

# Should Animal Welfare Count?

*Olof Johansson-Stenman*

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*Department of Economics, School of Business, Economics and Law,  
Göteborg University, Sweden*

**Abstract** This paper discusses the standard welfare economics assumption *anthropocentric welfarism*, i.e. that only human well-being counts intrinsically. New survey evidence from a representative sample in Sweden is presented, indicating that anthropocentrism is strongly rejected, on average. However, most people appear to have a consequentialistic ethics, in line with conventional welfare economics. The moral philosophical literature is also briefly reviewed, and here too anthropocentrism receives little support. Indirect evidence from environmental valuation studies seems also to imply that a non-negligible fraction of people has non-welfaristic and/or non-anthropocentric ethical preferences.

**Keywords:** Animal welfare, anthropocentrism, welfarism, ethics, ethical preferences, cost-benefit analysis

**JEL:** D6, D7, Q5

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“Animals are not self-conscious and are there merely as a means to an end. The end is man. [...] Our duties towards animals are merely indirect duties towards humanity.”

Immanuel Kant (1963 [1780]),

The French have already discovered that the blackness of the skin is no reason why a human being should be abandoned without redress to the caprice of a tormentor. It may come one day to be recognized, that the number of the legs, the villosity of the skin, or the termination of the *os sacrum*, are reasons equally insufficient for abandoning a sensitive being to the same fate. What else is it that should trace the insuperable line? Is it the faculty of reason, or, perhaps, the faculty of discourse? But a full-grown horse or dog is beyond comparison a more rational, as well as a more conversable animal, than an infant of a day, or a week, or even a month, old. But suppose the case were otherwise, what would it avail? the question is not, Can they *reason*? nor, Can they *talk*? but, Can they *suffer*?

Jeremy Bentham (1996[1789], Chapter 17, footnote b)

## **1. Introduction**

Conventional welfare economics is based on what Sen (1970, 1979) denotes *welfarism*, i.e. that social welfare depends solely on utility or well-being, as well as *anthropocentrism*, meaning that it is only humans' utility or well-being that counts intrinsically. It is of course still possible that people are willing to pay to reduce animal suffering and for improved environmental quality, and public goods in general, to the extent that their utility is affected by such changes. For example, the suffering of a particular animal species may affect social welfare through altruistic concern in one or many individuals' utility functions. However, social welfare is then only affected *instrumentally*, and not *intrinsically*. Although such an anthropocentric view dominates in welfare economics, it is not very often clearly expressed in plain English. Baxter (1974) is an exception:

Penguins are important because people enjoy seeing them walk about rocks; and furthermore, the well-being of people would be less impaired by halting use of DDT than by giving up penguins.

In short, my observations about environmental problems will be people-oriented, as are my

criteria. I have no interest in preserving penguins for their own sake. (Baxter 1974:5)

Although it is clear from the above quotation that Baxter holds purely anthropocentric values, this does of course not necessarily imply that most people would agree.

To investigate experts', in terms of philosophers', as well as lay persons' fundamental ethical preferences is the main task of this paper. Since there is relatively little discussion around the possible intrinsic values of animals and animal suffering in economics, a natural starting point appears to be moral philosophy, where these issues are more central. Indeed, since the early seventies the interest in animal welfare/rights issues has virtually exploded within philosophy. Section 2 therefore briefly reviews the moral philosophical discussion of animal suffering. Perhaps not surprisingly, a large heterogeneity of views is found, but the narrow anthropocentric perspective is found to be rare. Section 3 presents evidence from environmental valuations studies that seem to indicate that a substantial share of the respondents have non-anthropocentric and/or non-welfaristic preferences.

Section 4 presents the empirical contribution of the current paper. Evidence is presented from a large representative survey in Sweden, where the respondents are explicitly asked about their ethical perceptions. Two main hypotheses, reflecting fundamental assumptions underlying conventional economic welfare theory, are tested: *Hypothesis 1*. People's ethical preferences are consequentialistic, rather than deontological or rights-based, i.e. a bad action is bad primarily because it implies bad consequences for people and for the society in general, rather than because it violates rights or norms. *Hypothesis 2*. A reduction of animal suffering has no intrinsic value beyond the instrumental values that are linked to the fact that many human beings suffer from seeing animals suffer. The survey-based empirical results are, on average, quite consistent with *Hypothesis 1*, whereas we find little support for *Hypotheses 2*. Section 5 concludes the paper.

## 2. Moral Philosophy and Animal Welfare

In Genesis 1:26 of the Bible, God says:

Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.

