PHILOSOPHICAL DEBATE ON THE NATURE OF WELL-BEING: IMPLICATIONS FOR ANIMAL WELFARE

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Abstract

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There has been much consideration of well-being in philosophy, especially of human wellbeing, which contributes to our understanding of animal welfare. Three common approaches to well-being are presented here, which map approximately onto three possible ideas about animal welfare. Perfectionism and other forms of 'objective list' theories suggest that there are various values that should be realised or various things that an individual ought to have for his life to be a good life. In the case of humans, this is based on the concept of human nature. This approach is reflected in two ideas about animal welfare: first, that animals should live natural lives (which includes consideration of an animal's nature or 'telos'), and second, that welfare is concerned with functioning or fitness of animals. The two other approaches are subjective: in other words, they relate solely to the mental processes of the subject. The first, desire fulfilment, suggests that well-being is defined by the satisfaction of desires or preferences. The other, hedonism, states that well-being is the presence of pleasant mental states and the absence of unpleasant ones. These two approaches are both relevant to the idea that the welfare of animals relates solely to their feelings. That idea corresponds most closely to hedonism, so it may be that preferences are most relevant in helping to reveal feelings. However, it is sometimes implied that satisfaction of preferences is itself part of feelings. It would also be possible to maintain, as in the desire fulfilment approach to human well-being, that animal welfare consists of preference satisfaction itself. These possibilities need to be more clearly distinguished. Arguments for and against each approach to well-being are presented, so that scientists may be more aware of the strengths and weaknesses of their own ideas about animal welfare.

Keywords: animal welfare, feelings, functioning, hedonism, philosophy, preferences

Introduction

Philosophy has contributed considerably to discussion of animal welfare. Indeed, certain philosophers who have argued for increased consideration of animals have probably done more to raise the public profile of the issue than anyone else, whether scientists, politicians or activists (Singer 1975; Rollin 1981; Regan 1983; Midgley 1983). Others have criticised these proponents' arguments (Frey 1980; Leahy 1991; Carruthers 1992); they have had less coverage, at least in the popular press, but have helped to stimulate informed debate. However, people without much knowledge of philosophy, including experts in other aspects of animal welfare such as scientists, may find it difficult to understand the context in which philosophical arguments are made, to assess their plausibility, or to decide between them

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when they come to different conclusions. Here we set out some of the background to the contributions made to this field by philosophers, which helps to explain their assumptions and approaches. In particular, we outline some of the approaches they have taken to the question of what well-being is, and the arguments for and against these approaches. These are relevant to the question of what animal welfare is: while philosophy does not provide a definitive answer to this question, it does help to clarify thinking. Such clarification is important for animal welfare research, because research can be improved by making hidden assumptions explicit and by reflecting on those assumptions.

What is well-being?

There has been extensive consideration of well-being in philosophy, particularly of human well-being (eg Griffin 1986). The word 'welfare' is rare; when it is used, it is usually with the assumption that welfare is wholly subjective, relating to mental processes akin to what are considered as 'feelings' in discussions of animal welfare (Duncan 1996). For example, Sumner (1992, p 5) claims that a person's welfare depends "on the feelings, or aims, or preferences — what I shall generically call the attitudes or concerns — of the person". So in talking of welfare he does not explicitly distinguish between welfare and well-being, but of the possible theories or definitions of well-being that we shall discuss shortly, he uses only the subjective ones. Two other commonly used phrases that are more-or-less synonyms for welfare or well-being are "quality of life" (Sandøe 1999) and "what makes a person's life go well" (Parfit 1984).

Another related concept is self-interest. In a widely quoted discussion of this topic, Derek Parfit (1984, p 493) asks the following question:

What would be best for someone, or would be most in this person's interests, or would make this person's life go, for him, as well as possible? Answers to this question I call *theories about self-interest*.

It is relevant here that much of the thinking on this topic derives from economics, which used to be much more closely integrated with ethics than it is currently.

