

Animal Futures

Public Attitudes and Sensibilities towards Animals and Biotechnology in Contemporary Britain

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CONTENTS

CHAPTER 1. DIGEST	5
BACKGROUND.....	5
FINDINGS	5
POTENTIAL IMPLICATIONS	6
CHAPTER 2. CONTEXT.....	8
THE REPORT	8
BACKGROUND.....	8
THE RESEARCH METHODS AND DESIGN.....	9
<i>Research focus and topic guide</i>	9
<i>Group specification</i>	10
<i>A note on methodology</i>	11
CHAPTER 3. FINDINGS.....	13
EXPERIENCES OF ANIMALS IN EVERYDAY LIFE	13
<i>Animals as pets</i>	13
<i>Animals as wildlife</i>	15
<i>Animals as prey</i>	16
<i>Animals as working and gaming partners</i>	16
<i>Animals as livestock</i>	17
EXPERIENCES OF ‘INDIRECT’ USES OF ANIMALS.....	18
<i>Animals as meat and clothing</i>	18
<i>Animals for research</i>	20
PERCEPTIONS OF ANIMALS AND BIOTECHNOLOGY	22
<i>New demands for animal testing</i>	22
<i>Genetically modified animals</i>	24
<i>Messages for Government</i>	28
CHAPTER 4. IMPLICATIONS AND REFLECTIONS.....	30
THE DIVIDE BETWEEN MORAL AND INSTRUMENTAL VIEWPOINTS.....	30
DISAGGREGATING RESPONSES TOWARDS ANIMALS.....	31
ANIMALS ‘IN THEIR NATURE’	32
THE DISTINCTIVENESS OF CONCERNS ABOUT INCREASED ANIMAL TESTING ARISING FROM ADVANCES IN THE NEW GENETICS	32
THE DISTINCTIVENESS OF CONCERNS ABOUT GM ANIMAL TECHNOLOGIES	33
THE SOCIAL CONDITIONS FOR PUBLIC ACCEPTABILITY	35
REFERENCES.....	36
APPENDICES.....	37
APPENDIX 1 TOPIC GUIDE (HOUSEHOLD PETS).....	37
APPENDIX 2: GROUP SPECIFICATION.....	41
ANNEX.....	43
RESEARCH ON USES OF ANIMALS AND PUBLIC OPINION IN THE UK	43
(1) ANIMAL EXPERIMENTATION	43
<i>Facts and Figures</i>	43

<i>Public Opinion On Animals Experimentation</i>	43
(2) ANIMALS & FARMING IN THE UK.....	45
<i>Facts and Figures</i>	45
<i>Public Opinion about Farming and Animals:</i>	46
(3) ORGANIC FARMING THE UK	46
<i>Fact and Figures</i>	46
(4) VEGETARIANISM IN THE UK.....	47
(5) HUNTING IN THE UK.....	47
<i>Facts and Figures</i>	47
<i>Public Opinion about Hunting</i>	48
(6) ANIMAL WELFARE AND ANIMAL CRUELTY IN THE UK	48
<i>Facts and Figures</i>	48

Chapter 1. DIGEST

Background

- This research report examines contemporary UK public attitudes towards animals, and in particular towards the prospective uses of animals as a result of continuing advances in biotechnology. It was undertaken by social scientists at the Institute for Environment, Philosophy and Public Policy, at Lancaster University in July-October 2001.
- The study employed qualitative discussion group methods, interpreted sociologically, for a spread of social groups in the north and south of England. It builds on previous work by the researchers in other, parallel spheres of contemporary public sensibility.
- Each discussion group was set up to reflect a different balance of elements, involving both a variety of specialist relationships with animals, and broader connections with animals as pets. Methodologically, situations were set up in which people could talk about animals in different spheres of daily life, in their own terms, and subsequently to explore how people responded to potential human uses of animals arising from biotechnological applications, and the factors shaping such responses.
- The concern of the study was to throw light on how people feel about:
 - a) Their everyday experience of and relationships with animals – as pets, as wildlife, and in work and sporting contexts; and
 - b) Perspective increases in the use of animals to take advantage of recent and continuing advances in biotechnology, and in particular genetic modifications.
- The study, based on a necessarily limited sample of population groups, is seen as providing an initial snapshot rather than a definitive analysis.

Findings

- Many people have close, affective relationships with animals in domestic and other contexts.
- People recognise frequent personal contradictions in their behaviours towards animals, moving between close, even intimate and inter-dependent family connections, and exploitation for food, for clothing and as ‘surrogate’ humans in scientific testing. A degree of ‘denial’, and even hypocrisy, in this regard is frequently acknowledged. Such reactions appear to signal shifting social awareness of the tensions between ‘moral’ and ‘instrumental’ approaches to animals in modern society.
- The discussions suggest there is only limited appreciation in the UK of the extent and character of persistent patterns of animal use for experimental and testing purposes. In general, people’s attitude towards animal testing depends critically on the use to which the research is oriented. In this regard, people feel less uncomfortable about animal testing for *medical* purposes than for *cosmetic* purposes. However, there appears to be an emerging acknowledgement of the difficulty of maintaining such clear-cut distinctions.
- The prospective use of animals to take advantage of contemporary developments in biotechnology tends to be interpreted by people in the light of their attitudes to *existing* practices and relationships. Some discomfort is evident when people come to think about

such matters, but with this comes recognition that open and considered public debate about the issues is now appropriate.

- People's attitudes towards such matters are influenced by their perceptions of the *purposes* of the research or exploitation processes involved. This issue of 'justification' seems likely to pose challenges for present apparently clear-cut distinctions between the medical and other (e.g. cosmetic) benefits.
- Animal testing arising from advances in the new genetics for 'medical' purposes arouses ambivalence. A minority appear to be opposed in principle; but a need for greater official openness about 'what is actually going on', including a clear justification of the 'usefulness' of such research, and for regulation grounded more firmly in human/moral criteria rather than scientific/commercial necessities, is felt by many to be appropriate.
- Most people regard the direct genetic modification (GM) of animals as both 'new' and 'unnatural'. Although few people rejected the use of this technology *tout court*, there is considerable concern about the speed and pace of such developments, the degree of intervention and precision involved, and the anticipated likelihood of unanticipated mistakes. Key conditions for acceptable use of GM animal technology include the requirement to demonstrate a *genuine and authentic need* for undertaking such procedures, commensurate with such concerns.
- Public concerns to GM animal technologies can be seen to encompass a number of distinct elements. Firstly, they include concerns about the intrinsic character of animals, including the need for animals to retain their integrity. Secondly, they encompass concerns about animal welfare, about the maintenance of standards of care in the treatment and use of animals. And thirdly, they embrace a range of additional issues pertaining to the surrounding conditions of regulation and institutional oversight.
- The misgivings people express towards the applications of GM animals appear to be reflections of broader syndromes of mistrust towards those institutions seen as responsible for such applications. Repeatedly, the crises over BSE and GM foods were invoked in support of suggestions that key institutions responsible for overseeing such innovations are not to be trusted. Perceiving such institutions as being 'in denial' of what was at stake in such technological advances – both morally and consequentially - exacerbated people's sense of the likelihood of subsequent unanticipated mishaps.
- However some differences of attitude prevail, largely dependent on the work practices of the individuals involved. Farmers are more likely to see GM animals as further stages in selective breeding – though this in turn is seen as unlikely to bring benefits for most *existing* farmers in their real-world circumstances.

Potential Implications

- There thus appears to be potential scope for controversies to arise in the GM animals and the genetic testing domains. Whilst there appears from the groups to be little outright rejection of such practices, people's personal unease at their own contradictory behaviours towards animals appears to be combining with pressure for greater public disclosure of the levels and patterns of experiments to create potential tensions.

- Moreover, if the overall advantages to society of ‘the new genetics’ becomes itself a focus of public questioning - as some of the discussions appear to imply is now possible – then vulnerabilities for public controversy will tend also to increase, even in the medical domain.
- There is an evident need for openness and informed public discussions of these matters if socially resilient ground-rules for future use of animals in biotechnology are to be developed. At present, most people feel ‘in the dark’, and hence suspicious, despite an evident willingness to strike ‘reasonable’ balances between animal welfare and technical advances.
- This offers a timely reminder of the case for implementing new ways of engaging public opinion, prior to any publicly damaging controversy. Furthermore, regulatory systems need to get to grips with the key *conditions* underpinning the public acceptability (and unacceptability) of GM animal technologies. There is an urgent requirement both to identify what these conditions are, and to support and cultivate government action to ensure such conditions prevail.

Chapter 2. CONTEXT

The Report

This study outlines new research on UK public attitudes and sensibilities towards animals and biotechnology. It aims to cast light on:

- The ways in which attitudes towards animals are shaped in different roles and across different social groups of the UK public;
- How boundaries towards ‘acceptable’ and ‘unacceptable’ uses come to be constituted;
- What kinds of responsibilities people tend to feel towards animals and why.

Through a clearer understanding of general sensibilities towards animals it may be possible to ‘read’ potential factors likely to govern future public responses towards animals in biotechnology.

The research was undertaken in July – October 2001 at the Institute for Environment, Philosophy and Public Policy (IEPPP), at Lancaster University. The study was commissioned by the UK Government’s Agricultural and Environmental Biotechnology Commission (AEBC), as part of their on-going examination of issues around animals and biotechnology.

Background

Noting the paucity of relevant UK research in the field, the AEBC highlighted the strategic need for a clearer picture of public understandings of animals, and of the values and attitudes towards them across different social groups of the UK public.