For a long time in the western humanistic/Christian tradition, animals have been considered to be distinctly inferior to humans, and treated as objects rather than subjects from an ethical point of view. It is sometimes argued, however, that Greek philosophy in general, and Aristotle in particular, has been even more influential in this tradition. Aristotle writes in his *Politics* that

plants exist for the sake of animals, and brute beasts for the sake of man – domestic animals for his use and food, wild ones for food and other accessories of life, such as clothing and various tools. Since nature makes nothing purposeless or in vain, it is undeniably true that she has made all animals for the sake of man. (Aristotle, 350 BC, book 1, chapter 8)

These ideas were then incorporated into Christianity partly through the writings of Thomas Aquinas, who was very influenced by Aristotle and who wrote about animals that:

by divine providence they are intended for man's use in the natural order. Hence it is no wrong for man to make use of them either by killing or in any other way whatever. (Aquinas, 1905[1258-1264])

This view, by and large, dominated both thinking in general and law for a very long time in western societies. In the seventeenth century, Descartes put those ideas to an extreme when referring to animals as “automata” who could not feel pain. Many followers of Descartes consequently believed that if an animal cried out this was just a reflex, similar to the kind of reaction one may get from a mechanical doll or some other type of machine. One logical implication was that they saw no reason not to experiment on animals without anaesthetics.

It was not until the age of enlightenment that animals received serious attention, and then largely through the early utilitarian philosophers. According to Martha Nussbaum (an

explicitly non-utilitarian philosopher) “utilitarianism has contributed more than any other ethical theory to the recognition of animal entitlement.” (Nussbaum, 2004, 302) For example, Jeremy Bentham in the same section as his famous initial quotation in *An Introduction to the Principles of Morals and Legislation* argued that animals too should be protected by the law, and that it is unsatisfactory that animals, “on account of their interests having been neglected by the insensibility of the ancient jurists, stand degraded into the class of *things*.” (Bentham, 1789, chapter 17, Section 4) There is some evidence (see e.g. Favre and Tsang, 1993) that his writings were influential in obtaining what is widely regarded as the first animal protection legislation in the world, the so-called *Dick Martin's Act*, introduced in Britain 1822 in order to prevent cruel treatment of cattle. Still, the legislation was not very far-reaching and full of loopholes.

John Stuart Mill appears to have had a very similar opinion. This can be illustrated with his forceful defence of Bentham in a debate, where he made sure that the issue of animal welfare was not of periphery concern to him:

We are perfectly willing to stake the whole question on this one issue. Granted that any practice causes more pain to animals than it gives pleasure to man; is that practice moral or immoral? And if, exactly in proportion as human beings raise their heads out of the slough of selfishness, they do not with one voice answer ‘immoral’, let the morality of the principle of utility be for ever condemned. (Mill, 1874)

Perhaps of even more interest to economists are the reflections of public intervention in his *Principles of Political Economy*, where he too explicitly points out the need for animals to be protected by law:

The reasons for legal intervention in favour of children, apply not less strongly to the case of those unfortunate slaves and victims of the most brutal part of mankind, the lower animals. It is by the grossest misunderstanding of the principles of liberty, that the infliction of exemplary punishment on ruffianism practised towards these defenceless creatures has been treated as a meddling by government with things beyond its province; an interference with domestic life. The domestic life

of domestic tyrants is one of the things which it is the most imperative on the law to interfere with. (Mill, 1848, book 5, chapter 11, paragraph 31)

He continues in the same paragraph by explaining that his concerns are directed towards the animal suffering *per se*, and not towards potential instrumental effects:

It is to be regretted that metaphysical scruples respecting the nature and source of the authority of government, should induce many warm supporters of laws against cruelty to animals, to seek for a justification of such laws in the incidental consequences of the indulgence of ferocious habits to the interests of human beings, rather than in the intrinsic merits of the case itself.

Henry Sidgwick, who besides Bentham and Mill is one of the most influential utilitarians, expressed strikingly similar opinions in his *Methods of Ethics*:

We have next to consider who the “all” are, whose happiness is to be taken into account. Are we to extend our concern to all the beings capable of pleasure and pain whose feelings are affected by our conduct? or are we to confine our view to human happiness? The former view is the one adopted by Bentham and Mill, and (I believe) by the Utilitarian school generally: and is obviously most in accordance with the universality that is characteristic of their principle. It is the Good *Universal*, interpreted and defined as ‘happiness’ or ‘pleasure,’ at which a Utilitarian considers it his duty to aim: and it seems arbitrary and unreasonable to exclude from the end, as so conceived, any pleasure of any sentient being. (Sidgwick, 1907, Book 4, Chapter 1)

Many contemporary utilitarians hold similar views, of which Peter Singer is presumably the best known example. According to him:

If a being suffers, there can be no moral justification for refusing to take that suffering into consideration. No matter what the nature of the being, the principle of equality requires that its suffering be counted equally with the like suffering – in so far as rough comparisons can be made – of any other being. If a being is not capable of suffering, there is nothing to be taken into account. (Singer, 1974)

Largely starting with Singer, since the early seventies, the philosophical literature related to animal welfare has virtually exploded. According to Tom Regan (1990, xi), it is not an overstatement of the case to say that “within the past 20 years contemporary moral

philosophers have written more on the topic of human responsibility to other animals than their predecessors had written in the previous two thousand years.” And since 1990, the interest seems to have increased further.

