the top floor, the doors opened onto the garden and the dog ran out of it and entered apartment complex B.

How may we explain this behavior of the dog? To propose an explanation, I need to add two facts. Firstly, this was the first and only time that the dog and I walked along the corridor and went up in the elevator together. Secondly, the dog and I were familiar with one another from the many times that it had lain in the parking lot and had seen me entering or leaving the corridor. I suggest that the range of the dog's behavior (overtaking me, running, looking back, waiting for the elevator, etc.) may be grasped by an appeal to the teleological explanation: the dog's purpose was to reach its dwelling place, its master's apartment in complex B. To realize this purpose, the dog utilized my expected behavior, namely ascending in the elevator to the garden. To achieve this, the dog had to retrieve from its memory relevant information, such as recognizing me as a creature (i.e., a human) that lived in the building and habitually walked to the elevator and travelled in it to the garden (it is reasonable to suppose that the dog had taken the elevator several times with its master and generalized that information to me, as another human inhabiting the building area). The dog applied these pieces of information, which was expressed by means of its behavior; it recognized me, ran and overtook me on my way to the corridor, checked from time to time whether I was walking in the correct direction, entered the elevator, and watched the doors that would open onto the garden (it stood in the elevator with its nose pointing in the direction of the exit).

From this explanation it emerges that the dog was endowed with a large number of intelligent abilities. For example, it could store past pieces of information, retrieve them, and use them to guide its behavior. And because the dog in the present observation recognized me, etc., it is hard to suggest that it was not endowed with information about the past and the future. To be sure, the dog is not endowed with intellectual abilities like those of a human, but it is endowed with abilities sufficient to contend with challenges such as ascending in an elevator. Furthermore, although we cannot know whether a dog has the ability to be self-aware, we may assume that it has fairly high levels of recognition of its feelings and

its desires. And if it is aware of its own desires, it is possible to offer the hypothesis that it is aware that these desires are its own, that is, it may have some low level of self-awareness.

I do not think that another explanation based on instinctive processes alone will succeed in fully explaining the dog's behavior. Likewise, a theory of mechanistic learning would be very hard-pressed to explain the behavior of a dog that fetches the leash for its master, to urge its master to take him out for a walk. (To the best of my knowledge, an entire theory of mechanistic learning has not, to date, proven able to contend with the concept of purpose, such as in the present case, where the dog's purpose was to reach its master's apartment, e.g., Rakover, 2018.) I shall now describe the second observation involving my Himalayan cat, Max (see Rakover, 2007).

The pampered cat. Late one evening, when I was on my own watching television, Max sidled up to me. With his forepaws, he scratched at the edge of the armchair in which I was sitting, and then remained seated on his rump, looking at me with his blue eyes. We exchanged looks. I leaned towards him, picked him up, settled him on my knees and stroked him. How can this behavior be explained — the mutual relation between Max and me? To be able to suggest a teleological explanation for this observation, that Max wants me to pet him so he scratches the edge of the armchair, I must emphasize that scratching had undergone a change from a natural, adaptive, survival function to a new function: to summon my attention to him, with the aim of being petted. The natural scratching is done by thrusting out the claws through stretching the toes of the feet when a cat enters the following situations: defense-attack, hunting, marking the scratched place with the cat's smell, and replacing claws. (Max has a special stand on which he customarily sharpens his claws.) None of these functions was effectuated in the present observation. Hence the scratching acquired a new function: a means to obtain reinforcements. The new function was acquired by a long learning process on the part of the cat, who had lived many years in the Rakover family apartment.

Based on these two observations, it may be suggested that animals (dogs, cats) have a high level of cognitive processes that make it possible for them to become adapted to their environment by means of learning processes: they remember past events, change their behavior accordingly, and as a result also become used to planning the future. Does this level of cognitive development allow the animal to develop self-awareness? This is an extremely difficult question. Nevertheless, I tend to give a slightly affirmative answer because the explanations that suit these observations are based on the animal's inner world. The dog wanted to get to its master's apartment, and used me as a means of achieving its goal; and Max wanted me to pet him and achieved this by scratching the edge of the armchair in which I sat.