So what is well-being? Kagan (1992, pp 169-170) sets out three main approaches clearly:

In what is rapidly becoming the traditional classification, there are three basic types of theories of well-being. First, there are *mental state* theories, which hold that an individual's well-being consists solely in the presence of the relevant kinds of mental states. Hedonism is, of course, the most familiar theory of this sort, claiming that well-being consists in the presence of pleasure. But ... one might accept a broader mental state theory according to which, even though being well-off was a matter of having the right mental states, the direct relevance of a given mental state need not be exhausted by its pleasantness.

Second, there are *desire* or preference theories, which hold that being well-off is a matter of having one's (intrinsic) desires satisfied. What is intended here, of course, is 'satisfaction' in the logician's sense: the question is simply whether or not the states of affairs that are the objects of one's various desires obtain; it is irrelevant whether or not one realizes it, or whether one gets some psychological feeling of satisfaction. (Some desire theorists restrict well-being to the satisfaction of the desires one would have if fully informed and rational, but for our purposes these refinements will not matter.)

Finally, there are *objective* or objective list theories, which hold that various things are objectively good for a person to have, whether or not he realizes it, and whether or not he desires it. Being well-off is simply a matter of one's having the various objective goods. These might include not only pleasure, but also, for example, friendship, fame, knowledge or wealth. The list of objective goods is, of course, a matter of dispute, but there is no obvious reason to think it would be restricted to kinds of mental states.

Commonly used terms from this classification, as for example in the discussion by Parfit (1984), are hedonism, desire or preference fulfilment, and objective list. In this paper the term desire fulfilment will be used rather than preference fulfilment when referring to human well-being, as the word preference has been commonly used in relation to animal welfare (Fraser & Matthews 1997). In economics, hedonism was the original idea; it was superseded by desire fulfilment and then more recently economics moved away from considering well-being at all (Sen 1987). One other important concept, which is a type of objective list, is that of human perfection. This forms the basis of the moral theory of perfectionism, which suggests that there are various values that should be realised by an individual if his life is to be a good life. According to Hurka (1993, p 3):

[Perfectionism] starts from an account of the good human life, or the intrinsically desirable life. And it characterizes this life in a distinctive way. Certain properties, it says, constitute human nature or are definitive of humanity — they make humans human.

Human well-being and animal welfare

The above discussion is obviously reminiscent of that on animal welfare. Fraser *et al* (1997) have suggested that three main ideas are expressed in public discussions concerning animal welfare: feelings, functioning, and natural living. We shall examine how these correspond to the categories of human well-being (Table 1) and how arguments for and against the latter contribute to understanding of animal welfare. One important distinction to make at the outset, which has often been lacking in discussions of animal welfare, is between the following two questions: 'How should well-being or welfare be defined?' and 'How should well-being or welfare be assessed?'. We shall primarily address the former, but with obvious relevance for the latter.

Table 1 Correspondence between concepts of human well-being (eg Parfit 1984) and animal welfare (eg Fraser *et al* 1997).

Human well-being	Animal welfare
	Feelings
Hedonism	Pleasure, suffering
Desire fulfilment	Preferences
Objective list	Functioning
Perfectionism (importance of human nature)	Natural living (importance of animals' nature or telos)

The concept of feelings in animals relates to the subjective categories both of hedonism and of desire fulfilment in human well-being (Jensen & Sandøe 1997). As a definition of animal welfare, the concept is closer to hedonism; for example, Fraser *et al* (1997) represent this idea as follows:

Animals should *feel* well by being free from prolonged and intense fear, pain and other negative states, and by experiencing normal pleasures.

However, expression of preferences by animals is often included under the heading of feelings without recognition that this is a separate issue. This is partly because it is often assumed, and sometimes stated explicitly, that pleasure will be achieved and suffering avoided by allowing animals to express their preferences: this is the basis of preference testing. Thus, Duncan and Fraser (1997, p 22) say that:

One research approach [to the subjective experience of animals] involves studying the preferences of an animal for different environments, and the strength of the animal's motivation to obtain or avoid certain features of the environment. Underlying such research is the assumption that animals will choose (and work to obtain) environments in which they experience more contentment and/or less pain, fear and other negative states.