Undoubtedly, the relationship between humans and animals has undergone a profound set of transformations as we enter the twenty-first century. In the early part of the twentieth century these still tended to be based on a categorical distinction between humans and animals. Indeed, since at least the industrial revolution, animals figured in the modern project principally as a resource for human progress (Franklin 1999). At the close of that century that distinction, and its reliance on the subordination of animals, is being seriously questioned. The historian Keith Thomas has identified what he describes as a historically generated paradox (1985). Just as the logic of industrial society has resulted in the increasingly systematic instrumental use of animals for human betterment (in multiple ways), so that same society has also generated new forms of empathy towards and identification with animals.

Indeed, most of us appear to be caught up in a complex web of contradictory responses in daily life, identifying with animals and frequently treating them with feeling and compassion (for example, as pets), while also benefiting from a diversity of instrumental uses (for example, as meat, as clothes, and as ‘surrogate humans’ in animal testing). Public opinion research also shows considerable numbers of people uncomfortable and doubtful about contemporary uses of animals, particularly in agricultural practices, in laboratories, and in field sports (for relevant data of public opinion and animals, see Annex below).

Clarification of such culturally embedded tensions, and of the factors shaping them in today’s world, appears highly relevant to the expressed concerns of the AEBC. By throwing light on the complexities of people’s responses to animals in different roles and contexts, it may become possible to speculate in informed fashion about how responses to future use of

animals in the biotechnology domain will evolve. On the face of it, public reaction seems a strong possibility, both in relation to the creation of genetically modified animals *per se* (for example, for medical or agricultural applications), and to the increases in animal testing which can be expected to flow from advances in the new genetics (for example, as a precondition to the development of new drugs).

The Research Methods and Design

The study rests upon the interpretation of eight focus group discussions, involving a selection of population groups in the UK. The discussions were held in July and October 2001 in the North-West of England and in London. Details of the group specification, and of the topics discussed, are set out in Appendix 1 and 2 below.

Research focus and topic guide

The focus of this necessarily limited study was on the ways in which attitudes towards animals, in different roles and contexts, appear to be shaped; how boundaries between ‘acceptable’ and ‘unacceptable’ uses come to be ‘constituted’ (socially and psychologically, as it were); and what kinds of responsibilities people tend to feel towards which kinds of animals, and why.

A particular challenge for the research was to identify a framework within which to analyse relevant contemporary human responses and sensibilities. Currently dominant theoretical approaches, including those informed by utilitarian and deontological criteria of ‘welfare’ and ‘rights’, may be insufficiently ‘social’ in emphasis (Benton 1993). Our chosen research approach was to adopt as an entry point the social practices - both in professional/specialist and private/family domains - through which different kinds of people experience and reflect upon animals.

The design of the discussion guide was set out to explore:

1. How people talk about, and directly experience, animals phenomenologically: for example, how intelligent, how affectionate, how responsive, how like/unlike humans they find them to be; what *feelings* they have towards them.
2. How they talk about animals in relation to ‘professional’ uses and contexts.
3. How they discriminate in their responses between different kinds of animals.
4. How they respond to apparent tensions, dilemmas and contradictions in their own attitudes and behaviours.
5. How they view the (potential and actual) uses of animals associated with biotechnology.

Through sensitive interpretation of the phenomenologies of people’s experiences as these are reported in the discussion groups, the study offers an initial account of tensions, contradictions, boundaries and sensitivities likely to arise in relation to human uses of animals in the biotechnology domain.

Methodologically, we set up situations in which people could talk about animals in different spheres of daily life, and subsequently explored emergent paradoxes and contradictions. As anticipated, the discussions were not without difficulties; they touched on thorny and generally unarticulated aspects of their lives and behaviours, especially where there were

obvious tensions for individuals between professional and personal dimensions of their relations with animals (for example, as in farming). The full topic guide is set out below in Appendix 1. (The topic guide provided is that used for the two groups of ‘pet owners’. Sections 1 and 2 of the topic guide for the other focus groups were slightly altered so as to explore different familial and professional contexts in which these groups experienced animals.)

Group specification

A topic-specific sampling strategy was adopted in the composition of each focus group. Each group was set up to reflect a different balance of elements, involving both a variety of specialist relationships with animals, and broader connections with animals as pets. There was also a ‘non-animals’ group, as a kind of control, comprised of people with no pets and no acknowledged strong relationships with animals. There were initially in total six groups, each of 7-9 individuals, all conducted in the North-West of England. Following a presentation of initial findings to the AEBC it was decided to conduct two further groups, of pet owners and non-pet owners, in London. This was to ensure against the possible effect of regional bias and to provide a deeper understanding of two substantial social groupings (approximately half of UK households have pets, see Annex below for more details).

North-West Groups

1. *Pet owners*. This group consisted of men and women who had dogs and other domestic pets. The participants were all active dog walkers.
2. *Wildlife enthusiasts*. This group consisted of men or women who were outdoor enthusiasts and who had a specialist interest or hobby in observing animals.
3. *Non-animals group*. This group consisted of men and women who did not have pets and who did not have any special affinity with animals. In effect, this comprised a control group.
4. *Intensive farmers*. This group consisted of specialist poultry and pig farmers involved with livestock in ‘intensive’ forms of food production. The group included both male farmers and their farming wives to facilitate discussion of both specialist relationships with animals, and broader connections with animals as pets.
5. *Extensive farmers*. This group consisted of farmers involved in ‘non-intensive’ food production. It included mixed farmers, sheep farmers and beef-rearing farmers. As above, the group included both male farmers and their farming wives to facilitate discussion of both specialist relationships with animals, and broader connections with animals as pets.
6. *Country sports enthusiasts*. This group consisted of country sports enthusiasts who shoot, wildfowl or hunt or fish with flies. Half the group had working dogs.

London Groups

7. *Pet owners*. This group consisted of men and women who had dogs and other domestic pets. The participants were all active dog walkers.
8. *Non-animals group*. This group consisted of men and women who did not have pets and who did not have any special affinity with animals. In effect, this comprised a control group.

Standard advice for focus group composition is to bring people together on the basis of shared experience (Barbour and Kitzinger 1999). In each of our focus groups participants shared a set of common relationships and experiences with animals, and this helped to create a productive group dynamic in which participants could explore familiar and less familiar themes. Criteria of age, life-stage, gender, socio-economic class and geography of residence were also used in recruitment to ensure that the groups reflected a broad cross-section of society.

To avoid people who had active commitments to particular lobbies, and who subsequently might skew responses, people who were members of animal welfare groups (including the RSPCA) and animal rights groups were excluded. Members or active supporters of campaigning environmental groups were also excluded (but not members of the RSPB or the National Trust). An agricultural advisor - a local farmer and management consultant – was employed to assist recruitment with the farming groups.

A note on methodology

It is important to note the different rationales underpinning quantitative and qualitative methodologies to social research. L J Philip has usefully outlined a quantitative approach as one that conventionally involves traditional scientific methods, frequently with the aid of statistical techniques to test hypotheses and to verify theory, developing precise empirical descriptions and producing knowledge by means of a process that can be replicated exactly by others. Quantification is commonly associated with large data sets, and knowledge about the world is often translated into numeric form – condensed into categories and generalisations by an apparently objective researcher striving for what are projected as being results allegedly free of the researcher's own personal prejudices and biases (1998: 264).

By contrast, qualitative methodologies, characterised most simply as 'non-numeric' approaches to social research, seek to describe the diversity, variety, complexity and meaning of human experience. Such studies, increasingly popular across the social sciences, are typically small-scale intensive pieces of research in which everyday life experiences by all sorts of people and communities at different times and in different places is explored. Such studies allow for the complexities and 'differences' of the life-worlds under study to be explored and represented. Such methods range from participant observation, focus group discussions, group interviews, unstructured interviews, discourse analysis of both written and spoken texts, and the use of case studies (Philip 1998). Commonly, such methods are criticised for being value-laden and hence compared negatively with the supposedly objective virtues of quantification. However, methodologists have pointed out that quantitative methodologies also embody value-laden assumptions about what is at issue, especially as regards to what qualifies as legitimate evidence or knowledge (Porter 1995). Indeed, both quantitative and qualitative methodologies can be seen as necessarily selective and restrictive in their treatment of social phenomena, and to embody tacit normative commitments and values (which arguably should be as explicit and open as possible as part of the research process).

The methodological requirement in this study was to design a situation in which people could talk about animals in different spheres of daily life, and subsequently to explore emergent paradoxes and contradictions. A focus group approach was seen as the methodology most appropriate for enabling participants to explore their own experiences, opinions, wishes and concerns in relation to the chosen topic. Focus groups are seen as a method particularly suitable for allowing participants to generate their own questions, frames and concepts and to

pursue their own priorities in their own vocabulary (Barbour and Kitzinger 1999). This dimension is particularly important in seeking to answer the question as to the sensitivities likely to arise in relation to the human uses of animals in the biotechnology domain. In a domain still clearly lacking in social research, in a field where few people could be claimed to have ‘informed’ or settled views, it becomes vital to allow people the space in which to develop their own opinions *in their own terms*. In this sense, the research was explicitly exploratory, both in terms of its attempt to explore the deeper reasoning and contextual understandings shaping expressed attitudes, and in its attempt to develop insight as to which underlying variables or criteria are most cogent to the shaping of public sensibilities.

Such thinking was central to the design of the topic guide and to the composition of each of the focus groups. The topic guide was structured so as to set up situations in which people could talk about animals in different spheres of daily life, in their own terms, and subsequently to explore how people responded to potential human uses of animals arising from biotechnological applications, and the factors shaping such responses. The composition of the focus groups was explicitly designed according to three criteria.

1. So that each focus group could provide a ‘snapshot’ of experience, each group was designed to be relatively internally homogeneous, so as to enable an in-depth exploration of shared experiences.
2. Since people encounter animals in different roles and contexts, six very different social groups were set up, each reflecting a particular phenomenology of human-animal relations, each reflecting a significant social group in UK society.
3. Since it remains unclear as to precisely which social factors are likely to prove significant in structuring subsequent attitudes, the overall design of the groups was set up to ensure *breadth* across standard criteria such as age, socio-economic class, gender and life-stage. For this reason little attempt was made to match groups and to compare the effect of *a priori* specified variables. At this exploratory stage, it was deemed more fruitful to ensure a broad diversity of human experience, from which initial clues could be derived about factors shaping attitudes and likely responses.