On the contrary, Immanuel Kant, perhaps the most influential rights-based ethicist to this date, argued (as quoted above) that animals were not part of the “categorical imperative,” and had only instrumental values.<sup>1</sup> The most well-known contemporary rights-based ethical contributions are presumably *A Theory of Justice*, by John Rawls (1971), and *Anarchy, State and Utopia* by Robert Nozick (1974). Although these authors came to very different conclusions regarding the appropriate role of the state and redistribution, supporting extreme egalitarianism based on maxi-min principles and virtually no redistribution and a minimal “nightwatchman” state, respectively, their views on how to deal with animals are surprisingly similar. Neither of them argues that animals should have the same rights as humans, but both agree that animals should be given *some* weight (as long as they do not infringe on human rights), in what essentially seems to be a utilitarian trade-off between animal and human welfare. According to Rawls (1971, 512):

It does not follow that there are no requirements at all in regard to them [the animals], nor in our relations with the natural order. Certainly it is wrong to be cruel to animals and the destruction of a whole species can be a great evil. The capacity for feelings of pleasure and pain and for the forms of life of which animals are capable clearly imposes duties of compassion and humanity in their case.

Nozick (1974) is more explicit, when discussing our habits of eating meat:

If some animals count for something, which animals count, how much do they count, and how can this be determined? Suppose (as I believe the evidence supports) that *eating* animals is not necessary for *health* and is not less expensive than alternate equally healthy diets available to

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<sup>1</sup> However, Johann Wolfgang Goethe soon after extended the categorical imperative to also accommodate the interests of animals. In *Metamorphosis of Animals* he argued that “each animal is an end in itself” (Goethe, 1790). The philosophy of Tom Regan, and many other contemporary philosophers who argue that animals have

people in the United States. The gain, then, from the eating of animals is pleasures of the palate, gustatory delights, varied tastes. I would not claim that these are not truly pleasant, delightful, and interesting. The question is: do they, or rather does the marginal addition in them gained by eating animals rather than only nonanimals, *outweigh* the moral weight to be given to animals' lives and pain? Given that animals are to count for *something*, is the *extra* gain obtained by eating them rather than nonanimal products greater than the moral cost?

Eventually, Nozick rejects utilitarian calculations also for the trade-off between animal and human well-being. However, the reason given is not that such tradeoffs would give animal well-being too great a weight. Rather, he concludes that sometimes animals' rights imply that an action ought probably not to be made even when the increase in human wellbeing outweighs the loss in animal wellbeing, and he exemplifies as follows (Nozick, 1974, 42):

Would it be alright to use genetic-engineering techniques to breed natural slaves, who would be contended with their lots? Natural animal slaves? Was that the domestication of animals? Even for animals, utilitarianism won't do as the whole story, but the thicket of questions daunts us.

Of contemporary moral philosophers in the rights-based tradition, Tom Regan is the most well-known defender of explicit animal rights. He argues that higher animals in principle should have the same rights as human beings (e.g. Regan, 1983, 2001, 2003).

Although Singer and Reagan are certainly not representative for philosophers as a group, from reviewing the literature it nevertheless appears that most current philosophers, of either tradition, who have expressed any view on the matter, tend to be of the opinion that animals should at least be given *some* intrinsic weight, and that we have some responsibility towards them. However, there are of course exceptions, such as Carruthers (1992) who defends a contractualist ethics and argues that animals have no intrinsic moral significance. It is somewhat paradoxical that economics, which from an ethical point of view almost entirely builds on consequentialism, is nevertheless built on assumptions that resemble Kant's (or Carruthers's) rather than Bentham's (or Singer's) perception with respect to animal suffering.

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inherent rights, is also often characterized as Kantian in a sense that resembles this broader perspective.



However, not everybody agrees that philosophical thinking and ethical arguments should be influential in public decision making. Indeed, the influential law professor Richard Posner argues that “ethical argument is and should be powerless against tenacious moral instincts.” (Posner, 2004, 66-67).<sup>2</sup> Moreover, even some philosophers, such as Bernard Williams (1985), question whether philosophical thinking should guide public priorities. Together with basic democratic values this provides further reasons for investigating laypersons’ ethical perceptions with respect to animals and the environment. This is therefore the issue we turn to in the following two sections.