Given that animals do possess certain intellectual abilities, one may wonder if these abilities guide them to behave rationally especially in a pain/suffering

situation. To answer this question, we may look at the following experiment, which I shall call "fear versus pain" (see Rakover, 1975).

Fear versus pain. If an individual has experienced sharp pain in a certain environment (or state), she will avoid re-entering that space because it will arouse fear of the pain that is liable to strike again. For example, if a dentist caused a sharp pain in the course of treatment, the individual may avoid returning to that dentist or may prefer to postpone treatment. The fear of pain may be seen as suffering in addition to the physical feeling of pain itself. Because countless experiments have shown that various animals develop fear of pain, it may be suggested that animals feel fear in addition to the sensation of pain. For example, in states where a neutral stimulus such as light is associated with a pain-arousing stimulus such as electric shock, thereafter light will cause a reaction of fear: an animal is likely to freeze (rats, for example, tend to go completely still, their fur stands on end, they cannot control their excretions, and they sometimes emit scream-like sounds) or take flight. In this sense then, the assumption that animals do not suffer but only feel physical pain is incorrect. Given this, the general question that arises here is not who feels more pain and who suffers more — the human or the animal, but rather this: considering the relation between fear and pain, who behaves more rationally in a fear/pain situation — the human or the animal?

This question may be answered empirically using an example to determine what constitutes rational behavior for a fear/pain situation (see Rakover, 1975). Consider the following procedure applied to a device that consists of two boxes, when box A is connected to box B. First, in box A, a rat receives a strong electric shock and as a result, box A arouses strong fear in the rat. Then the rat is transferred to box B in which it receives a very weak electric shock that steadily increases. This situation raises the following question: What level of pain in box B (caused by the increasing electric shock) is the rat ready to suffer in order not to enter box A, which arouses strong fear? The answer to this question leads one to define the following two limits of rationality:

Lower limit: if the rat enters box A, which arouses strong fear, without even feeling minor pain from the weak electrical shock delivered in box B, we may say that its behavior is not rational because it has learned nothing from its past experience (the pain it suffered previously in box A).

Upper limit: if for non-entry into box A, the rat in box B suffers pain (caused by the increasing electrical shock) that is greater than the pain it suffered in box A, we may say that its behavior is not rational. The rat pays for avoiding the fear aroused by box A with pain that is even greater than the pain it suffered earlier in box A.

Generalizing both these limits of rationality to humans, it may be asked whose is the more rational behavior in a fear/pain situation — the human's or

the rat's? Here I will discuss two kinds of examples that suggest new and interesting interpretations to human behavior from the viewpoint of these two limits of rationality. One may propose that there are many cases that can be interpreted as non-rational. Let us start first with everyday examples such as the fear of medical treatment (e.g., at the dentist's). The fear may lead people to postpone medical treatment at a very high cost: they ultimately pay with far greater pain than the pain they initially feared (to say nothing of the financial cost). Other examples are found in the way people act in the context of romantic relationships. For example, a person may consistently enter into relationships with an inappropriate kind of person (lower limit), while a person who was hurt by a love affair may consequently avoid romantic relationships altogether (upper limit). On a larger scale, one may consider human behavior in the context of war. In World War II, for example, one might say that the Germans should have avoided embarking on such a war based on the painful experiences of World War I. As in the lower limit of rationality described above, they should have avoided entering a painful situation. One might say that the British and French also behaved irrationally, because their fear of war was so great that they ended up paying a higher price in World War II than in World War I. This meets the criterion of the upper limit of rationality as described above.