The limitations of that assumption are pointed out by thoughtful commentaries on preference testing (Fraser & Matthews 1997). There are, then, three possible views on the subjective nature of animal welfare. First, there is the view that animal welfare is all about feelings such as pleasure and suffering (hedonism), and that expression of preferences is only relevant because it tends to increase pleasure; thus preference tests may help to reveal such feelings. Second, it can be held that animal welfare is about both feelings and preference satisfaction. Third, it could be maintained that animal welfare is all about preference satisfaction; this third view is probably rare. Interactions between hedonism and desire or preference fulfilment will be considered below.

Claims that animal welfare is concerned with functioning, often attributed to Broom (eg 1991), correspond quite closely with the objective list theory of human well-being. For example, in discussing this theory, Parfit (1984, p 499) says that the things that are good for people (whether or not they want to have them) might include "the development of one's abilities, having children and being a good parent". Of course, having offspring may also be associated with pleasure, the fulfilment of desires or both. As emphasised above, there are overlaps between the different conceptions of human well-being as well as of animal welfare (in this case feelings and functioning). Indeed, Broom (1998) has pointed out that feelings may be an important aspect of functioning. However, it may still be that when it comes to definition of well-being or welfare it is appropriate to adopt one category as pre-eminent and to think of the others as contributing to well-being or as providing means of assessing it, rather than as defining it. In this case, welfare may be defined in terms of functioning, with any associated variation in feelings or preference satisfaction being seen as secondary.

Whether animal welfare should be defined in terms of feelings or functioning has been a matter of debate (Broom 1996; Duncan 1996). As indicated above in references to Sumner (1992) and Kagan (1992), similar debates occur in discussion of human well-being about the relative merit of subjective and objective approaches. Sumner treats well-being as wholly subjective, but Kagan (p 187) notes "the possibility that certain changes in the body might affect well-being even though they involve no changes in one's mental states". This parallels the debate on whether an animal's welfare is diminished by an illness that doesn't (yet) affect its feelings; some consider that it is, others disagree (Duncan & Fraser 1997).

The idea of 'natural living' for animals encompasses several concepts, perhaps most commonly that of the importance of living in 'natural environments'. There has been little consideration of 'natural environments' in philosophical treatments of human well-being (although quite a lot in other areas such as environmental ethics). However, the emphasis on human nature in perfectionism (Hurka 1993) does correspond to one other major approach to 'natural living' for animals, proposed clearly by Rollin (1993a, p 48):

It is likely that the emerging social ethic for animals ... will demand from scientists data relevant to a much increased concept of welfare. Not only will welfare mean control of pain and suffering, it will also entail nurturing and fulfilment of the animals' natures, which I call *telos*.

Indeed, both Hurka and Rollin derive their ideas partly from Aristotle. In particular, the term *telos* derives from Aristotle's writings (1934).

To be able to assess animal welfare, scientists must, at least implicitly, take a definition of animal welfare as their starting point. In the following sections, arguments for and against the different approaches to well-being will be discussed, to explain the strengths and weaknesses of each and to consider their relevance for animal welfare, so that the choice of definition may be as informed as possible. Scientists should be aware of the assumptions and commitments that go with a favoured definition — not least because these may have an effect on the way in which animal welfare should be measured.

Perfectionism and the objective list approach

The classic formulation of perfectionism was given by Aristotle in *The Nicomachean Ethics* (1934). According to Aristotle, every living being has an essence, which sets a goal for the life of that being. With regard to humans, some philosophers accept the key idea that there are a number of substantial human values at least some of which have to be realised for a human life to count as a good life. They would therefore say that there is more to a good life than mere pleasure or desire satisfaction; a good life must realise important human potentials. Perfectionism appeals to widely shared intuitions about what constitutes a good life. Thus having a good family life, being creative artistically or otherwise, gaining knowledge, having success professionally, being politically active, having friends and the like, are normally thought to contribute to the quality of a human life. To have a good life one need not be successful in all of these respects, but if one falls short in all or most respects one's life will be a 'poor' life. Arguments about the importance of animal natures to their welfare follow similar intuitions. For example Rollin (1993b, p 11, 13) suggests that:

Animals, too, have natures — the pigness of the pig, the cowness of the cow, 'fish gotta swim, birds gotta fly' — which are as essential to their well-being as speech and assembly are to us.