For such reasons the study was seen as providing an initial ‘snapshot’ rather than a definitive analysis.

Chapter 3. FINDINGS

This chapter summarises key findings from the focus group discussions. It is divided into three main sections. The first addresses people's direct experiences of animals in everyday life, as pets, as wildlife, as prey, as working and gaming partners, and as livestock. The aim is to give a sensitive phenomenological account of how different social groups experience and relate to animals. This is followed by a discussion of how people experience more 'indirect' uses of animals in daily life, either as meat and clothing or as research subjects. The chapter concludes with an account of how people respond to future potential uses of animals in the biotechnology domain, both in relation to the creation of genetically modified animals *per se*, and to the increases in animal testing which can be expected to flow from advances in the new genetics.

A general observation relevant to all eight of the focus groups concerns the degree of consideration and thought given by the participants to the research process. People appeared sincerely to have enjoyed the focus group discussions, even though they found much of the conversation challenging and difficult. Two of the groups – the intensive farming group and the hunting and shooting group - were at first suspicious and wary, not least due to a pervading sense of mistrust over how their chosen activities tended to be portrayed in the public sphere. However, once the participants realised that the research process was one in which they could talk frankly and openly about their experiences, in their own terms, apprehension dissipated and everyone engaged in broad ranging and at times, penetrating discussions. Moreover, they all seemed genuinely pleased when they learnt that a government Commission was sponsoring the research, both because the topic appeared a significant issue for society and also because a government body appeared to be interested in listening to their concerns and aspirations.

In the passages directly quoted from the focus group discussions names have been anonymised to protect confidentiality. Abbreviations have been used to distinguish male participants (M), female participants (F) and the moderator (Mod). Passages have also been numbered to indicate the progression of speakers (M1 is the first male speaker, M2 the second, and so on). The names of individuals referred to in the exchanges have been changed.

Experiences of Animals in Everyday Life

Animals as pets

Unsurprisingly, people maintain close, affective relationships with pets across a range of domestic contexts. People experience pets as part of the family; indeed, pets often hold a central place in the inter-dependent network of family relations. Across the group discussions pets were experienced as beneficial, even indispensable, in reciprocating love and attention, in helping children learn how to care for others and deal with issues of life and death (what Buddhists call 'impermanence'), in providing a 'surrogate' child, in helping to relieve stress, in facilitating social contacts, and in ensuring routine walks in the outdoors. Below are two passages from 'pet owners', both of which capture the texture of contemporary relationships:

- Mod *How would you say that having animals has affected your life?*
F1 *I think it makes it a bit less stressful somehow, I don't know [all agreeing]. You can be busy at work and stuff and you're climbing the walls but you can just go home, shut the door and there's your animals, it's all nice and peaceful. All right, they can be a bit daft, like you were saying with your Springers...*
F2 *They're always pleased to see you.*

- M1 *They never argue do they...*
 F1 *You get that lead out and they're just...*
 F2 *You can go for a nice long walk and you can just...*
 F1 *Yeah, you just walk it off, you sweat it and walk it away.*
 All *Yeah, always pleased to see you.*
 F1 *Whenever they greet you they wag their tails.*
 M1 *Plenty of love in them.*
 F1 *And I think as well, like you say once you get out with your walks and you meet other dog walkers and you stand and have a chat and...*
 (Pet owners – North-West)
- F1 *Oh, he totally de-stresses me my dog. I get very worked up and very fiery and he has helped me out a lot. Suffer with lots of abscesses and stresses and things like that and he's certainly helped in that score. He's just always, it's your best friend.*
 M1 *No matter what sort of day you've had you come in and that dog is there for you, isn't he?*
 F2 *Pleased to see you.*
 F1 *No matter what he always forgives you, if you trip over him he comes back wagging his tail, smiling, saying I'm sorry, they're just... They give so much, they don't ask for a lot. The only trouble is it's always when it's wet and rainy and horrible out here, you still have to do it. And then once you're out walking it's not a problem. It's just the thought of having to get yourself together to go to do it, you know, on a bad day. And that's all they want, and they come back and they're as happy as Larry. Just like your husband and your kids [irony]. [laughs]*
 Mod *So are they part of the family then?*
 F1 *Oh yeah.*
 F2 *Mmm, very much so.*
 F1 *Yeah, come before the kids, my dog does.*
 Mod *Yeah. Do you think it's good for kids to have animals?*
 M1 *Oh yeah.*
 F3 *It's nice to mix with because they learn to be gentle with the animals so when they grow up they've got a respect for an animal because they know how to handle them. If you're mean to an animal it's gonna be mean back to you whereas when you're little... But if you teach the kids not to be mean to the dog or the cat then at least when they're adults they're not going to be the type of adults that you see walking up and down the road beating the whatever out of a cat or dog.*
 (Pet owners – London)

The passages cited above illustrate the affective language in which people described their experience and relationships with their pets. Clearly, there were strong emotional bonds, reflected in the time, effort and energy expended in looking after and caring for animals, particularly in the context of bringing up children. Terms used to characterise such relationships included, 'love', 'affection', 'loyalty' and 'respect', characteristics that were commonly seen as particularly 'English'. And even though people reflected on animals as very time-consuming and tying, these were seen as worthwhile trade-offs. Indeed, considerable attention was devoted to making life as pleasant, as happy, and as healthy for one's animal as possible. For some people, a strong point of principle was not to buy animals but to get unwanted animals from rescue sanctuaries, to relieve animals from a life of cruelty and suffering, to get an animal that really needs a home. Many people commented on how people were becoming more accommodating to their animals compared to previous generations: in the time of their parents dogs were not allowed on chairs, certainly not on the bed, and tended to be kept downstairs.

Different species and breeds of animals commanded different levels of respect and care. Typically, those animals who were more intelligent, more reciprocal in providing love, more cute and more 'like us' tended to be regarded with higher levels of affection. However, this was not necessarily the case. For one woman, 'Bob' the goldfish had a special place in the life of her two year old son, while for another woman her 19 year old tortoise was her most

cherished animals on account of its age and strength of resolve in the face of climatically unsuitable conditions.

Those participants who did not possess household pets could crudely be divided into those who shared similar ‘animal’ values to those expressed above, but who could not have their known animals on account of personal circumstances (for example, not having enough time, having unsuitable accommodation, living unsettled and mobile lives or not wanting more responsibility), those who had little desire to own or care for a pet themselves but who nevertheless had robust views on animal rights and justice, and those who genuinely had little interest in or sensibility towards animals. The latter were a minority but included those who saw domestic animals as unhygienic, dangerous and smelly. As one woman from the London non-animals group said: *‘animals should live outside not inside. It’s disgusting’*. However, other people tended to be more compassionate towards animals, even if they were somewhat sceptical as to the lengths some people went in fetishising their pets as fashion accessories. A significant minority felt ill at ease with processes of domestication, especially with regards to ‘exotic’ animals, preferring that animals live in a more ‘natural’ (undomesticated) environment.

Animals as wildlife

One of the focus groups was set up to include people who all shared an active enthusiasm in wildlife. Of particular interest was the way in which people in this group discussed the appeal of observing and encountering animals in the wild. Wild animals tended to be regarded as ‘vulnerable’, ‘graceful’, ‘amazing’, ‘adaptive’ and ‘free’. A key consideration appeared to be the desire to experience animals ‘in their nature’, in their territory, away from a human-controlled world. Much talk was centred on the cruelty of animals in zoos, animals not free but caged. Such experiences of animals in the wild were seen as a necessary antidote to the perceived stresses of modernity. As the passage below shows, in wild nature, and preferably in the company of wild animals, one could restore a much-needed sense of calm and relaxation:

- M1 *You’re on the outside and going on their territory. I think that’s one of the things.*
M2 *Takes you to a lot of different habitats as well, if you’re interested in certain species that you probably may not go into normally and that broadens your horizons especially.*
F1 *I think, I do a lot of hill walking and in places like Scotland you can be amongst various different birds and I think it’s the fact that you’re at peace with yourself, you know, up in the mountains but also that you’re linked with nature, you know, you’re as close to nature as you can be. Because you’re away from the city and the places that you can’t think, you can’t relax but you can relax more when you’ve got a calmness of nature and animals around you... Yeah, I think you feel part of it. I think you feel lucky enough to be part of their life whilst they’re flying around. You know. I’ve been lucky enough to be in the Highlands in Scotland and, you know, be on bird reserves there but with the birds just flying around and ones that you might not normally get sort of in Britain itself.*
M1 *You’re definitely in their territory there aren’t you?*
F1 *Well, you are.*
(Wildlife enthusiasts – North-West)

Participants in other groups shared an appreciation of witnessing animals in the wild, but in more mediated ways through wildlife documentaries. Such documentaries appeared to thicken people’s understanding of the otherness and integrity of animal behaviour, leading to enhanced feelings of respect and awe. There was considerable empathy, especially among the younger participants, towards the plight of animals threatened with extinction, notably majestic animals such as whales, dolphins, elephants and tigers.