Do animals, like humans, also behave irrationally at times? The following experiment that I conducted with white rats gives a negative answer: it transpires that rats are rational creatures (see Rakover, 1975). First, I shall briefly describe the stages of the experiment. Figure 1 shows the device in which the experiment took place. It consists of two boxes with a connecting hatch that allows transition from box to box. The floor of each box is constructed of rustproof iron bars through which it is possible to send an electric shock to the rat's feet. (Note that years ago the ethical

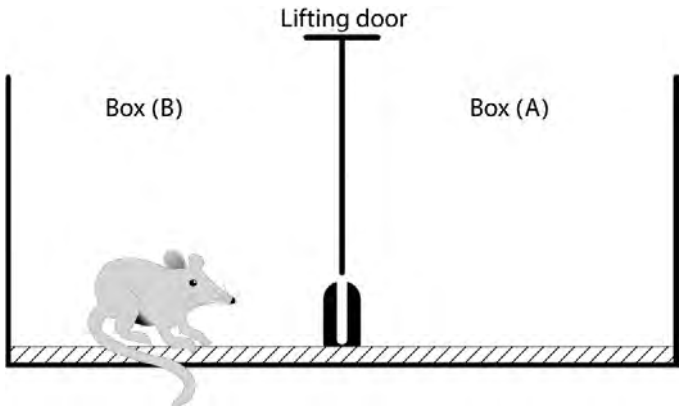

Figure 1: The device of the experiment: the floor is made of iron bars that can carry an electric current (adapted from Rakover, 1975).

justification for such research was not yet being called into question.) In the first stage of the experiment, the rat received fear conditioning (association of light and electric shock) in box (A): different groups of rats received electric shocks of varying strengths (in mA). In the second stage, the rat was transferred to box (B), the hatch was opened, the frightening light was switched on in box (A), and in box (B) the rat received increasing electric shocks in units of 0.1mA (at this stage an electric shock was not given in box (A)). The question was, what is the threshold of the rat's fear? That is, what intensity of electric shock delivered to the feet of the rat in box (B) will cause it to move from box (B) to box (A)? What strength of the electric shock — i.e., how much pain — is the rat willing to pay for its fear? (The fear threshold is the shock intensity midway between that which left the rat in box (B) and that which caused it to move to box (A).) It transpires that the rat is willing to pay with pain that is about 23% of the strength of the electric shock that it received earlier in box (A). For example, if the rat received the fear conditioning with an electric shock of 2 mA, its fear threshold will be 0.46 mA. Moreover, as can be seen in Figure 2, the rat's freezing response also increased with the strength of the electric shock in the conditioning stage, but payment for the freezing was less than payment for escape (when the rat was free of its freezing it still did not cross into the terrifying box (A), but moved around box (B) where it received an electric shock).

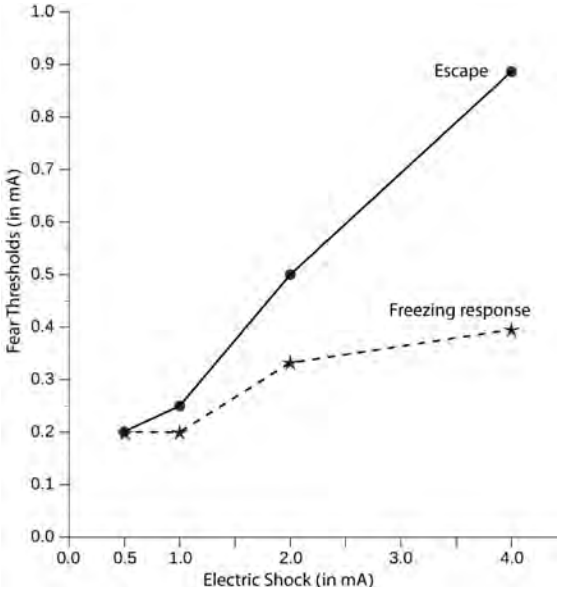

Figure 2: Fear thresholds (in mA) as a function of the strength of the electric shock (in mA) [adapted from Rakover, 1975].