Common sense tells us that animals who are built to move need to move to feel good; there is no point in trying to prove that they are fine if kept immobile — no one will believe you anyway.

Despite its intuitive appeal, perfectionism is not part of the mainstream of modern moral philosophy and a number of arguments have been produced to show that perfectionism is, after all, not a tenable position. Three such arguments will be considered here.

In the first argument, concerning autonomy (cf Sumner 1992, pp 7–8), perfectionism is wrong because it does not respect the view of the individual whose well-being is in question. For example, according to perfectionism it may be best for individuals to develop their

talents even though they desire to do things for which they are less talented. Some discussions of animal welfare also place value on autonomy, particularly when discussing higher primates (DeGrazia 1996). This objection presupposes that people's or animals' preferences define what is good for them. However, both people and animals often do things that apparently run counter to their long-term self-interest, for example things that make them ill. Interestingly, if the argument is tenable it also tells against defining well-being in terms of happiness, because what people or animals prefer may sometimes turn out to make them unhappy.

The second argument concerns the categories of beings that are to be included in the definition (cf Sumner 1992, p 6). Philosophers usually apply the notion of well-being only to humans. By a natural extension it may also be applied to some animals but it does not seem applicable to lower animals or other organisms with less developed sentience. However, in perfectionism an individual's well-being is enhanced by 'flourishing', ie the fulfilment of potentials characteristic of things of the kind to which the individual belongs. There is no obvious reason why a worm or plant should not have well-being thus defined. On what grounds, then, should less sentient organisms be excluded?

Adherents of perfectionism may reply to this point in two ways. Both accept the consequence just described, that, for perfectionists, the notion of well-being extends to worms and other living beings. The first reply simply accepts that worms and other living beings are objects of moral concern. For independent reasons this view has been accepted by a number of moral philosophers within environmental ethics. The other reply severs the connection between being a subject to which the notion of well-being may be applied and being a subject that deserves moral concern. Worms have well-being, according to this reply, but their well-being is not a matter for moral concern. These two replies affirm that whether or not a certain notion of well-being is acceptable depends on the context within which the notion is used, in this case on whether or not possessing well-being is thought to have moral implications.

The third argument casts doubt on perfectionism's presupposition that humanity has an essence on the basis of which characteristic human values may be defined. It also denies that this essence, even if it existed, could serve to define substantive values for well-being. This argument may be summarised as 'anti-essentialist'.

The concept of animal natures or *telos* is subject to similar criticism. It usually includes aspects of natural environments, natural behaviour and natural living, but often these are impossible to define (Duncan & Fraser 1997). Furthermore, an accusation of arbitrariness can be made of concepts of animal welfare that emphasise either animal natures or functioning. For example, the concept of functioning often involves ideas about evolutionary fitness, including successful breeding as well as a healthy, flourishing life. This becomes difficult to apply, though, when breeding is strongly affected by human intervention: it seems unreasonable to include breeding achieved by artificial insemination as a positive indication of welfare. It is also unclear how far the concept of evolutionary fitness can be incorporated into that of welfare. Barnard and Hurst (1996) point out that natural selection involves not just adaptive self-preservation but also adaptive self-expenditure. This might suggest that a mother could improve her welfare by defending her young, even if she sustained injury in the process. Alternatively we might regard the mother's welfare as reduced, even though her fitness is increased.