### **3. Evidence from Environmental Valuation Studies**

Several survey-based contingent valuation (CV) studies have found that many respondents do not want to, or simply refuse to, assign a monetary value in tradeoffs involving animals and the environment (e.g. Spash and Hanley, 1995; Stevens *et al.*, 1991). This has sometimes been interpreted as a reflection of value incommensurability and a rights-based deontological ethics, where there is no room for tradeoffs. However, there is also evidence that, if pushed, most respondents are indeed willing to make tradeoffs (e.g. Spash and Hanley 1995). This, together with common sense, seems to indicate that most people’s ethics probably do not imply that it would always be intrinsically wrong to reduce, say, the local environmental quality in a certain area, even if animal welfare decreases, provided that the benefit side is sufficiently large. Even so, the reluctance to make tradeoffs in the first place is likely to say *something*. One plausible interpretation is that some respondents believe that nature, including animals and their well-being, has a value of its own irrespective of human well-being.

Another common line of critique against survey-based valuation methods claims that

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<sup>2</sup> See, however, the response by Singer (2004).

people's responses to such surveys are often biased upwards and that they largely reflect the "warm glow" or the "purchase of moral satisfaction" from contributing to a good social cause, rather than measuring preferences; see e.g. Kahneman and Knetsch (1992) and Kahneman et al. (1999). Schkade and Payne (1994) provide direct empirical support for this hypothesis based on a "think-aloud" methodology. However, the most frequent format of CV studies, after the recommendation of Arrow et al. (1993), is the referendum format. Then the respondents are asked whether they would vote *Yes* or *No* to an imagined referendum that would both imply an environmental (or some other) improvement and a payment vehicle that would imply a cost for all (or most) members of the society, such as a tax increase. But why would people get a warm glow for voting *Yes* to such a question if others would have to pay too for the environmental improvement? Indeed, if people get a warm glow from making a (hypothetical) decision that would improve the well-being of others, it is easy to show that such warm glow feelings would not affect an individual who believes that they would on the margin have to pay their maximum willingness to pay for the improvement. As expressed by Michael Hanemann, a leading proponent of the contingent valuation method: "'Warm glow' is simply a red herring. I have seen no evidence that people get a warm glow from voting to raise their own taxes, whether in real life or in a contingent valuation study." (Hanemann 1994, p. 33) Consequently, it is hard to explain why people would express a higher WTP for an environmental improvement due to a warm-glow feeling from improving the wellbeing of others. However, if people also care intrinsically about animal well-being and/or the environment, i.e. irrespective of the instrumental effects through people's well-being, one can show that the WTP is higher than without such concern (Johansson-Stenman, 2006). Thus, irrespective of the payment vehicle one could explain that the respondents' WTP is increased due to warm-glow effects, if such effects are caused by concern about animal well-being or the environment *per se*.

Consistent with this, there is quite clear evidence from recent meta-analyses that people tend to over-estimate their *WTP* more, i.e. have a larger hypothetical bias, for public goods than for private goods (List and Gallet 2001, Murphy et al. 2005). This may be interpreted as a higher reason for *self-signalling* in this case, i.e. that people would like to signal to themselves that they are socially responsible persons (cf. Benabou and Tirole, 2002).<sup>3</sup> However, again, if people only cared about the well-being of others in addition to direct instrumental effects for themselves, it is hard to see why one would self-signal social responsibility by overstating his or her true *WTP*, given that others would have to pay too. If on the other hand a person believes that nature and animal well-being have values of their own, it is much easier to explain such self-signalling behaviour. In the next section we will turn to this issue of whether people do hold such ethical values.

#### 4. Survey Results

In Section 3 we saw that environmental valuation studies provide a pattern that is consistent with, and seems to reflect, ethical perceptions beyond anthropocentric welfarism. But this is clearly only indirect evidence, and there may be other hypotheses consistent with the observed behaviour. In order to investigate whether people really do have such ethical views more directly, we simply asked them about their ethical perceptions in a survey.

In contrast to many other social scientists, economists are on the whole quite reluctant

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<sup>3</sup> There is indeed much evidence that people have an unrealistically positive view about themselves (e.g. Baumeister, 1998; Gilovich, 1991; Taylor and Brown, 1994). For example, in a survey of university professors 94% of them thought they were better at their jobs than their average colleague (Gilovich, 1991, p. 77). Johansson-Stenman and Martinsson (2006) asked people about what characteristics were important to them when they were about to buy a car. Many considered environmental characteristics to be very important, whereas very few considered the status associated with a specific car as important. However, when asked about which characteristics that they thought were important *for others*, when they were about to buy a car, the pattern changed dramatically implying that status became much more important and environmental concern less important. This indicates that people derive utility, or well-being, from seeing themselves in a positive light.

to use survey evidence (Bertrand and Mullainathan 2001). One possible reason is economists' emphasis on monetary incentives; if people's behaviour is assumed to be solely motivated by material incentives it is indeed hard to understand why they would respond truthfully to survey questions. However, as recent research in behavioural economics has shown, people are evidently motivated by many other factors. Moreover, some issues that we are intrinsically interested in are moreover difficult to analyze empirically with revealed preference methodologies. Quite logically then, the interest in using survey methodology has increased recently within many fields of economics such as happiness research (e.g. Di Tella et al. 2001, 2003; Luttmer 2005), concerns about relative income (e.g. Johansson-Stenman et al. 2002; Solnick and Hemenway 2005), wage setting in labor economics (e.g. Agell and Lundborg 2003; Agell 2004) and public economics (e.g. Fong 2001; Alesina and La Ferrara 2005). There are nevertheless of course possible biases, which will be further commented upon at the end of this section.

The survey was mailed to 2450 randomly selected adults above the age of 18 years in Sweden during Spring 2004; the response rate was 45%. Due to missing responses of particular questions, the number of observations included in the analysis varies between 919 and 1072, i.e. between 38% and 44% of the total selected sample. The sample analysed is fairly representative of the overall underlying sample of adults in Sweden; the last column of Table 2 provides mean values and standard deviations of the explanatory variables used. We have an over-representation of university-educated people and a slight over-representation of Women.

### *Are People Consequentialists?*

The first fundamental question is whether people have consequentialist ethical preferences in the first place, or whether they think that the government should be guided by some kind of

rights-based or deontological ethics. To find out, we simply asked the respondents what determines whether an action is “bad” from an ethical point of view.

**Table 1 around here**

As can be seen from Table 1, the result is quite consistent with the consequentialistic ethics underlying conventional economic welfare theory, although a non-negligible fraction of the respondents appear to have other fundamental ethical views. In order to look into the determinants of this variation, we ran a multinomial logit regression.

**Table 2 around here**

Table 2 reveals that the probability of choosing the “consequences for others” alternative increases with the respondents income. The 0.048 parameter for equivalent household income on “consequences for others” in Table 2 implies that the probability of choosing this alternative increases by almost 5 percentage points when the equivalent household before-tax income increases by 10,000 SEK per person per month, at sample means. Increased age significantly decreases the probability of choosing the “consequences for others” alternative and increases the probability of choosing the “violation of what is natural” alternative by about as much. This may in part reflect a pure age effect, but it appears likely that it also reflects a generation effect. For example, society as a whole was much less tolerant towards homosexuality (which some still consider unnatural) 50 years ago than it is now. Not surprisingly, people who see themselves as Christian believers are more likely to choose the “violation of Christianity” alternative. University education increases the probability of choosing the “consequences for others” alternative, and decreases the probability of choosing the “consequences for me”<sup>4</sup> and “violation of what is natural” alternatives. Perhaps university

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<sup>4</sup> It is possible, of course, that some of those who chose the “consequences for me” alternative misunderstood the question, or had a vague idea about the meaning of “an ethical point of view.” Still, what has become known as *ethical egoism* is sometimes defended in the philosophical literature (see e.g. Kalin, 1970), even though it is much easier to find critics than supporters of this doctrine.

education teaches people to think more systematically about ethical issues, which in turn reduces the probability of using more dogmatic motivations. Women are more likely to choose the “violation of someone else’s rights” and less likely to choose the “violation of Christianity” alternative. Possibly, the former result is a reflection of more women than men being focused on men’s crimes against women when answering. For such crimes much focus in the recent debate has been on respecting the rights of the women, “a no is always a no” etc.. The latter result may to some extent reflect the fact that Christian rules, as well as the rules of most other religions, have been, and sometimes still are, discriminatory against women.

#### *Are People Anthropocentrists?*

In order to test the anthropocentric assumption, we asked the respondents about how animal suffering, per suffering unit, should count compared to human suffering in public decision making.

#### **Table 3 around here**

The results show clearly that the standard assumption in economics, i.e. that animal suffering should only count instrumentally, can be questioned since only 3.2 percent chose this alternative. The most frequently chosen alternative is instead the one where animal suffering and human suffering are counted as equal, in line with opinions expressed by utilitarians such as Singer (1974, 1975, 1979, 2004). Although the responses on average imply that animal suffering should count less than human suffering, the results are clearly very far from what is typically assumed in the environmental valuation literature, and in the economics literature more generally.

In order to look into the determinants of the variation of the ethical preferences we run both an Ordered Probit regression and an OLS regression, with similar results with

respect to parameter significance.

**Table 4 around here**

On average, women care more about animal suffering than men do; the parameter of 0.39 in the OLS regression implies that on average women answer 0.39 steps more towards a higher value for animal suffering, in comparison to men. This result can be compared with Eckel and Grossman (1998) who present evidence from dictator games that women tend to behave more altruistically than men, and with Andreoni and Vesterlund (2001) who found that “men are more likely to be either perfectly selfish, or perfectly selfless, whereas women tend to be more ‘equalitarians’ who prefer to share evenly.” (p. 0). While the first of these results suggests that our finding may simply reflect that women are more altruistic, the second suggests that the equal-weight-formulation may have triggered, on average, stronger reactions from women than from men.

We also see that concern for animal suffering increases with age and is lower if the respondent has children, is university educated or is a Christian believer. The age-dependency may seem surprising, given that the support for vegetarianism and the animal-rights movement appears to be particularly strong among younger age ranges. On the other hand, older people have had more experience of agricultural production that may be seen as a more humane and less industrial, and the result may express a stronger negative attitude amongst the older generations with respect to current agricultural production practices. This effect may have been amplified by the fact that a cow was mentioned explicitly in the question. Moreover, List (2004) provides experimental evidence that pro-social behaviour increases with age. The child effect is perhaps due to a changed focus, where most things other than their own children decrease in salience and importance. The negative Christianity effect is not surprising, given the historical development described, although it is not directly obvious since contemporary Christian theology both emphasises that human beings are superior to

animals and at the same time that animals are part of God's creation and should therefore be treated well. However, given that the responses on average give such weight to animal suffering, the result appears logical. The negative effect of university education is perhaps a bit harder to explain. One possibility is simply that university education increases the probability of using cognitively more demanding strategies when choosing. For example, "no weight" or "equal weight" (the most frequently chosen alternative) are examples of choices that can be made without much involvement with tradeoffs, whereas "somewhat lower weight" or "much lower weight" more explicitly demands that tradeoffs be made. Thus, it is simply possible that university educated people chose "somewhat lower weight" instead of "equal weight" more often, not because of different ethical values but that they to a larger extent are willing to make tradeoffs; cf. the results for consequentialism above.

#### *Should we Trust the Survey Results?*

As mentioned when discussing CV studies and environmental valuation, a potential problem with survey results is that people may want to self-signal that they are "better", and hence respond more in accordance with their ethical views, than they would in reality. In our case, this is less of a problem, however, since we are not concerned with how people would act, or do act, in reality. For example, it is evidently true that many of us appear to care quite little about animal suffering in our daily life, and if animal suffering would be that important to us, one may wonder why we (including the author) continue to eat meat? But even though our ethics presumably influences our actions, it is certainly not the only determinant. Consider charity as an example: even if we believe that it is morally good to give a major share of our income to charity, most of us are nevertheless only giving a small share. From this observation it would of course be absurd to draw the conclusion that most people consider



large charity donations to be morally blameworthy.<sup>5</sup> Moreover, it is not *a priori* obvious that vegetarianism is in the interest of animals, since, as noted by Blackorby and Donaldson (1992, p. 1345), “if we reduce our consumption of meat, there will be fewer cattle in the world” (cf. also Blackorby, Bossert and Donaldson, 2005). Even if reduced animal *suffering* would result, animal *enjoyment* may be reduced to, and it is in principle possible that this effect dominates.

This is not to say that the survey responses are without bias. One possible bias is related to the many non-responses (as is almost always the case with surveys). Although the sample is reasonably representative of the general adult population in Sweden with respect to measurable characteristics, it is of course possible that there are non-negligible differences with respect to the respondents’ ethical views.<sup>6</sup> One could, for example, argue that people who respond to voluntary household surveys are particularly socially responsible, and that such people also tend to have ethical preferences that put a high intrinsic weight on animal suffering and the environment. Still, it is hard to believe that the response pattern would be dramatically different without such a bias. Another potential bias is that respondents may want to express certain opinions about which we do not explicitly ask, such as, “I believe that animals should be treated better than they currently are”. By doing so, they may overstate the degree to which they really believe that animal suffering should have compared with human

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<sup>5</sup> Similarly, consider a case where an individual is asked about appropriate principles for the tax structure in a society. It is likely that this answer would be different from a case in which the individual was acting as a dictator and could determine both his own and others’ tax levels. This does not, of course, imply that the actual behaviour would be a good measure of the individual’s ethical preferences. However, it is of course possible to argue that individual choices should be given moral significance *per se*, i.e. independent of individual well-being (Sugden, 2004).

<sup>6</sup> In order to ensure full anonymity, we did not identify the responses. After about two weeks a reminder was sent out to all households, i.e. both those who had responded and those who had not, together with an explanation (i.e. the need for anonymity) that we had to send reminders to everyone, including those who had already responded. Of course, the flip-side of this strategy is that it makes non-response analysis essentially impossible.

suffering; cf. Kahneman et al. (1999). One problem with this argument, however, is that only 3.2% chose the extreme alternative that animal suffering should be given higher weight than human suffering. If many respondents acted strategically with this goal, one would have expected a higher fraction. There are also possible cognitive problems and associated potential biases, since many (perhaps most) respondents have presumably not thought much about this kind of questions. It is therefore possible that some respondents adopt choice strategies that are cognitively less demanding.

However, even though there are sometimes good reasons behind the economics research tradition to trust *what people do* rather than *what they say*, it would be very hard to induce these kinds of fundamental ethical values from observed behaviour. Therefore, for values of this kind, at least, it is easy to agree with Sen (1973, p.258) that “we have been too prone, on the one hand, to overstate the difficulties of introspection and communication and, on the other, to underestimate the problems of studying preferences revealed by observed behaviour.”

## **5. Conclusion**

This paper has discussed the issue of how society should deal with animal suffering and the environment beyond instrumental effects for human beings from three different vantage points: 1. The moral philosophical literature; 2. Existing environmental valuation studies; and 3. A new tailor-made survey with a representative sample in Sweden that attempts to measure the extent to which people’s ethical preferences are consistent with the standard assumptions in economics. The moral philosophical review revealed little support for the narrow anthropocentric assumption; the environmental valuations studies seem to indicate that a substantial share of respondents in willingness-to-pay studies have non-anthropocentric and/or non-welfaristic preferences; and the empirical results from the survey are, on average,

quite consistent with a consequentialistic ethics, but they are not at all consistent with anthropocentrism. Thus, none of these perspectives provide support for the conventional anthropocentric welfarism assumption in economics. As far as the author knows, this is the first study that directly attempts to measure people's ethical preferences in these respects. Even though there are reasons to suspect that the obtained estimates based on the survey are not very accurate, we can say with greater confidence that the conventional anthropocentric assumption appears to be highly problematic.

The philosophical review also reveals that there has been a dramatic change in our perception of animal welfare, and basically no one continues to deny that animals feel pleasure and pain. Although it is of course not possible to measure animal welfare very accurately, there are nevertheless accepted measures, based for example on physiology (e.g. immune function and hormonal status) and observed behavior. The change in attitude has also affected legislation, and the expressed motivations behind current legislation are in many countries (e.g. Sweden and the Netherlands) made in clearly non-anthropocentric terms. Thus, it seems that Bentham was indeed right in presupposing a development towards greater concerns for animals, although we are of course still far from the situation where animal suffering is given the same weight as human suffering. One can, of course, speculate about the likelihood of eventually ending up in this or a similar situation, but this is beyond the scope of this paper.

The overall normative conclusions of the current paper, assuming that we should base the social decision rules on people's ethical preferences, are much less far-reaching, and can be summarised as follows: *We should stop the current practice within economics of always focusing exclusively on human welfare.* One consequence is that we should, when relevant, generalise welfare analysis in order to encompass non-anthropocentric effects; see the accompanying paper to this one (Johansson-Stenman 2006) for such an attempt. Analysis of

that kind will prove useful both from a descriptive point of view, in order to explain people's observed behaviour and political opinions, and from a normative point of view where the goal is to analyse the appropriateness of alternative governmental choice rules. In future research it is also important to use other methods and samples in order to test how robust the empirical results presented here are, and the extent to which they can be generalised.

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Table 1. Response distribution on the following question: *One can have different opinions about what determines whether an action, from an ethical point of view, is “bad.” Tick the alternative that you think corresponds best with your view. How bad an action is, from an ethical point of view, depends primarily on...*

How bad the consequences of the action are for myself	5.3%
How bad the consequences of the action are for other people and for the society	62.7%
The extent to which the action infringes upon someone else’s rights	17.5%
The extent to which the action violates what is natural	10.6%
The extent to which the action violates Christianity according to the New Testament in the Bible.	3.7%
The extent to which the action violates the rules given by any other religion (such as Islam or Buddhism)	0.3%

Note: number of observations = 985

Table 2. Marginal effects evaluated at sample means for a multinomial logit regression based on the responses to the following question: *One can have different opinions about what determines whether an action, from an ethical point of view, is “bad.” Tick the alternative that you think corresponds best with your view.*

	<i>How bad an action is, from an ethical point of view, depends primarily on...</i>					<i>Mean value [std] of the independent variables</i>
	Consequences for me	Consequences for others	Violation of someone else's rights	Violation of what is natural	Violation of Christianity or other religion	
Constant	-0.026 (-0.93)	0.40*** (5.70)	-0.14** (-2.45)	-0.18*** (-4.09)	-0.050** (-2.52)	
Equivalent household income per capita (10,000 SEK/month)	-0.013 (-1.18)	0.048** (2.25)	-0.0087 (-0.51)	-0.014 (-1.10)	-0.012* (-1.95)	1.42 [1.17]
Women	-0.011 (-0.76)	-0.011 (-0.76)	0.056** (2.06)	-0.0070 (-0.40)	-0.027*** (-3.48)	0.551 [0.498]
Age (years)	-0.0003 (-0.74)	-0.0027** (-2.35)	-0.00007 (-0.07)	-0.0028*** (4.10)	0.00034 (1.31)	46.42 [15.11]
Has any children	-0.027* (-1.65)	-0.060 (1.63)	-0.031 (-1.00)	-0.0035 (-0.16)	-0.00035 (0.042)	0.357 [0.479]
University-educated	-0.039** (-2.47)	0.12*** (3.64)	-0.020 (-0.72)	-0.072*** (-3.46)	0.0061 (0.80)	0.412 [0.492]
Would vote for the right-wing party	-0.001 (-0.05)	-0.035 (-0.82)	-0.041 (1.19)	-0.011 (0.48)	-0.016 (-1.50)	0.162 [0.369]
Lives in any of the three biggest cities in Sweden	-0.016 (-0.86)	0.017 (0.42)	-0.056* (1.73)	-0.065** (-2.45)	0.0067 (0.77)	0.259 [0.438]
Lives in the countryside	-0.013 (-0.82)	-0.0056 (-0.15)	0.0092 (0.29)	0.0034 (0.19)	0.0062 (0.77)	0.323 [0.468]
Christian believer	0.020 (1.18)	-0.013 (-0.30)	-0.043 (-1.18)	-0.0077 (-0.32)	0.043*** (4.50)	0.171 [0.376]

Note: number of observations = 919

- \*\*\* Statistically different from zero at 1% significance level.
- \*\* Statistically different from zero at 5% significance level.
- \* Statistically different from zero at 10% significance level.

Table 3. Response distribution on the following question: *Society can reduce through different, most often costly, measures, animals' as well as humans' suffering. In order to be able to prioritise, we need to know how great a weight society should put on reducing suffering in an animal (such as a cow), compared with reducing an equal amount of suffering in a human being. Which of the following statements is most in accordance with your opinion regarding the weight that should be given to animal suffering in public decisions?*

Animal suffering should not count at all in public decisions	0.8%
Animal suffering should not count per se. However, some people suffer from knowing that animals suffer, and this should be taken into account in public decisions	3.2%
Animal suffering should be taken into account to a certain extent in public decisions, even when no human beings suffer from the fact that the animals suffer. However, animal suffering should be given a much lower weight than human suffering	13.2%
Animal suffering should be taken into account to a fairly high degree in public decisions, even when no human beings suffer from the fact that the animals suffer. However, animal suffering should be given a somewhat lower weight than human suffering	30.3%
Animal suffering should be taken into account to an equally high degree as human suffering in public decisions, even when no human beings suffer from the fact that the animals suffer	49.3%
Animal suffering should be taken into account to a very high degree in public decisions, even when no human beings suffer from the fact that the animals suffer. Animal suffering should have a higher weight than human suffering	3.2%

Note: number of observations = 1072

Table 4: Parameter estimates from Ordered Probit and OLS regressions of the weight that should be given to animal suffering, per suffering unit, relative to human suffering.

	OLS regression	Ordered Probit regression
Constant	3.06*** (25.22)	2.15*** (14.00)
Equivalent household income per capita (10,000 SEK/month)	-0.033 (-1.18)	-0.039 (-1.12)
Women	0.39*** (6.83)	0.48*** (6.71)
Age (years)	0.0062*** (3.03)	0.0080*** (3.14)
Has any children	-0.14** (-2.18)	-0.17** (-2.17)
University-educated	-0.13** (-2.27)	-0.19** (-2.51)
Lives in any of the three biggest cities in Sweden	-0.055 (-0.77)	-0.095 (-1.08)
Lives in the countryside	0.0016 (0.02)	-0.010 (0.13)
Christian believer	-0.19** (-2.57)	-0.24*** (-2.61)
Would vote for the right-wing party	-0.10 (-1.33)	-0.12 (-1.22)
$\alpha_1$		0.62
$\alpha_2$		1.48
$\alpha_3$		2.44
$\alpha_4$		4.48

Note: number of observations = 998

\*\*\* Statistically different from zero at 1% significance level.

\*\* Statistically different from zero at 5% significance level.