An immediate conclusion from this experiment is this: the rat's behavior is entirely rational. It lies between the lower limit and the upper limit of rationality as defined above, i.e., the rat's behavior has not crossed the boundaries of rationality. In contrast, it appears that humans often do behave irrationally; they cross the lower limit and the upper limit of rationality. Hypothetically, the reason why human behavior is not always rational is that it is motivated largely by higher-processes that animals are not endowed with (see discussion below). In other words, irrational behavior in fear/pain situations is caused in many cases by the very fact that humans are endowed with rather sophisticated cognitive processes.

Discussion: Pain, Suffering, and Higher-Processes

At first sight, the original question of who suffers more seems like a question that cannot be answered. The comparison can be thwarted by asking: What is the yardstick with which the suffering of the one can be compared with the suffering of the other? Let us assume that in a fear/pain situation, behavior is affected by two main factors: physical pain and cognitive processes. Even if we assume that the feeling of physical pain in humans and animals is similar, we do not at the present have a way to measure the suffering resulting from the cognitive processes in humans and animals. Therefore, no yardstick is available with which to sufficiently answer the question.

Supposing, therefore, that the pain sensation is in fact universal (and appears in both animal and human), the decreased suffering approach suggests that higher-processes intensify suffering in the human, creating additional suffering that animals do not experience. By contrast, the increased suffering approach proposes that higher-processes help to lessen the suffering, and therefore animals suffer more than humans.

Compared with these two approaches, the rational behavior approach suggests that suffering in animals is also influenced by cognitive processes, albeit these are not developed to the level present in humans. The observations of the dog and the cat described above are well-explained by the teleological model and indicate a rather high level of cognitive processes, by means of which the animal is able to realize its goals (e.g., the dog wanted to reach its master's apartment; Max the cat wanted to be petted). Animals are equipped with fairly good cognitive tools that allow them to learn and remember, and change their behavior accordingly. As for pain and suffering, animals learn to fear; they are able to expect pain in the future; they react powerfully to threats. In other words, if we accept that feelings of this kind increase suffering, then it would seem that these cognitive processes increase suffering in both humans and animals.

The result of the experiment described above shows that the rat's behavior is rational because it does not exceed the lower or the upper limit of rational behavior in a state of suffering. By contrast, a large number of human behaviors can

be interpreted as exceeding the boundaries of rationality. These excesses emanate from higher-processes. Why? Because it would be hard to explain the glaring excess beyond the upper limit of rationality in states of suffering without resorting to the world of beliefs and values that humans developed on the basis of these processes. For example, it is hard to understand the practice of self-sacrifice apart from the context of human beliefs, such as in the case of serving one's motherland (e.g., kamikaze) or self-sacrifice and war in the name of religion. Similarly, choosing a monastic way of life replete with asceticism cannot be explained without reference to human beings' social and religious beliefs. As animals have not developed these kinds of beliefs, it is hard to find in them similar non-rational excesses.

Accordingly, one may suggest that, in humans, higher-processes have developed social, moral, and religious values that give rise to some non-rational behaviors. From this, one may extrapolate that higher-processes in humans cause greater suffering than in animals, who do not hold such values. On the other hand, higher-processes are likely also to help humans: by their means, humans have developed a marvelous civilization that greatly reduces human suffering and ennobles humans through worlds of pleasure, from which animals are far distant.

It seems to me within the bound of rational discourse to suggest that while animals use cognitive processes that can be interpreted as rational, our use of higher-processes can be irrational, even though in many instances we are capable of using these processes rationally. Thus, higher-processes in humans are likely to create two opposite outcomes: on the one hand, higher-processes reduce one's daily suffering by developing a culture that sets goals for oneself and imparts meaning to one's life; on the other hand, higher-processes intensify a person's suffering because the indebtedness and absolute commitment to a specific culture may lead the individual to irrational decisions such as self-sacrifice.

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