Two sorts of reply are typically given to the anti-essentialist argument. The more ambitious insists both that humanity has an essence and that this can be used to define well-

being. On the basis of this, Hurka (1993) defines standards in the light of which a human may be said to fare better or worse. The other reply is to defend perfectionism without essentialism. Typically perfectionism will then take the form of an objective list of values that are not derived from or otherwise based on an account of nature (Griffin 1986; Scanlon 1993). Each of these replies faces problems. The first may be thought to be over-ambitious. Thus it may be doubted whether substantive values can be based on a plausible account of human nature or the nature of any other species. Perfectionism without essentialism may seem too unambitious: it can seem to erect an account of the good life on unstable foundations. Thus it may be claimed that the stipulated objective list of values is imperfectly grounded and *ad hoc*. Indeed, Hurka's (1993) analysis of human nature explicitly rejects evolutionary ideas — for example, the idea that aggression and competitiveness (which might be produced by natural selection) are part of human nature. A contrary view is held by others such as Rachels (1990).

To sum up, perfectionism and the objective list approach have intuitive appeal, but several arguments can be raised against defining well-being in these terms. Whether or not these arguments are decisive depends partly on how well the two other notions of well-being stand up to scrutiny.

Desire fulfilment

The obvious antidote to perfectionism is the idea that well-being is defined in terms of satisfaction or fulfilment of desires (Brandt 1979; Hare 1981; Nordenfelt 1994). This view suggests that a good life is one in which the people or animals in question get what they want. It has the advantage of being very simple, and there is a clear link between well-being and the observable behaviour of the individual in terms of revealed desires, ie desires displayed in action. Thus it is possible to study well-being by empirical methods. There is also less tension between promoting well-being and respecting autonomy than there is with perfectionism. Indeed it might be argued that there is no such clash, since respecting desires is the same as respecting autonomy. The problem of which categories of beings are concerned is also dealt with, since only sentient creatures have desires or preferences. Finally, the view is clearly compatible with an anti-essentialist outlook.

However, the desire fulfilment approach is vulnerable to other objections. First, there may be cases of desire fulfilment that, intuitively, do not contribute positively to well-being. One example is given by Parfit (1984, p 494) that, while rather obscure in relation to animals, makes a strong point about defining well-being too simply:

Suppose that I meet a stranger who has what is believed to be a fatal disease. My sympathy is aroused, and I strongly want this stranger to be cured. We never meet again. Later, unknown to me, this stranger is cured.

The problem here is either lack of awareness (the individual is not aware that the desire is being satisfied) or temporal dislocation (the individual no longer holds the desire). The normal way of overcoming these obstacles is by adding requirements of experience and contemporaneity: only if an individual is aware of a desire being satisfied (or frustrated) and still holds the desire at the time does it affect his well-being. These requirements are obviously reasonable when interpreting an animal's welfare in terms of preferences. If a dog is frightened of you and would prefer you to leave, it does not contribute to her welfare if you leave secretly (behind a screen, say, so that she thinks you are still present) or if you leave when her fear has ended (perhaps because you feed her). It may also be appropriate to add an information requirement — to require that the person or animal with the preference

understands fully what would be involved in its being satisfied. This is difficult to achieve with animals, even though their preferences are unlikely to be as abstruse as the human example given above. However, there are some cases where provision of information results in preferences being expressed that seem intuitively reasonable. For example, pigs given the opportunity to sample foods fully in advance can then choose a diet that provides them with an appropriate proportion of protein for healthy growth (Kyriazakis *et al* 1990). These replies aim to transform the desire fulfilment approach so that it no longer gives rise to counterintuitive examples.

The second argument is that there may be increases in well-being without fulfilment of desires. One example is a happy surprise, ie a person or animal experiencing something with enjoyment where there was no apparent desire to be satisfied.

The third argument says that the desire fulfilment approach lacks content in the sense that it does not indicate how to improve the welfare of an individual. If a person asks how he should live, it is no answer to say that he should aim to satisfy his desires, since the person is, in essence, asking *which* desires to satisfy. Similarly, animals' preferences are not immutable: animals may acquire or lose preferences, for example through training by humans. Which preferences should we encourage or discourage? It seems that there is more to the desire fulfilment approach than just the satisfaction of desires. This, it seems, must be a separate account of the good life. The first two arguments discussed in this section suggest that what matters is not desire or preference satisfaction as such but an associated positive feeling. Thus a good candidate for a more substantive account of well-being is hedonism.