Animals as prey

Another mode of interacting with animals was through practices of hunting, shooting and fishing. The participants in this rural group spoke of the pleasures of such leisure pursuits as arising from a close and intimate involvement in the countryside. And as the passage below indicates, such pleasures were seen both as part of the social fabric of rural life, and as contributing to a life-world in which people (notably men) could escape the pressures of contemporary life:

- M *No, I mean it doesn't matter whether it's hunting, fishing, shooting, train spotting, building walls or whatever, you do something that is different, it's a different world that you can enter. Now a lot of country people and we're all country people round here, will take their pleasure from the country, not everybody, some people have different pursuits. But if you live in the country and you've lived in the country all your life, you do find that your dad will have fished or your dad will have shot, in my case they were all shooters, I don't shoot but most of my family did. But you take your pleasures from the country as well as living in it. And it is this different world that you can enter. And so that is why when these two gentlemen get together, they don't talk about their[work], it's the world that they've entered, the world of shooting, and to them they can chat about shooting and they can exchange tips and they can relive memories that they've had. And the rest of the people in that world are like-minded.*
(Country sports enthusiast – North-West)

However, for most participants such pleasures were not the same as train spotting, nor indeed were they similar to wildlife observation. For many participants, the pleasure arose out of a more active mode of participation in nature. Shooting enthusiasts distinguished between established and manufactured forms of shooting, such as pheasant shoots, and grouse or rough shooting which was regarded as a purer and more authentic form of interaction in nature:

- F *That's why the grass moor is so appealing, it's such a natural environment.*
M *And on the marsh, you know, wild fowling, that's one of the most exciting things there is in my book. You sit down there, in mud and sludge for five hours and nothing happens, you know, and other days it's magnificent.*
(Country sports enthusiasts – North-West)

For such reasons, there was a greater sense of achievement in shooting grouse as opposed to pheasant, just as it was to fish a stream for wild brown trout than to fish a well-stocked lake. However, even though considerable discussion focussed on 'the thrill of the kill', and on how this appeared to reflect a kind of longing for another and deeper kind of relation with the natural world (see Scruton 1997, for an extension of this line of thought), little attention appeared to be given to the actual animals involved as individual sentient beings, either as fish, birds, foxes or hares. Participants acknowledged 'the thrill', but rarely reflected on what underpinned it, other than the occasional appeal to '*some primeval instinct*', or of '*man against beast*', or of hunting as '*a pleasure made out of necessity... because the vermin has to be controlled*'.

Animals as working and gaming partners

In contrast to the above, many of the participants involved in shooting had both affective and intimate relationships with their 'working dogs'. This corresponded to the kinds of relationships developed between farmers and their sheepdogs. Even though working dogs were always distinguished from pets – they tended to remain outdoors, they fulfilled a purpose, they were highly disciplined and trained, they worked in partnership with their owners – both farmers and dog trainers expressed high degrees of affection and fondness for their animals. Such affection was commonly expressed through accounts of the intelligence

or spectacular feats or eccentricities of particular dogs. The following passage reflects such intimacy in a discussion on breeding and pedigree:

- M1 *The dog I said that I had, when I had old Blackie, Blackie came to me to shoot and turned out to be the best dog probably I was saying one has seen round these parts. Now that's one of these odd things. He was a working collie of very high standards but he had no pedigree. We didn't know who his father was to be absolutely sure, but the combination was right because Blackie was a good one and three of his sisters were good uns. But they never bred right. Alright, I'll admit it was a good one with Blackie but they were few and far between like.*
- Mod *So are the qualities for a good sheep dog the same as for a good shooting dog?*
- M1 *Well it's intelligence isn't it. Collies are probably the most intelligent dog on earth isn't it.*
- M2 *Well if you get a litter of collies, say there's six in the litter, doesn't mean to say they'll all turn out work dogs.*
- M3 *Oh no, half of them they sort of, as soon as they open their eyes they'll be knocking ducks about. They will you know. A young collie pup. But the basic thing about any sort of dog as has been said already, they're pack animals. And what happens with Henry, OK his Blackie, he said he got it to shoot, well OK, I mean it suddenly clicked with Henry as being the head of the pack. And that's where they, again it's a sort of respect, a mutual understanding if you like.*
- M1 *No, no. Blackie were different. Blackie assumed that me and him were equal. Yes he did, because he was never affectionate in any way at all, never showed any affection to anybody. He once out glared an Alsatian judge. The judge was going to go through [the farm] and Blackie stood there and he daren't even face him, that's the kind of dog he was. So me and him were equals. If it was a very good day and he felt in a very best mood, he would just give a nip on hand there, he's the only dog I've ever known do it. He would just give me a friendly nip, but sometimes you know he nipped properly like. But his intelligence was beyond ...
(Country sports enthusiasts – North-West)*

Animals as livestock

In both the extensive and intensive farming groups we explored the ways in which farmers experienced their livestock. The intensive poultry and pig farmers adopted a largely instrumental view of their pigs and chickens. As one farmer said, *'when you get onto pig numbers and poultry numbers you don't recognise individuals'*, not altogether surprising given that one of our so-called 'medium sized' poultry farmers had a turn-over of over five million chicks per annum. Welfare and economic considerations were seen as mutually reinforcing; if animals were not happy, or sick, or stressed, or overstocked, they would not be producing at their optimum level. Looking after pigs and poultry was thus regarded as synonymous with noticing when they were not well. Indeed, the farmers themselves rejected that they were involved in 'intensive' production. Rather, as one farmer stated, *'you're keeping stock in ideal conditions for them to thrive'*. Below are discussions on welfare and economics:

- M1 *... what he's saying quite rightly is that methods are being evolved over time by farmers who've found the most economic way to keep the animals is generally the kindest way to keep them because an animal does not thrive unless it's in good conditions where it is fed well, kept at the right temperature and...*
- F1 *They don't thrive if they're stressed, do they.*
- M2 *Looking after animals, making sure that they are fit, healthy and thriving so that they make money for me at the end of the day...*
- M1 *Well, we keep animals to make money. It's our business to produce animals to feed the nation. I mean, that's what our job is. It's like a factory producing nuts and bolts. If they haven't got any nuts and bolts to sell at the end of the week they're gonna go out of business. We have to have some pigs every week going out otherwise we're out of business. There's no point in doing it otherwise. So I mean, our job is to produce really good specimens of pigs that go to the abattoir to be killed to make best quality pork. That's what they're about, that's what they're there for.
(Intensive farmers – North-West)*

The farmers involved in more extensive practices of dairy, beef and sheep farming tended to have more familiar and personalised relations with their livestock. Dairy farmers handled their animals twice a day and often knew their livestock not simply as individuals but as personalities. Considerable discussion arose as to the diverse personalities of dairy cows, of the importance of handling them from birth, or transforming ‘shy and timid’ ones into ‘softies’, of knowing the ‘boss cow’, and so on. Below are farmers talking about their livestock:

- Mod *How familiar are you with your livestock?*
 M1 *I'm on first name terms with most of me sheep. [irony] [laughs]*
 F1 *I mean, you love your stock, don't you, every day. Well, put it this way, you know your animals that well that you can tell if they are ill. The calf that looks at you with sad eyes and I knew it wasn't so well and I was right.*
 M2 *... I know every cow on the farm.*
 Mod *You know every cow?*
 M2 *I know every single cow and you'll just about be the same with your milking cows will you?*
 M3 *Oh, you know them all, yeah. Twice a day, they come past you twice a day like that so you're very close up to them.*
 M4 *My sucklers, I know every single one, it's not just a bunch of animals in a field.*
 (Extensive farmers – North-West)

Especially the farming women spoke of particular animals that had become pets, about the cow that *'died on the farm because I could never get rid of'*, the lamb that *'used to go around with a halter and go all over the place'*, the calves that are *'my children because I'm a big softie and because they give me less aggro than the kids'*, the pet bullock called Bertie *'who used to end up in the house'*. However, at the same time both the male and female farmers stressed the need not to become over-attached to the stock, realistic about the business of farming as involving slaughter.

Experiences of 'Indirect' Uses of Animals

So far we have explored the ways in which people directly experience and reflect upon animals, both in professional/specialist and private/familial contexts. With notable exceptions – most prevalent in discussions amongst the intensive farming and the hunting/shooting participants – the picture that emerges is one of feeling, empathy and compassion. In this section we examine how people think about animals implicated more indirectly in social life, either as meat and clothing or as research subjects. What emerges is a very different kind of relationship.

Animals as meat and clothing

For the non-farming urban and suburban groups there was a profound distancing between the ways in which people felt about and treated animals as ‘pets’ and how animals were used in food production (unsurprisingly, this was less the case for the farming and rural groups who were more familiar and accepting of the treatment of animals in food production). In each group, following a discussion on pets and household animals we asked people to reflect on the different ways in which animals entered their lives. After a degree of probing people tended to mention ‘meat’ and ‘clothing’. In discussing the ways in which people thought about animals in these contexts the tenor of discussion shifted, as people began to reflect on a more difficult and at times uncomfortable aspect of social life:

- M1 *The food aspect of animals we shut, we sort of shut it away.*

- F1 *Yeah, we don't wanna see. No. No. I don't even like to see, you know, when people buy half a cow or half a lamb, when they're buying from the butcher's direct. I don't even like to see that. I like it packed up in little...*
- F2 *Little bits, all chopped yeah.*
- M2 *In a way it's, yeah, it's a bit sort of bury your head in the sand about it, isn't it, in a way.*
- F1 *You close your eyes really to what you find offensive and you don't wanna see.*
- F2 *I think years ago, I know people's attitudes have changed because of people not eating meat, vegetarians and that, and people, the animal rights and all this. It's made you more aware of animals. When I was a kid I couldn't have given a monkeys. You saw the big joints up in the butchers and that all the time, you didn't think nothing of it. We had pets at home and we used to go to the zoo, used to go to the farms, but we never thought of anything on the food side of it. But I prefer now when I go to see my meat it's all chopped up in its little packet. I don't like seeing big carcasses now.
(Pet owners – London)*
- M1 *I suppose I could say I don't care about cows, pigs and sheep because I eat them.*
- F1 *But do you like them in the fields?*
- M1 *I like to see them in the fields but I mustn't care about them because I eat them everyday.*
- M2 *You don't want to see cruelty or...*
- F2 *We're hypocrites really.*
- F3 *Yes, we are.*
- M1 *We're selective when we want to be.*
- F2 *When it suits us.*
- F3 *When you're at the supermarket you don't think about it.*
- M3 *You must be able to switch off, it goes back to that point about caring doesn't it. You like them in the field but...*
- F2 *Yeah, you all go and say look at the bunnies in the field but I like rabbit pie.
(Wildlife enthusiasts – North-West)*

For many participants the dominant response was one of detachment and separation. The relationship between animals and their transformation into food and clothing products was vague, mediated and deeply contextual. People simply tended to prefer not to recognise or confront the realities of meat production. As one participant stated, *'It's a completely different context, isn't it?* In such ways people in part acknowledged and recognised their own double standards, both caring for animals in certain contexts while at the same time refusing to 'witness' the animal behind the meat. Some regarded their own self-acknowledged hypocrisy as complicit with the 'interests' of supermarkets and other bodies involved in modern meat production. However, this was not always seen as an entirely satisfactory resolution, not least due to media coverage of an apparently unending series of food scandals, from salmonella to BSE to foot and mouth. There thus appeared to be latent unease with modern forms of agricultural production, including the manner in which farm animals were treated, and some people endorsed the need for a more open and honest public debate. On a more intimate level, especially in the process of bringing up children, notably mothers found themselves in difficulty in explaining the connection between meat and the farm animals from which they derived:

- F1 *I mean, when you're younger, when your mum or your dad puts food on your plate in front of you, you don't at that time think goodness, what am I eating, where has this come from, how has it been killed, what do I have to do or what would I have had to do to get this animal to my plate, if you will. And I was trying to explain to my daughter, we were laughing about what she was particularly eating, we were having some beef I think, and we were laughing about cows and animals and things and I said beef is a cow. And she went don't be silly mummy, we don't eat cows. [laughs]*
- F2 *My niece has just turned four. She was quite devastated to find out that the bacon she had on her plate was actually an animal and then she asked me loads more questions and I must admit, I have her for the weekend now and again, and she's beginning to ask questions. She'll go in*

the fridge and say, "so what animals that then", and you've got to actually really think. So she's beginning to ask questions and I just wonder if there's gonna come a time when she'd rather have something not meat than meat because she really is getting very into animals and she's very, very curious about what goes on.
(Non-animals group – North-West)

For such reasons there appeared to be some impetus towards reflecting more consciously on the manner in which meat was produced or on deciding not to eat certain animals. However, few participants in our focus groups had explicitly decided to become vegetarians or to refuse to eat meat produced under 'intensive' conditions. Such strategies appeared to be impeded due to the mediated nature of food production and people's complicity in such mediation. For example, people asked whether organic or free-range production was really better for the animals concerned. Would such practices genuinely make a difference or was it just a new tactic by producers and retailers to 'fleece' the consumer? Indeed, could one trust the regulations? For these and many other reasons it appeared easier to just block it all out and leave it to others.

Animals for research

People tended to prefer to blank out the issue of the use of 'animals in research' as something that *'you just don't want to know'*, in a way that was analogous to the above discussion on meat. However, when probed, the phrase 'animals for research' was closely associated with animal testing, either for medicine or cosmetics. People's attitudes towards animal testing depended critically on the use to which the research was oriented. Useful research tended to be portrayed as 'medical', often juxtaposed to frivolous uses of research usually associated with cosmetics:

- M *Yeah, but if they've got to research drugs, yeah, there's no other option is there but monkeys because they're our closest ancestors aren't they. And if that means finding a cure for cancer, yeah, I for one am all for it. Or other things like cancer related diseases and things like that. If that's our closest ancestor and they get better results from monkeys, right, you might disagree with me, but yes I'm all for that. But when you start for cosmetics, yeah, that is bang out of order. If it's for medical research and it...*
(Pet owner – North-West)
- M *Well, surely it depends whether it's for cosmetics of life saving drugs. That's the big difference... That's my view. If it might save my life or somebody else's life in a few years time well, get on with it!*
(Extensive farmer – North-West)
- M *Animals for research, if it is for the benefit of the human race medically wise I'm talking in favour. If it's just to make some snob's wife look a little bit prettier, bugger him.*
(Country sports enthusiast – North-West)

For medical applications many people saw little alternative, one participant suggesting that *'medically I don't see a way around it'*. Useful applications of research tended to be perceived as medical applications that could save human lives, now and in the future. Indeed, when the life of a human was juxtaposed to that of an (non-human) animal, the sacrifice of the animal tended to be seen as justified. However, some people reflected on whether such crude distinctions could be maintained. What about the person in need of cosmetic surgery after a burn? Or the pharmaceutical company more concerned with its profits than with any genuine medical advance? Or household products that might untested cause unforeseen allergic reactions? These were difficult questions to which participants found no easy

answers. However, the key criteria to which people kept returning to was whether the particular research was authentically being conducted for ‘useful’ and ‘necessary’ purposes:

- M *Well as far as I'm concerned, if it's of benefit to mankind, particularly medically as [Frank] was saying, then I would go along totally with it. If you're asking me to grade the animals, then that becomes more difficult, but obviously when you see the gorilla which is slightly more like us, then it would make me think slightly longer. But at the end of the day if it was for the genuine good and would save human life, then I would go ahead of it.*
(Country sports enthusiast – North-West)

The above passage illustrates the manner in which the question of the usefulness of the research took priority over the actual animals used in research. If research was genuine, and if the research practitioners sincerely needed to use particular kinds of animals (including higher mammals), then this tended to be seen as justified. As one participant stated, ‘*if you're saying you can use one animal you can't be picking and choosing what animal you use, if you're talking about a serious disease*’. Of course, when asked to choose which animals they were most concerned about in animal research, responses tended to prioritise pets (dogs and cats and rabbits) and higher mammals (such as chimps as well as farm animals) as opposed to those usually regarded as vermin (such as rats and mice).

One key difficulty in talking about animal testing, poignantly captured by the farming groups, was that animal testing often involved the intentional giving of pain and disease to animals (whereas the farmers saw their own husbandry as about relieving animals from suffering):

- M1 *I think what you're getting from the conversations from everybody is that as a bunch of farmers we actually care about animals and therefore we wouldn't wish to see pain inflicted over any length of time and unnecessary suffering... You know, I mean, like put it this way, if there's very little effect on the animal then we don't necessarily have a problem. But if there's a, you know, if you are going to cause major suffering then we wouldn't do it to farm animals so why should the scientists, you know, why should they have one rule for them and one rule for us, you know.*
Mod *Do you trust the drugs companies and the scientists involved in this?*
F1 *We probably don't know do we.*
M1 *Can we make an opinion on that?*
F1 *You don't have a choice, we don't have a choice.*
M2 *I'm not sure that they have a choice that much as well either. I mean, if you're testing a drug to see if it has harmful effects then presumably that animal is going to be ill or show symptoms of being ill and they won't want to kill it straightaway because they want to see how far the symptoms will progress and that sort of thing and that's the difficulty no doubt.*
(Intensive farmers – North-West)

Indeed, all the participants shared a profound sense of lack of knowledge about animal testing. How many animals were involved? Was it in the thousands or millions? Was this decreasing or increasing? Why were particular animals chosen? For what purposes was testing conducted? Who decided what was justified and which wasn't? How were the animals treated in research? How was this regulated? What, if any, were the alternatives to using life animals? How realistic were these alternatives? Was the issue one of cost or of ethics? In relation to such questions people felt that the whole issue was clouded in secrecy, and that such secrecy could very possibly be at the expense of the animals involved:

- M1 *It's done behind closed doors isn't it.*
F1 *You don't really know do you.*
F2 *I think you'd need to be Greenpeace or something like that to know...*
F3 *... it's all hidden away isn't it.*
M2 *Regulation is another thing, probably most people here don't know about the regulations but there must be some sort of regulations behind the scenes that they have to adhere to...*

- F1 *We should only use animals if it's absolutely essential and there's no other way.*
 Mod *And, do you think this is the case at the moment?*
 F1 *No...*
 M1 *I mean, I'd like to qualify my stance on that, I'd like the whole thing to be more public. This hypocrisy that we have talked about earlier, no matter how uncomfortable it might be, we as a society won't have moved on until we can face that hypocrisy.*
 (Wildlife enthusiasts – North-West)
- M *Well, I don't think we know because we're not told. I mean it's probably one of many things in society that we're not told about.*
 (Country sports enthusiast – North-West)
- F1 *I think like we choose to eat meat, I think perhaps they [researchers] choose to be ignorant. I don't know, I think there's some comparisons there in the way that yes, we all know that animals die a horrible death so we can have our steak on our plate but we choose not to go into it further or think of it any further so perhaps they have a similar sort of detachment.*
 F2 *They probably just look at the end result, don't they.*
 F1 *Like we do, we look at a nice meal on our plate, we look at the end result. Maybe there's some comparisons to be made.*
 (Non-animals group – North-West)

To some extent, people both understood and were sympathetic to some of the reasons as to why the issue remained so secret. People acknowledged the fact that there existed a very real threat from animal rights activists, and that promoting a more informed public would be difficult not least because people, including themselves, appeared so unwilling to confront the issue. However, and perhaps because of the acknowledged biased and sensationalised accounts of animal testing portrayed by the so-called more 'extreme' animal rights organisations (top of mind on the issue of 'animal testing' for a number of people was the picture of the smoking beagle), there was a clear sense of the need to open up the issue and for government to promote a considered and inclusive public debate. The need for a more inclusive debate in the context of conditions of 'mistrust' is an issue that is further addressed in Chapter 4.

Perceptions of Animals and Biotechnology

In this section we examine the texture of public concerns to both the increases in animal testing which can be expected to flow from advances in the new genetics (for example, as a precondition to the development of new drugs), and the creation of genetically modified animals *per se* (for example, for medical or agricultural applications).

New demands for animal testing

BOX 1.

Recent scientific advances have promised to help understand the genetic make-up of life. For example, the Human Genome Project is the largest project ever taken in the Life Sciences. It aims to sequence the entire DNA (the building blocks of life that carry genetic information) in humans. This will facilitate comparison with the DNA of other species. By mapping the DNA it is anticipated that we can identify sites of genetic difference, including the underlying genetic sources of certain abnormalities and disorders. These advances offer considerable potential for the development of new medicines and drugs, especially in the field of hereditary diseases.

But, one by-product of such advances is the likely considerable increase in animal testing. Substantial numbers of animals will need to be tested if we are to determine whether these new drugs are safe. Already some pharmaceutical companies, anticipating this need, are seeking permission for a number of new animal testing laboratories.

People's responses to the above text, outlining the potential need for increases in animal testing arising out of the new genetics, was far from negative. (The text in Box 1. was read out to participants on a concept board accompanied with iconic pictures of the Human Genome Project and 'unemotional' pictures of laboratory animals.) Indeed, there was little rejection *per se*. Rather, the dimensions of concern outlined above in connection to animal testing, was intensified. Many people understood and empathised with the need for new drugs aimed at developing cures to hereditary diseases. Indeed, there were many examples of people displaying compassion, not only to the animals involved in testing, but also to those people actually suffering from hereditary diseases:

- F1 *So it's which side of the line does it fall on? Does it fall on the right side or does it fall on the wrong side? I mean, if we're going back to what we were saying before then things for medical things fall on the acceptable side don't they, and not the unacceptable.*
- Mod *So this is more that [acceptable] side?*
- F1 *From what we were saying but when you say in the cold light of day that it's going to increase [animal testing] it's very hard to swallow to a certain extent.*
- F2 *It's still not pleasant...*
- F1 *It's still not nice, it's still not something that you particularly want to know or want to think about. But I suppose if you had a child who, the age old thing, if you had a child that needed the particular drugs that they were testing or if you had a disease that was being, the cure of which was being advanced through animal testing you're really not gonna care who they test it on so long as there's a cure found.*
(Non-animals group – North-West)
- F1 *It's a very hard issue, isn't it. You haven't got a child who's, I don't know if anybody here has got a physically handicapped child but if you haven't got a child with special needs you might think differently to someone who has got a child with special needs. Or if you've had a termination because you've had a child, that's the big issue. Because I read in the newspaper the other day that somebody's child had a very rare illness so they got pregnant again because of this what's going on, I read it very recently, had another baby... and they took the DNA from the cord and gave it, injected it into this other child and its been cured, its been cured of this very rare illness it has. But through this testing they got, that's how they found out that they could cure it, if it's compatible and the new brother or sister was compatible.*
- F2 *Half of that is like making a Frankenstein, the other half isn't. Everyone's got their own personal views. It's a very touchy subject... yeah, I don't mean that in a horrible way but you've got to look at it from both sides of the coin. If it doesn't affect you personally you can't always see the reasoning for it and like they're making perfect babies. They're not supposed to be perfect, you can't have a perfect human being. We've all got something somewhere wrong with us. No, you shouldn't try to have, to make the perfect baby. It's not even, it's like putting all the bits together of everybody in the room and making a perfect person, you shouldn't be able to do that.. They're fiddling with too many bits. I mean obviously if they can help people who can't have children...*
- M1 *Yeah, but even that's abused. When you're in America you can pick whether you want a boy or a girl..*
(Pet owners – London)

The idea that advances in the new genetics might require a 'substantial increase' in animal testing brought into stark relief the ambivalence many people felt. People's attitudes towards the additional testing of animals were *conditional*: the key condition being the need for a clear demonstration of the 'usefulness' of the research. To be justified would require transparency, accessible information, strong regulation, and the explicit rejection of alternatives, over and above considerations of cost. As the passage below indicates,

- F1 *I think we should have access to what they're testing and, you know, if there's a form, not just a web site that you log into it, but you know if there's a way of reading up on what they're testing for and sort of having access to the information of what they're doing.*
- F2 *Because it is so private isn't it.*

- F3 *It is, it's all hush-hush, and the next thing you see this, what's that sheep, Dolly the Sheep, or something. And it was there, it was formed.*
- F1 *That was out of the blue, wasn't it.*
- F2 *Yeah. And this is just so intense I think you need to sort of make it more public.*
- F1 *Bring it out in the open.*
- F2 *Have a governing body... a governing body might decide on whether you can choose to have a male or a female baby.*
(Non-animals group – London)

Other participants similarly reflected on the need for new forms of governance and regulation to focus policy attention on scrutinising the conditions of new genetics research. Dilemmas of this kind were seen as too important to be left to the scientists and pharmaceutical companies alone. The question as to what constitutes an appropriate or inappropriate use was given added urgency on account of the moral issues involved pertaining not simply to the question of animals testing, but to the wider ethics of genetic testing. For many people the divide between using the new genetics to cure diseases and using genetics to favour certain social characteristics was less than exact. Several participants drew links between apparently benign medical uses of the new genetics and the potential for more eugenic applications arising from emergent ideals (and their normalisation) about what constitutes 'perfect health':

- M *I think with the genetic makeup and everything else, with the genome, it's a totally different scene, it's over the top as far, where science is concerned at the moment just happening to come on to the horizon. What the devil is going to come after that I don't know. But when the homo sapiens is dealing with genetics, it's a very, very fine dividing line between what you might call science and the benefit of the human race. Because they've started, well there's cloning which is similar, I mean it's a very similar situation to this. I mean it's only in the last sort of 10 years we actually found the spiral of genes. And that's taken a hell of a long time. But armed with that, it's like saying you will, it's like going back to Hitler, you know, they will have Aryan race, and it's only so and so or so and so that can breed, all this sort of thing, which then gives you a great problem with natural selection. And if you're going to say that certain people because they have the anti-bodies or they're likely to have the common cold, they should be de-selected, then I think you're in great trouble.*
(Country sports enthusiast – North-West)

Genetically modified animals

We now examine people's responses to the development of genetically modified animals, and their potential application across an array of medical, agricultural and domestic domains. (The text in Box 2. was read out to participants on a concept board accompanied with iconic pictures of the new genetics. The examples of the possible future applications of such research were derived in consultation with the AEBC.)

BOX 2.

We now possess the skills to alter the genetic make-up of animals. By altering the genetic material it is anticipated that we can modify the characteristics of animals in very precise ways. The process involves transferring a gene, commonly a human gene, from one animal species into another. Animals altered in this way are called transgenic. Through this kind of process it is possible to produce transgenic animals designed to manufacture pharmaceuticals, organs for xenotransplantation, animal models for research, and other transgenic animals.

Possible future applications of genetic modification of animals include:

- **Cows that produce milk with lower cholesterol and enhanced nutrients**
- **Faster growing farm animals and faster growing fish**
- **Farm animals with reduced sentience to make them less distressed by farm conditions**
- **Cats that do not cause human allergies**

- **Cats that have their hunting instinct reduced/removed**
- **Mosquitoes that cannot transmit parasitic diseases such as malaria which are bred to replace, at least locally, wild populations**
- **Sheep or cows that make pharmaceutical products in their milk**
- **Pigs that are bred to produce organs, such as hearts, that can be xenotransplanted into humans**

With few exceptions people reacted negatively to the above text. For most respondents the immediate response was visceral: *'I don't like any of that'*, one person stated; *No, I don't like any of that at all'*, another agreed. Others called the potential applications 'scary', 'wrong', 'interfering' and 'ridiculous'. But the term shared by nearly all the participants was that such applications were 'unnatural' in that they marked a radical departure from nature:

F1 *It's just taking away nature, isn't it?*

F2 *Mmm, it's not natural.*

F1 *None of it's natural, no.*

(Non-animals group – North-West)

F1 *I think that's going a bit too far.*

F1 *It's just not letting nature take its course; it's just interfering with nature too much.*

(Non-animals group – London)

F *It's not right, it's too much messing with nature.*

(Pet owners – London)

There appeared to be two dimensions to such responses. On the one hand, people adopted a 'deontological' reaction against the proposed technology as intrinsically a violation of nature and transgressive of so-called natural parameters. On the other hand, people reacted more pragmatically, questioning the apparent 'usefulness' of the putative applications to genetically altered animals and their known and unknown consequences. With the exception of the malaria application, people found the other applications dubious, dangerous and unnecessary. However, as we see below, often such 'intrinsic/deontological' and 'pragmatic/consequentialist' considerations combined:

F1 *Yeah, I think it's just taking it too far. I don't agree with using organs off animals for transplants. And the cholesterol, that's down to your diet isn't it, not... It's so unnatural.*

F2 *Just think, what about the next generation of those animals though? What if they were to... breed?*

F1 *For instance, you know, and then what happens to them if they've got this gene inside them and if that gets broken down and other chromosomes and whatever.*

F3 *You don't know what the consequences are.*

F1 *Yeah, you need to let, you know like the GM crops when that all came out it was like a really big thing and then it all sort of went pear shaped. Take it off the market, do this, I think you have to let it go. It's like we're still experimenting with the beef. You know, they say there could be another epidemic rising in another five years time. You don't know enough.*

F3 *And, you know, science makes mistakes and we don't know how many mistakes, what's going to result from this. You know, cancer causing things and...*

F2 *Just let nature take its course.*

F3 *Look what happened with thalidomide, they thought that was a wonder drug. You know, they make mistakes. Too dangerous.*

(Non-animals group – London)

The progression in the above discussion is illuminating. The passage commences with an account of how the applications of genetically altered animals listed above did not appear

necessary. Tacit here is the notion that such applications may be justified in situations when there is a proven and authentic need. However, such an even-handed approach began to dissipate as people started to think through the consequences of what was implied, and to focus on what appeared to be related episodes. Focusing on the apparently analogous example of BSE, people began to ask what the unforeseen effects might be. Contemplating the known and unknown consequences people then began to question the intrinsic merits of such technological interventions. Underpinning such discussions was the lurking sense that such interventions appeared to violate an deontological sense of ‘nature’, and that such a nature had a tendency to ‘fight back’ in vengeance.

- M1 *You'll never beat Mother Nature.*
 Mod *What do you mean by that?*
 M1 *She'll always come back at you one way or another.*
 Mod *So is this trying to beat mother nature, all this stuff, is that what you're saying?*
 M1 *In effect, yes.*
 F1 *Well it's altering nature isn't it.*
 M2 *No, I don't think it, no. We are assisting nature, I don't think we're trying to -*
 M3 *No, we can't be assisting nature if we want to breed a cat that doesn't catch birds or mice. The whole essence of a cat being put on the Earth and not by God is to catch birds and mice. That's what they do. So we're not - however many millions of years we breed cats they will always catch birds and mice. What this can do is can take an animal and it can alter it's characteristics, and that's what I think you should be thinking about, is do we want a dog that doesn't bark, do we want a cat that doesn't catch mice.*
 (Country sports enthusiasts – North-West)

More generally, people saw such applications as the attempt to solve problems that were of their own making. Plants and animals had evolved over millennia and to propose that one could improve characteristics on a more or less ‘instantaneous’ basis appeared to some respondents as arrogant, as hubris and as likely to rebound on humans. Many respondents commented on the ‘speed’ and ‘pace’ of such developments, especially when driven by commercial considerations. In this sense, such highly interventionist practices commonly were referred to as ‘messing with nature’, or ‘mucking about with evolution’, or just simply ‘wrong’. Again parallels were drawn with the still unknown consequences associated with BSE and genetically modified foods:

- M1 *They're the solutions to the problems that they've made themselves.*
 M2 *Apart from malaria.*
 M1 *That's right. The malaria is about the only one there. But, you know, stress free animals to live on a battery farm so they don't get stressed out by the conditions.*
 M2 *At the end of the day it gets back to the same problem as farming. It's all about money. That was in that line there, wasn't it, faster growing animals.*
 F1 *And how many years is it going to be until something goes wrong. We've been feeding, not us personally, but we've been feeding our farm animals food that they're not naturally supposed to eat. And look what we've done to ourselves. We're gonna start eating and drinking stuff that's not naturally produced, what's gonna happen to us?*
 M1 *You're talking about the food chain and evolution there.*
 F1 *That's it, you're mucking around with evolution. It's...*
 M1 *The driving force of it would be money but what will happen is the good side that's capable coming from this will be outweighed in the end by the greed of the companies...*
 F1 *To me, it's just getting out of control.*
 (Pet owners – North-West)
- M1 *Most of these animals have been the same for thousands of years, what are we changing them for now?*
 M2 *Yeah, but what can be [the effect], by altering the genetics, if we're eating the meat afterwards are we passing it back on to ourselves.*

- M1 *I don't think there's enough known about this one.*
M3 *The GM modified potatoes and stuff, they've been coming across that same thing, you know. Not safe to eat.*
M4 *That xenotransplantation, there was a programme on TV about it and there was a bloke there and he wanted a liver and they didn't have one and they put a pigs liver in an incubator type thing and that kept him going until the liver come. But when they put the liver back in, when they put the proper liver in, now he's got to take some tablets for the rest of his life because there's some disease from the pig he can get.*
(Pet owners – London)

In the discussions the moderator explicitly asked participants in what ways the practice of genetically modifying animals was different or not from conventional selective breeding. Most participants perceived such practices as qualitatively distinct, especially in dimensions of *speed* and *precision*. However, people also appeared to be grasping at a more fundamental difference pertaining to how we, as humans, should be striving towards a relationship in which we interact with nature in a way in which we are only a part of nature, *in a relationship of respect*, and where nature can go on, more or less, regardless of our own actions. The transgression of such boundaries raised both moral and pragmatic considerations:

- Mod *Can I just say, so in what ways do you think these animals are natural?*
M1 *Well, they won't be natural will they?*
M2 *They're not natural, they're man-made aren't they.*
M1 *They're engineered.*
F1 *But we do that now through interbreeding don't we.*
M2 *But even more so now...*
Mod *But that's a point, how is it different from conventional selective breeding?*
M1 *It's quicker.*
F1 *More precise.*
(Wildlife enthusiasts – North-West)

- Mod *You say this is 'not natural'. In what way is it different from what goes on at the moment?*
F1 *Well, none of them seem a necessity. It seems to be that we've carried on long enough with different means of getting those results, why do they need to do it like that?*
F2 *Well, whether you believe in God or a different god or not, animals and humans are put on this world, are created on this world to perform a function. I mean, cows producing, what is it, milk that has something or other? If God or whatever meant for cows to do this in the first place it'd be like that already.*
F1 *But you can side effects from that, okay, you could have a mosquito that doesn't give you malaria but you don't know...*
F2 *What else it's giving you.*
F3 *It's like they're dictating how you should live, they're reducing choices, they're saying this is what is acceptable, this is how it should be so this is what we're going to produce.*
(Non-animals group – North-West)

The farming groups were by contrast more ambivalent to the idea of genetically altered animals. By and large they saw fewer distinctions between conventional selective breeding and new forms of genetic modification. Even though the process was recognised as *'now going into the laboratory and fiddling around ...and altering the DNA'*, all one was doing was *'speeding up the genetic alteration'*. Farmers also recognised the appeal of such processes, especially for breeding companies. However, even among the farmers there was pronounced ambivalence and unease over the likely consequences of going down this path:

- Mod *So do you see this, how do you see this compared to like conventional selective breeding?*
M1 *It's probably exactly the same.*
M2 *That's just travelling at light years faster isn't it.*

- M3 *Yeah, it's just doing it that much quicker but you're all after those sort of things aren't you. Cows that give you ten thousand litres, calf easily, don't have mastitis...*
- M1 *We'd have cock-ups along the way but...*
- M3 *We don't know what sort of throw backs some of this research [will produce]...*
- F1 *Yes, yes. I think nature will have a way of turning around and showing them that they're wrong.*
- M2 *Well, I'm all for it really. But they've got to proceed with a bit of caution because whether we go with it or we don't go with it it's gonna happen. It's gonna happen. So the government should be in there and making sure it's going to happen so lets get a good safeguard on it and get the rules set out at the start instead of letting it just get out of hand. It's got to be in there, we've got to put the rules and regulations as to just how far it can go. But it will happen, it's going to happen.*
- M4 *Well, it's like you say, it's happening. It's not gonna happen, it's already happening isn't it, it's probably been going on for some time but with it I think they're gonna fetch more problems because diseases are getting immune to medicines and it's just an on-going thing and they're going to create more problems.*
(Extensive farmers – North-West)

Tacit in such responses is a remarkable perceived lack of agency in farmers' sense of their ability to control their own futures. Both groups of farmers were highly fatalistic in this regard. The production of genetically modified animals was perceived as an inevitable part of the future of farming, arising from the ineluctable forces of technological advance and commercial self-interest. Indeed, the farmers' own assessment of the likely consequences associated with such technological advance was seen as irrelevant. When pressed on this issue, the farmers were on the whole cautious and pessimistic. Such changes were judged as likely to further exacerbate the existing precarious state of farming. On the one hand farmers would find themselves with little choice but to embrace new technological innovations in genetics, compelled to embrace change they were to stay if in business in a competitive market-place. While on the other hand, the adoption of such practices was seen as likely to further alienate the public and compound the existing stigma of farming. Such advances were finally seen as likely to favour large producers at the expense of the small farmer, exacerbating existing trends.

Messages for Government

At the end of each discussion the sponsor of the research was identified and people were asked to provide a message for the Government. The main message for the Government was not to reject the technology *tout court*, but to proceed cautiously, slowly, openly, and with recognition of the scale and scope of what was being undertaken.

- Mod *So how should the Government be thinking about this?*
- F1 *Very warily... Well I think things go too fast and they want to just go very slowly and think about it very, very carefully because I think there could be some enormous problems.*
- M1 *I think you'd be very brave to go ahead with it, sort of this is it, that's it, push it like mad, I think you'd be very brave. And if I was in government I wouldn't like to push it through.*
- M2 *It's a question of how it's done, it's either the slow way or the quick way. And the quick way you can often miss a few stages at your own peril... But where the problem lies is the actual scientists doing it a damn sight quicker than Mother Nature if you like. It comes back to where we came in earlier on, poultry farming pheasants or wild birds.*
(Country sports enthusiasts – North-West)

Many people spoke of the difficulties of regulation, especially when such developments were being conducted in a globalised and inter-connected world, driven by powerful commercial interests. Most people were depressingly realistic about the ruptures between what appeared to be required and what appeared to be plausible in real-world situations, including their sense of the exigencies governing present day arrangements of regulation. People also spoke

of the need for new institutional bodies that recognised the texture of current public responses, comprised of people encompassing a broad spectrum of lay public opinion. People 'like them' were seen as more likely to reflect and deliberate on the long-term risks and dangers as well as the commercial benefits of such innovations:

- F1 *I'd like to know what the government thought about, what they think is going too far... Because their boundaries and their limits are probably far bigger than ours.*
- F2 *I mean, we don't even understand the human brain, you know, we just don't, we only use a small portion of it and we don't know, scientists don't know exactly everything in there and yet you're prepared to mix genes and DNA samples eventually if they go down that road.*
- F1 *We're perhaps getting ahead of ourselves too much really.*
- F2 *Because we've got the actual capabilities of doing it, scientifically, I don't think we've really thought about the ethical side of it very much and there's a danger that they're just gonna get carried away without thinking about the repercussions.*
(Non-animals – London)

Tacit in such responses was a lack of trust in the capacities of scientists and companies for self-regulation and the need for Government to regulate on behalf of the public. However, more open communication was seen as a *sine qua non* for public acceptability:

- M1 *We'd like to know what's going on. Basically.*
- M2 *I think there should be more openness. It's like the masons, you know, people want to know what they get up to and they're becoming more open these days. It's the same scenario.*
(Wildlife enthusiasts – North-West)

Chapter 4. IMPLICATIONS AND REFLECTIONS

The overall impression from the focus group discussions is that there is considerable scope for public controversy arising from future uses of animals in the biotechnology domain. In this final chapter we reflect further on the focus group discussions and explore their implications, informed by previous research on GMOs and biotechnology.

The Divide between Moral and Instrumental Viewpoints

In the focus groups we found people caught between moral and instrumental viewpoints, both seeing animals as ‘ends in themselves’, and participating in daily practices that ‘indirectly’ use animals more instrumentally, as a means to satisfy ‘human ends’. Thus, on the one hand, we found evidence that large numbers of people were experiencing and relating to animals as individual, living, sentient beings. People were developing what can be described as a ‘culture of care and responsibility’ towards animals, expressed through the establishment of strong emotional ties, feelings of reciprocal love and respect, time spent in the company of animals, and a desire to enable animals to live a life as happy, as healthy and as free from suffering as possible. Such sentiments were unsurprisingly most prevalent amongst ‘pet owners’ but were shared across a variety of different social groups. For example, some farmers spoke in emotive terms about their livestock, wildlife enthusiasts spoke of the moral imperative of protecting and respecting animals in their natural habitat, while country sports enthusiasts spoke passionately of their intimate relationships with their working dogs. Of course, what constitutes ‘care and responsibility for animals’ is hugely contested; what constitutes ‘care and respect’ for one social group may be alternatively represented as ‘cruel and inhumane’ by another. Indeed, such contested notions of animal-human relations are reflected in the growth of vegetarianism, the rise of animal welfare and animal rights organisations, the popularity of protests over the live exports of animals, and so on. Nevertheless, not withstanding such differences in definition and approach, across a wide variety of contexts we can see a growth of empathy and compassion with animals.

At the same time, the focus group discussions also pointed to a collective ‘blinking out’ of those aspects of daily life that remain utterly dependent upon the instrumental use of animals, especially in the use of animals in meat production. Many people saw themselves as being ‘in denial’, choosing to eat meat yet at the same time distancing themselves from actively confronting the realities of modern farming; colluding with supermarkets, advertisers and food producers in dislocating meat from its production. Yet, the very acknowledgment of ‘hypocrisy’ and ‘selection’ commonly expressed by participants represents what may be seen as a reflexive break from the past, or what sociologists refer to as an instance of ‘reflexive modernisation’ or ‘detraditionalisation’ (Beck *et al.* 1995; Heelas *et al.* 1996). In previous times people were more likely to regard the eating of meat as a given, as part of the unspoken norms of traditional life. Nowadays, traditions have to explain themselves, to become open to interrogation or discourse (Giddens 1994). Hence, there exists a vibrant on-going public debate on the ethics of meat production, reflected in the growing popularity of vegetarianism, as well as in debates on animal welfare standards, the future of intensive agriculture, and the lessons to be drawn from past controversies including BSE and foot and mouth. In negative terms, the active dislocation of meat from its context of production may be viewed as part of the contemporary feeling of powerlessness in the face of inaccessible institutions and technological hubris (Dunant and Porter 1997). In a more positive light, the reflexive engagement with such acts of separation belies a latent desire to ‘work out a moral and ethical way of living together, both animals and humans’ (Franklin 1999).

The question of ‘animal testing’ raised similar ambivalent responses as people appeared to be caught between contradictory instrumental and moral/caring viewpoints, between the view as to what was an appropriate use for human betterment pitted against one’s moral distaste for subjecting animals to pain. Indeed, such ambivalent caring/instrumental responses can even apply to the same animal, when people accepted the conditional need to use animals for testing that elsewhere would be regarded as pets or wildlife. Again, the preferred option was to ‘switch-off’. However, when respondents confronted the issue a number of common conditions emerged. Significantly, people tended to accept (or at least to tolerate) the suffering of the animals concerned when there existed a genuine and authentic human need, typically expressed in the need to cure life-threatening diseases. Significantly, such a need had to be justified in *human* rather than *commercial* criteria and was only seen as justified when alternatives were not available. Finally, it is important to note that these boundaries and emphases on what constitutes an acceptable use are not static or unalterable; they remain conditional on the movement of wider cultural and political dynamics as reflected in, *inter alia*, policy discussions, NGO campaigns, pressures for socially responsible investments, media coverage and consumer movements.

Disaggregating Responses towards Animals

So far we have not attempted to categorise and segment different kinds of responses towards animals. In our initial brief we hypothesised that the way in which people experienced and related to animals, in different contexts and roles, were likely to affect how people constituted boundaries between acceptable and unacceptable uses.

In our analysis, we found that the various groups tended to adopt divergent ways of talking about animals, reflecting different kinds of relationships. We found that the farmers tended to talk about their animals using a more instrumental language while the groups of pet owners, countryside sports participants and wildlife enthusiasts tended to use a more moral and affective language to talk about animals. And we also found that such ways of talking about animals tended to prevail, to some extent, across different contexts of animal use. Thus, the farming groups who tended to see their livestock in more instrumental ways were more likely to adopt instrumental criteria in assessing the justification for animal testing, whereas those pet owners who had close affective relations with their pets were more likely to question our rights as ‘humans’ to submit animals for testing. Similarly, the farming groups tend to emphasise pragmatic considerations over the genetically modification of animals whereas the other groups adopted more moral arguments about principle.

A second factor that appeared to underpin responses concerned people’s general sensibilities towards animals. Those who had no real sentiment towards animals were less exercised morally about the plight of animals *per se*, including the use of animals in animal testing, than those who considered themselves people who cared about animals. Such a caring role was embraced by those who had close affective relationships with animals - as pet owners but also as farmers, wildlife enthusiasts and even countryside sport enthusiasts – but also by those who did not have any real direct connection with animals but still cared about animals as an issue of justice (including some participants in our non-animals groups). Indeed, only a minority of participants in the ‘non-animals’ group would portray themselves as people who did not care about animals.

However, it is important not to over-emphasise the distinctions between the groups. Even those people who adopted a more affective and moral language about animals still tended to use animals instrumentally as ‘meat’, even though they were more likely to acknowledge

such practices as somewhat hypocritical. Indeed, across all the groups people deployed both moral and instrumental arguments in assessing what constituted an appropriate use of animals, and clear differences emerged amongst participants within each of the discussions. Both the farming groups, for example, contained discussions about the morality of genetic modification. Indeed, the common ways of talking about animal sensibilities, and the dislocations between direct ‘caring’ uses and indirect ‘instrumental’ uses, are a central finding of the research study.

Animals ‘in their Nature’

In every group discussions participants commonly invoked the term ‘nature’ to distinguish between acceptable and unacceptable uses of animals. This may seem somewhat irrelevant, possibly even irrational, if one presumes that a ‘natural state of affairs’ is one that remains untouched by humanity (McKibben 1988), since the vast majority of animals under discussion have been altered, domesticated, bred, and subjected to human influences over centuries if not millennia. However, the appeal to the idea of nature as it was invoked in the discussions may be somewhat more nuanced than the definition cited above.

For many participants the appeal of animals in daily life – either as domestic pets, wildlife or shooting companions – tended to be talked about in terms of its contrast to the everyday stresses and strains of modern living. In the presence of animals one could leave behind the pressures of work, of parenting, and of farming. By contrast with humans, animals ‘*never argued*’, ‘*were always pleased to see you*’, ‘*always forgave you*’, and so on. However, what people also appeared to be striving towards was a relationship with animals in which people could feel a part of a more ‘natural’ way of being or rhythm that operates beyond human control. This was palpably the case with the wildlife enthusiasts and the countryside sports enthusiasts who, in different ways, sought to experience animals ‘in their nature’, in their territory, ideally away from a human controlled world. As one wildlife enthusiast stated, ‘*we’re all animals, aren’t we*’, while another enthused about feeling ‘*lucky enough to be part of their [wild birds] life when they’re flying around*’. Even the pet-owners could be seen to be striving towards an authentic relationship with their pets ‘in their pet-nature’, maintained to be as free and genuinely animal-like within the constraints of domestication. Many people refused to have household animals precisely because they could not offer such conditions.

Most respondents shared the ideal of keeping animals ‘in their nature’. Even the dairy farmers spoke of their desire to keep livestock ‘*in natural conditions*’, outside in the summer in grassy fields rather than kept inside throughout the year. More generally, people were wary of ‘going against nature’, a term that was key to the distinctiveness of concerns to the human use of animals in the biotechnology domain.

The Distinctiveness of Concerns about increased Animal Testing arising from Advances in the New Genetics

It would appear that present public concerns about increased animal testing arising from advances in the new genetics are not different in character from already established patterns of animal testing. All our participants tended to question the justification for increased testing in relation to certain key conditions. Why were the tests being conducted? Was it being conducted for ‘frivolous’ or genuinely ‘authentic’ purposes? Was there an alternative to the use of animals? Why were particular animals chosen? Were the animals treated with as much care as was possible? In relation to such criteria there was little distinction between the development of new drugs to treat hereditary diseases and the development of drugs for other

medical applications. Of course, in responding to a novel context of use it is not surprising that people tend to fall back on familiar categories. However, there are two reasons indicating why the issue of animal testing in the biotechnology domain might develop to become an issue with new public resonance.

Firstly, ