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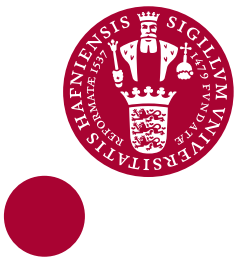

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# Happy pigs are dirty! – Conflicting perspectives on animal welfare[1]

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## Abstract

The study of animal welfare cannot be based entirely on science. For a number of assumptions of an ethical nature will inevitably enter the study of how good or bad animals fare under different systems of animal production. In some cases, ethical assumptions may be uncontroversial, but they may also be the cause of disagreement. A case study is presented that seems to indicate that there is systematic disagreement between lay and expert views about what a good animal life is. The study is based on interviews about modern pig production. The title of this paper summarises the reaction of an interviewee when commenting on pictures of what is generally regarded as animal-friendly pig production. In the lay perspective, living a natural life is an important part of animal welfare — a part that supplements, and therefore needs to be combined with, the absence of suffering and frustration that are central components of the expert approach. The main message of the paper for those who are professionally involved in animal production is that ethical assumptions and potential conflicts of view should be recognised and brought into the discussion of animal welfare.

**Keywords**: Animal welfare, ethics, public perception

## 1. Introduction: Modern animal production and the emergence of animal welfare science

Animal production in developed countries has changed considerably over the last 50 years. In Europe, the changes have been brought about by public policies favouring more abundant, cheaper food. As a result of these policies animal production became much more efficient, as measured by the cost of producing each egg, each kilogram of meat, each litre of milk, and so on. The pressure for efficiency has more recently become market driven, with competition between producers and between retailers to sell food as cheaply as

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possible. It has thereby acquired its own momentum. In many ways, this can be viewed as a success story. Thus consumers in the developed world are able to buy animal products at prices that are low relative to those charged in the past. In the 1950s it was typical for people in Northern Europe to spend between one quarter and one third of their income on food, but today about 10% is usual. The fall in price of some individual animal products such as pork, eggs and chicken meat has been particularly striking. At the same time, farmers and farm workers, while declining in number, have, in general, been able to maintain incomes that match the rest of society (Gardner 2002). In certain respects the life of most farm animals has also improved — e.g. where nutrition and incidence of infectious disease are concerned.

Efficiency has been achieved by intensification. Farms have grown in size and now keep more animals per unit area. Farming methods have been automated. Beyond automation, other features of contemporary animal farming reduce labour costs — consider, for example, cages and other types of housing designed to control the behaviour of the animals and thus make their management easier. Animals have also been bred to produce meat, milk and eggs faster and with lower feed inputs. These changes in agriculture have had a price, and to a great extent that price has been paid by the animals. They typically get less space per individual than they did previously; many live in barren environments that do not allow them to exercise their normal range of behaviour; and genetic selection has been accompanied by increased problems with some production-related diseases (Webster, 1994). Profits from increased efficiency are generally short-term, as they are regularly pared away by competition to reduce selling prices. And some of the changes through which efficiency has been increased — e.g. reduction in space allowance — have had, over the long-term, a harmful effect on the animals.

As a side-effect of these developments, the number of people involved in animal production has gone down dramatically, and so has the number of people who in one way or another feel attached to the agricultural community. Therefore the political influence of the farming community has in many rich countries diminished significantly (even though it is, for historical reasons, typically much higher than one would expect given the size of the sector). The number of people who through their upbringing, close relatives or local culture feel attached to agriculture has fallen greatly, and the farmer's perspective on things can no longer be expected to have a dominating influence in public debate.

Over the last 30 years or so public awareness of what is done to farm animals in intensive animal production has grown (Appleby, 1999). To give an indication of the size and character of the public attitude, we record the simple fact that that an internet search, made in late April 2005 using the Google search engine, for homepages containing the phrase "factory farm" gave 60,000 hits. A brief examination of the kind of

material that came forward clearly showed that the content of these homepages is largely critical of modern animal production and preoccupied with animal welfare issues.

Growing public awareness of farm animal welfare has led to responses and initiatives by various individuals and agencies concerned with agriculture and its role in the economy and society at large. Reaction first came from the political system in various northern European countries (Ryder, 1989, pp. 261-271). Starting with the British Brambell report (Brambell, 1965; Millman et al., 2004) initiatives were taken to facilitate research into the effects of animal production on animals. It was envisaged that this research would serve as input to reforms,

Over the last two decades, both in individual countries and across Europe via the Council of Europe and the EU, a sizeable number of initiatives promoting legislation that defines minimum standards of animal care in farm animal production have appeared. Significant reforms regarding all the main farm animal species have been made, each being aimed at improving the welfare of farm animals without undermining the competitiveness of European agriculture. In 1997, in an addition to the EU treaty (the so-called Amsterdam Treaty), a general statement was made calling for "respect for the welfare of animals as sentient beings", i.e. as moral subjects in their own right (Anonymous, 1997).

Initiatives to deal with animal welfare issues have been taken by farmers' organisations, by professional organisations such as those representing veterinarians and animal scientists, by several of the ancillary industries involved in animal production, and by various retailers and fast food chains. For example, the international fast food chain, McDonalds, has adopted principles of animal welfare that cover the production of the animal products it uses. It has, among other things, set up a scheme auditing US beef and pork slaughter plants (Grandin, 2005). More generally, codes of good practice, certified minimum standards of animal welfare, attempts to raise awareness within the many branches of animal production, and attempts to bring animal welfare issues into educational activity, have all been pursued. Finally, of course, animal welfare organisations have lobbied politicians and sought to promote their causes more widely. Nowadays these organisations increasingly operate at an international level.

Interestingly, these developments have been shaped by the emerging discipline of animal welfare science (Millman et al., 2004). This discipline grew out of veterinary science but has more or less been taken over by so-called 'applied ethology'. Besides ethology, stress physiology, pathology and veterinary epidemiology play a significant role in the field. For the pioneers in the field, it was important to emphasise that the study of animal welfare is purely (or mainly) science-based and does not involve ethical, social or political issues. This emphasis on scientific pedigree has been important in several ways (Broom, 1991; Broom, 1996;

Webster, 1994). First, it has allowed the new interdisciplinary field of studies to gain respectability in an environment dominated by scientific disciplines. Second, by emphasising their foundation in objective science, scientists have been able to serve as more or less neutral advisors on, and arbiters of, issues regarding animal welfare.

## 2: The role of ethical assumptions in the study of animal welfare

The idea that advice on farm animal welfare can be given purely on the basis of scientific information does not, however, stand up to scrutiny. It is now widely recognised that assessments of animal welfare are based on a number of assumptions which are of ethical in nature (e.g. Tannenbaum, 1991; Sandøe & Simonsen, 1992). Most notably, it matters a great deal how animal welfare is defined — whether it is defined in terms of animal function, of the balance of enjoyment or pleasure and suffering or pain, of preference satisfaction, or of natural living (Duncan & Fraser, 1997; Appleby & Sandøe, 2002; Fraser 2003).

The issue of how to define animal welfare is just one among several ethical issues that underlie the discussion about animal welfare. Often, this discussion has so far been conducted as if it were a one-dimensional topic in science. Three other such issues which have been discussed in more detail elsewhere (Sandøe et al., 2003) are: What is the baseline standard for morally acceptable animal welfare? What farming purposes are legitimate? What compromises are acceptable in a less than perfect world?

Allow us to give an example of a discussion which, on the face of things, seems to be merely technical, but turns out to have ethical implications. This discussion concerns how to measure the welfare of groups of animals, typically at farm level. Such measurements may be relevant in schemes aimed at certifying a product according to a certain animal welfare standard. The underlying ethical issue here is whether to focus on the best off animals, the worst off, or average welfare.

This last issue can be hugely significant. If the measure of welfare is the number of cannibalised animals, assessments of group welfare will focus on the animals in the population that are worst off. But other measures — e.g. where level of fear in the group measured by the time it takes for the first animal in a group to contact a novel object (Odén et al., 2002) — might provide rather different assessments. Thus in the Odén approach, the animal that is best off (i.e. least fearful) is used as a measure of the fearfulness of the group. A similar approach with focus on the best off animals is taken when group welfare is assessed by counting the number of animals that freely approach the experimenter in the situation being examined.

This is not to say that discussion about which measure to choose is wholly ethical. Such discussion will normally involve factual issues. Thus, for example, it may be important to establish whether there is a strong

correlation between the fear level of the least fearful animal and that of the most fearful animals (or the mean level of fearfulness in the population). This is a factual question. Some studies confirm this kind of correlation (e.g. Cransberg et al., (2000) on broilers). Others have failed to do so (e.g. Barnett et al., (1992) on layers in different housing systems and for other strains). One response to the question of whether to focus the best-off or worst-off livestock is to use quartiles (or thirds). Bonde et al. (2004) do this in their study of lameness in sows. This differs from the fearfulness example in that a minimum level of welfare is used as a criterion. Also, here, it is the proportion of the animals that are worse off that should be minimised. It should be noted, however, that when the complexity of the measurement is reduced too much — e.g. by classifying all pigs as simply "lame" or "not lame" — important information is concealed. In the present case, for example, sows with a limp and sows with a problem moving at all are not distinguished (Busch et al., 2003).

The important thing to notice in relation to this seemingly technical discussion about welfare measurement is that ethical considerations affect the choice of measure. People with a background in modern animal production will probably have a bias towards focusing on the average. That bias is bound to be ingrained in the thinking of someone whose professional aim is to optimise commercial income.

From other perspectives, however, it may be more important to estimate the welfare of the individuals that are worst off. This is reflected in legislation. Most animal welfare laws and regulations set a minimum welfare requirement. It may, for example, not be enough to show that most animals have access to water; every animal must have it.

This takes us to the main topic of this paper. Different stakeholders will take different views of the ethical issues that underpin welfare measurement, and this has a number of important implications. Let us not forget that the starting point of the growing awareness of animal welfare within animal production was public concern. If it turns out that the public, or a significant section of it, views animal welfare in a way that significantly differs from the way in which it is viewed by scientists and those working in animal production, then there are likely to be problems. These problems will have to be dealt with. Otherwise initiatives to improve animal welfare may backfire.

To start dealing with this issue, the next section of this paper reports a Danish study on how pig production and its consequences for animal welfare are perceived by ordinary Danish citizens. As will become clear, there are indeed significant differences between the way in which pig welfare is perceived by the Danish public and the way in which it is typically understood by experts in the field. Having summarised the Danish

study, we shall ask how scientists and business people who deal with animal welfare should handle conflicting views about the correct way to define animal welfare.

## 3. Case-study: Perceptions of pig welfare among the Danish Public

### 3.1 The approach of the study

Although pig production accounts for as much as 32% of the of Danish agricultural production (Danmarks Statistik, 2005), and although the welfare of pigs regularly pops up in public debate over food and agriculture, Danish lay perceptions of pig welfare have been investigated relatively little in Denmark. However, some quantitative studies commissioned by the meat industry cover welfare issues (e.g. GfK, 1995; Pedersen & Nielsen, 2001), and there are a few qualitative studies as well (e.g. Pedersen & Obelitz, 2001; Ngapo T.M, 2004;). Below we report the findings of a qualitative study of Danes' perceptions of pork and pigs carried out in November 2001 (Lassen et al., 2002). This study was part of a larger project examining the role of pigs and pork in Danish society, financed by Norma and Frode Jakobsens Foundation (Kærgaard et al., 2002). Because of this, it did not focus exclusively on animal welfare. Instead it covered any issues considered important by the interviewees. However, animal welfare proved to be a central theme of the interviews.

The study included six focus groups from different parts of Denmark. Each group had 6-7 participants. Interviewees were selected so that they represented a variety of factors known from the quantitative studies to affect attitudes to pigs and pork. Thus participants differed in age, gender, education and place of residence (urban/ rural). The interviews followed a semi-structured interview guide which left room for the participants to introduce issues they themselves thought important and develop their arguments. In practice, the interviews followed a funnel-shaped structure, opening with broad discussions of food in general, moving on to discussions of differences between food in an everyday context and at feasts, and eventually focusing on pork and different production methods. Within each main theme, interviewees were first invited to explore the subject with minimal interference from the interviewees. They were then, secondly, prompted in different ways to discuss matters of special interest for the research group.

This explorative approach enabled us on the one hand to get an impression of the relative importance of different issues (such as the environment, welfare, food safety etc) in people's thinking about pigs and pork. On the other hand, it provided insight into people's perceptions and arguments about issues relating to the production of pigs, including animal welfare.

The interviews were tape-recorded and subsequently transcribed. The analysis of the transcribed interviews followed a two-step procedure inspired by Coffey & Atkinson (1996) and Kvale (1996). First, the interviews

were coded into themes; secondly, the coded texts were retrieved and arguments within each theme were identified and characterised using a simple argumentation analysis based on the ideas of Stephen Toulmin (2003). In addition, the relative importance of different issues and the time of their appearance were noted.

### 3.2 Animal welfare: Not an everyday issue!

In the analysis of when and in what contexts animal welfare issues were taken up during the interviews, it was striking that there was almost no mention of welfare during the first period in which the interviewees were invited to discuss food in an everyday context. When talking about pork here, the interviewees characteristically limited their remarks to price and what can be described as the material quality of pork — that is, qualities closely related to the product itself such as taste and convenience. In addition appropriateness — i.e. the suitability of pork in general and of the different cuttings for certain (feast or everyday) occasions — was a major theme in this section. These discussions of appropriateness may, however, largely be the result of the fact that the interview guide focused on differences between typical food for feast and everyday occasions as a means of stimulating early discussion.

By contrast, immaterial qualities — i.e. things connected with the way the food is produced, such as animal welfare and environment — were by and large little discussed during this first period. When the context changed from the everyday to a 'production context' in which pork was framed as an agricultural product, the topics of discussion reversed dramatically. Now immaterial qualities took centre-stage at the expense of material qualities. It was striking that a mere reminder that pork was an agricultural product coming from pigs was enough, in most interviews, to bring about this reversal of topics discussed. And in most cases, animal welfare was the prominent theme here, as in these first thoughts of a male participant:

> "The first thing that comes into my mind when I think of pigs, that's the production — the farmers have to build still larger piggeries – more and more pigs in the same piggery — I don't like it, it's not worth it (…) I watched TV the other day and [producers like Danish Crown] announced that they want to punish farmers if the pigs are not well. And they are not, not as long as the pig breeders produce that many pigs every year. They cannot feel well in the piggeries they have today. (…")

This quotation is typical not just in taking up animal welfare issue as the first concern, but also in discussing animal welfare at the farm level of production. Hence problems during transportation and at the abattoirs were seldom topics arising during the interviews. Ignorance of pig welfare issues arising beyond the farm gate may, of course, reflect better welfare maintenance at these stages in the production chain. However, it is

more likely that it is the result of laypeople in Denmark being more familiar with farms than the rest of the production chain.

The quotation is also emblematic in linking the size of production facilities and animal welfare standards. According to a quite widespread perception, technological developments result in larger and more efficient production facilities at the expense of the welfare of the pigs. This view was indeed reflected in a shift in the way the interviewees talked about pig production: agricultural vocabulary, using words like peasant and pigsty used to describe traditional production methods, is here replaced by a more industrial vocabulary describing modern pig production units as factories and sites of industrialised mass production. One example is this male who, in his first reflections on pig production, although he does not mention animal welfare, ascribes most of the (as he sees it) calamities of modern pig production to the industrialisation process:

> "… Industry! Mass production! Not ethical at all! … and talking about antibiotic growth enhancers: we have problems with salmonella (…) the salmonella bacteria have become so much more powerful; they are incredibly dangerous and difficult to handle also in the households. (…) it's an incredible unfortunate result of enormous mass production. Talking about pork and mass production, I do know that it is a source of foreign currency and exports – but it's not very good meat!"

**3.3 Physical harm, integrity and autonomy**

The pigs raised in these industrial production systems were generally characterised as unhappy and suffering. Concerns expressed included physical harm, violation of animal integrity and reduced autonomy. When expressing concern over physical harm, participants would mention, for example, the way in which crowded pens lead to stressed pigs biting each other, the effect of living on slatted floors, or side-effects of the feed. Thus consider the following example:

> "Go and see them! Where they live on slatted floors, they have no straw at all and when [they are cut open] at the abattoir, the pigs, it is one big ulcer! It's cruelty to animals! I saw it on TV; I believe it was on the real big farms. They have no straw, and when [they were cut open] at the abattoir it was all one large ulcer. They simply lack fibres."

It was a widely felt that modern production technology has deprived the pigs of their ability to follow natural instincts and thus eroded their integrity. Concern was, for example, expressed about limited or absent access to mud bathing and rummaging about in the dirt — both being activities that were seen as basic and

necessary activities for pigs. Other concerns focused on the problems of sow fixation and early weaning. An example of the latter arose when a woman argued for the importance of maintaining integrity as follows:

> "Woman: I saw something in TV, it was (…) a really large farm which had a system where the sow, once she had given birth had this thing over her with a hole for every tit. Then the piglets could come to her … really that is disgusting! A sow that is not allowed to use her instincts there! That's a shame, that's really a shame! (…)
> Interviewer: And then we have to accept that some are laid to death!?
> Woman: Yes, that's the way nature is organised. I know that because when my cat has kittens one or two may be laid to death, there's not much you can do about that."

Apart from demonstrating concern about integrity, the quotation is also an example of how the interviewees often found themselves in dilemmas where they were forced to choose between two evils. In the above quotation, integrity is considered more important than the avoidance of physical harm in the shape of piglets laid to death by the sow. Taken to an extreme, the reference to the cat laying kittens to death can even be seen as a expression of the view that this particular physical harm is a side-effect of the way nature is organised, and thus acceptable.

The third category of concern has to do with autonomy. It was mostly expressed in worries over the crowded pens, sow fixation and other limitations to the pig's freedom. These concerns are most often closely linked to arguments about integrity, since restrictions on freedom hinder or prevent the pigs from following their instincts in a natural way, and thus living a decent pig life.

Throughout the interviews, an important marker of good welfare was dominant: a curly tail. To most, if not all, a curly tail was synonymous with good welfare conditions. Consequently, docking was viewed by many as not only a physical mutilation, but also an act depriving the pigs a means of communication. The communication in question here is usually one-way and rather anthropocentric: The tails expressing the general state of the pig to the human observer. But a few 8 interviewees also regarded tails as part of the communication between pigs: "… it [the tail] is part of their way of communicating (…) there are pigs higher in the pecking order, controlling them".

To further explore the relative importance of the curly tail, interviewees were presented with a dilemma between docking, and tail-biting during the interviews. Docking is a controversial mutilation, partly because of the physical harm, partly because it is in conflict with the pig's integrity, and partly because it deprives the pig of the most important indicator of happiness. The woman (A) in the next quotation adopts an integrity

argument in rejecting docking. She is rebuffed by a man (B) who reduces pigs to the status (as she would presumably see the matter) of objects:

> "A: There we are again! We do so many strange things, altering nature and the like.
> When a pig is born with a tail, why not let it keep it? We don't cut the nose off each other, do we??"
> B: But the pigs are born with the purpose of being slaughtered, aren't they … but …"

A dilemma occurs, however, when docking is presented as a solution to the problems of tail-biting.
Most interviewees reacted strongly to pig-docking. However, they believed such docking to be acceptable when it is introduced to solve the problem of tail-biting. This concession comes through clearly in the conversation that followed the remarks quoted above. Here, in reaction to the information about tail-biting, (A) changes her mind about docking:

> "C: If we don't cut off the tail of these pigs, if they are not docked, then they will eat each other's tails and then they will get infections, and there will be a terrible fuss".
> (…)
> Interviewer: Then they will look like this [shows a photograph of a bloody, bitten tail]!
> D: Ugh! How disgusting!
> A: Yes! — Then you have to take it off — that's obvious!
> (?): Of two evils, right!?"

**3.4 Free range pigs – the modern alternative**

The somewhat alarming image of welfare conditions in modern pig production contrasts with an equally romantic image of 'the good old days'. The good old days were a pastoral idyll in which farms were of reasonable size, farmers had plenty of time to caress the pigs, and the pigs happily ran around in the open air, rolling in the mud and snuffling in the dirt. This contrast between now and then is neatly encapsulated by the woman in the following quotation:

> "The pigs — I have this image of a romantic farm with pigs sniffing around, rolling over in the dung and feeling really good. But then this bogey pops up: This large… the large houses you see when you drive around, the pig houses, the smell! How do they feel in there?"

The modern equivalent of the good old days is 'alternative production' — that is, primarily free range systems, but also systems with organic certification. Today's contrast is thus between the good (free-

range/organic) and the bad (large-scale/industrialised). One participant summed up his perception of the significant differences between acceptable and unacceptable production methods in the following way. He was commenting his result of an exercise sorting photos of pigs and pork illustrating different production methods:

> " … I have a pile here containing the organic label and these pigs, I believe they are organic. They do not have a ring in the nose and they are dirty! That is crucial, pigs should be dirty! The reason why I have all the other pictures of pigs in the other pile is that they are far too clean. That means that it is a pure industrialised production. All the pigs are clean – I don't like that. And that includes the one with the curly tail too! Nice curly, but a little too clean, I find. It should have been dirty like the others."

However, the fact that both good (alternative) and bad (conventional) food products are commercially available in the market causes considerable frustration and ambivalence. Many participants refused to blame the individual farmer, but instead pointed to a number of structural factors, mostly of an economic nature, which together force producers to produce pigs in the way they do. These same interviewees recognised that they themselves are part of the 'problem', because they sustain the market for conventionally produced foods by purchasing cheap products, including pork, rather than paying more for alternative products:

> "Man: I have to admit that t I have a vague attitude (…) we all agree that [the free range pigs] belong to the positive, but when I look at the meat in the supermarket, I don't read about the way it is produced, I don't really care about it (...) I hate to admit it, but that is the consequence: I actually don't care!
> Interviewer: So in the supermarket, taste is the most important factor?
> Man: Yes, taste and price …"

## 4. Making room for different perspectives on animal welfare

One lesson of the interviews is that lay persons as a group have a wide range of concerns which they think of as concerns about animal welfare. Their concept of animal welfare includes avoidance of suffering, as was most apparent in rejections of suffering caused by tail-biting. Beyond suffering and other negative mental states of the animals, welfare was also taken to cover a range of concerns connected with the extent to which the animals are 'living a natural life' and have the option to realise various species-specific potentials that are considered important components of a good animal life.

However, while there is little doubt that these concerns about naturalness and species-specific behaviour are genuine parts of the concept of a good animal life defended by the lay people in the interviews, it must be emphasised that these concerns also function to some extent as indicators of production conditions that ensure reasonable standards of welfare. The demand for dirty pigs does not necessarily reflect the view that dirt in itself is part of a good life. Rather, dirt is an indication that the pig has had an opportunity to exercise natural behaviour. In much the same way, the curly tail is viewed not only as a significant part of a pig's anatomy, but also a sign of a generally good life. In a way, dirt, (curly) tails and indeed freedom (access to open air facilities) function as indicators used by lay persons when judging — one might say, diagnosing — welfare status.

This multi-dimensional view of animal welfare contrasts with a one dimensional view often taken by experts on animal welfare: the view that suffering and others elements of the subjective experiences of the animals are all that matter (Duncan, 1996; Dawkins, 1998). According to this view, as long as the animals do not face unnecessary suffering, and as long as they experience sufficient pleasure and satisfaction, then they have good animal lives.

The tension between the expert and the lay view is reflected in the development of different production schemes. In most countries, conventional production coexists with alternative schemes. In Europe, some of the conventional schemes have recently been modified in keeping with expert recommendations on animal welfare — a process that has largely been driven by pressure on policy formulators for animal welfare regulation. In this sense, the expert concept of welfare is dominant: It is prominent in policy circles and in mainstream production. However, the emerging alternative schemes are beginning to challenge this marriage of mainstream production and the expert approach to animal welfare.

Alternative schemes introduce an interesting dilemma that illuminates the complexity of the lay positions. In some cases, at any rate, allowing animals to live natural lives comes at a cost, because such animals experience a reduction in subjectively measured animal welfare as a result of disease and harmful behaviour (Hermansen et al., 2004; Miao et al., 2004). Within the expert view this dilemma does not arise, because naturalness (etc.) are no part of the concept of welfare. To people subscribing to this view, alternative schemes are (to the extent they lead to higher levels of painful disease) unacceptable from an animal welfare point of view. Followers of the lay view may argue that, despite the problems, the alternative systems are better for the animals because things other than the subjective states of the animals matter when it comes to animal welfare. They may claim that being able to exercise a certain repertoire of behaviour in a semi-natural environment is an important aspect of animal welfare. The dilemma arises when these people have to consider the degree of suffering caused by alternative schemes. As we saw in the discussion of tail-docking,

the interviewed laypeople were willing to accept things that are clearly unnatural if that is necessary to prevent pain and other forms of suffering. The dilemma is solved by weighing the concern that animals should lead a natural life against suffering: in some cases, this will lead to an acceptance of less lost naturalness, in others to a toleration of increased suffering.

It should be clear by now that ethical discussion of what constitutes a good animal life must be linked to public discussion of the assessment of farm animal welfare. Concepts like 'animal welfare' and the 'good animal life' are the outcome of an ongoing process of social construction. Consequently they can be seen as results of a political struggle between different interest groups, each of which tends to promote a particular definition. At present this struggle has been dominated by defenders of the expert concept of animal welfare. The lay concept, involving alternative schemes, is still marginalised to some extent. Nonetheless, it is also clear from the interviews reported here that, within the pig sector, this balance may be fragile: people are well aware that there is a discrepancy between their consumer behaviour and their official views when it comes to the welfare of pigs.

Those within the pig farming and food sector who wish to play a productive role in future developments should be open to the views found among the public. They should allow concepts such as that of 'natural living' a prominent place in the discussion. Failure to do so may result in a social controversy like the one witnessed in relation to food biotechnology in the past decades.

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