Hedonism

Hedonism is the view that well-being consists in the presence of pleasant mental states and the absence of painful or unpleasant ones. This view clearly avoids the problems about indifferent preference satisfaction that haunt the desire fulfilment approach; it also deals with happy surprises and the like. Furthermore, hedonism limits the notion of well-being to humans and other sentient animals. Intuitively, this is attractive.

Bentham (1789, p 64) gave the following classic account of how pleasure and pain contribute to a person's well-being:

To a person considered by himself, the value of a pleasure or pain considered by itself, will be greater or less according to the four following circumstances:

- 1. Its intensity,
- 2. Its duration,
- 3. Its certainty or uncertainty,
- 4. Its propinguity or remoteness.

Bentham did not claim that all the experiences of pleasure and pain that contribute to well-being are of the same kind. He allowed that there are many varieties of pleasure and pain, some of which, such as orgasm and migraine, are basic and simple, while others, such as winning at chess and grief, are more sophisticated. He did, however, claim that insofar as experiences affect well-being they share a certain quality, the quality of being pleasant or painful, and that on the basis of this shared quality we can compare the amount of well-being gained or lost in various situations.

This, though, gives rise to the first argument facing hedonism. This proceeds by listing examples of positive (or negative) mental states and then invites the reader to see for himself

that there really is no shared mental quality (cf Griffin 1986, p 8). A relevant list could be, for example, enjoyment of a good meal, of being creative, of reading a good novel or of finding out that one is not HIV positive. In case of negative states it could be nausea, intense physical pain, anxiety when waiting to have a suspicion of cancer confirmed or frustration at not being able to walk around. It does not seem possible to discern a shared quality experienced in all these mental states, nor a quantitative dimension whereby different sorts of pleasant states may be compared in intensity. This argument applies equally to animals as to humans.

To this the hedonist may reply by giving up the assumption of a shared mental quality. There is no need to assume that there is only one type of pleasant mental state: the fact that there are different sorts of 'pleasure' does not undermine the claim that it is because a mental state is pleasant that it is good.

This reply reveals that hedonism is related to perfectionism. Like perfectionism, it gives a substantive account of the good life, and indeed it may be seen as an objective list, with the special feature that the list only contains mental states (cf Kagan 1992, p 175). But if hedonism is an objective list theory, refusal to extend the list to include non-mental states, such as companionship and knowledge, may be seen as arbitrary. The hedonist may reply by appealing to the intuitions that favour the desire fulfilment approach over perfectionism. He can point out that a good life must reflect the subjective point of view of the individual in question. Positive welfare means not only that an individual's life is good, but also that the life is good for that individual. Pleasure and the absence of pain are not just valuable objectively, but valuable from the point of view of the affected individual. However, this in turn gives rise to an argument on the basis that particular sorts of pleasant or painful mental states might matter more to one individual than they do to another, for example because individuals have very different pain thresholds. After brain surgery people with chronic pain have even reported that although they still feel the same pain sensation, it no longer matters to them (Trigg 1970, pp 125-142). Therefore, the argument runs, what affects an individual's well-being is not just pleasure, pain and other mental states, but how much these states matter to the individual in question.

There seem to be two ways in which the hedonist can reply to this argument. The first is by saying that when a mental state matters differently to two individuals, or to the same individual in different circumstances, it cannot be the same state, ie a state of pleasure or pain with identical duration and intensity. Thus the patients in the stated example are wrong when they report after the surgery that they still feel the same intensity of pain. This reply is unlikely, however, to convince the individuals concerned. It is certainly hard to prove in the surgery example, and the general idea that how much a pleasure or pain matters to you cannot vary independently of variation in intensity and duration is hard to defend. The other reply is to accept the conclusion and then adopt a view that is a hybrid of desire fulfilment and hedonism. According to this view, which has been labelled preference hedonism (cf Parfit 1984, p 493), well-being consists of the presence of pleasurable (and the absence of painful) mental states, but just how much these mental states affect an individual's well-being depends on how much they matter to the individual in question.

This latter approach has obvious application to animals: it applies to the issue of whether human welfare and animal welfare are comparable, and to comparisons between animal species. Thus 'the same amount of pain' (or of other feelings) may matter more to a human than to an animal in some circumstances — for example, if the human worries about why they are in pain. But it may matter less in other circumstances — for example, the human

may know that a pain is temporary. There is no reason to believe that the same amount of pleasure or pain will in general matter more or less to a human than to an animal, or to a more complex animal than to one less complex. Moreover there are feelings that some species have, but not others. Humans are more complex than horses in characteristics such as rationality, sociality, self-awareness and autonomy, and it follows that there are types of pleasure and suffering felt by humans but not by horses. Similarly, there must be types of mental state that matter to horses but not to haddock. Only in the extreme view that most or all animals are incapable of having any feelings at all (Bermond 1997) — a view that is held by very few people — is hedonism inapplicable to most or all animals.

Discussion

There is no simple answer to the question 'What is well-being?'. At least three kinds of answer — perfectionism or other forms of objective list, desire fulfilment, and hedonism — have been developed by philosophers in relation to human well-being. Each has pros and cons. This discussion parallels the conclusion from Fraser *et al* (1997) and Duncan and Fraser (1997), among others, that a brief definition of animal welfare is not possible. Fraser *et al* (1997) argue that a scientific conception of animal welfare has to take into account all the value positions expressed in public discussion over the quality of life of animals, and the problems to which those positions relate. Those value positions emphasise animal feelings, functioning and natural living: categories that map approximately, but not precisely, onto those outlined for human well-being. Correspondingly, arguments for and against different approaches to human well-being contribute to understanding of animal welfare but cannot provide definitive answers.

As there is no definitive answer to the question about what well-being is — either for humans or for animals — the approach adopted must depend on the context. A person doing research on well-being must ask: 'What should I mean by well-being in the context of my own research?'. The answer to this question may involve both methodological and ethical considerations.

Different methods for measuring well-being lend themselves more or less well to different notions of well-being. Measures focusing on biological, psychological and social functioning can easily be interpreted within a perfectionist framework — to function well defines welfare for a perfectionist. Similarly, measures relevant to expression of human or animal natures (which are less well developed at present) will be most relevant to consideration of perfectionism or other objective list approaches in humans, and to natural living approaches in animals. If on the other hand the researcher makes his subjects rank different outcomes, his measurements will lend themselves more to a theory of desire or preference fulfilment. Finally, if researchers are mainly focussed on registering psychological well-being and distress, their data will be relevant to hedonism-based approaches. Both the latter approaches are relevant to feelings, but the distinction between preference fulfilment and hedonism needs to be made more clearly in relation to animal welfare than hitherto.

If the researcher, for one reason or another, is committed to a certain notion of well-being, this is also important in the discussion of methodology. The researcher needs to consider how the data recorded may be interpreted so as to say something about well-being in the specified sense. For example, measures of functioning do not in any direct way inform about preference satisfaction or pleasure and suffering. So the use of these measures within a preference or hedonist conception of well-being requires critical discussion.

In addition to methodology, ethical considerations also constrain what the welfare researcher should mean by welfare (Sapontzis 1987; Rodd 1990). Which definition is relevant may depend on the purpose of investigating the well-being of a subject or a group of subjects. For example, a study with the aim of finding new ways of housing zoo animals may require a different definition of animal welfare than a study aimed at improving the living conditions of intensively reared farm animals.

Animal welfare implications

The different conceptions of well-being used by philosophers provide a basis for evaluating different conceptions of animal welfare. This evaluation suggests that the conception adopted must depend on the context in which research is being carried out, and that it will affect the methodology chosen, the interpretation of results and the use that can be made of them. The approaches commonly taken to animal welfare, emphasising animal feelings, functioning or natural living, are supported by work on human well-being, with one important addition. The idea of animal feelings combines two concepts: whether animals are happy (hedonism) and whether their preferences are satisfied. Satisfaction of preferences may result in happiness, but it may not. These concepts should be distinguished in research and discussion on animal welfare.

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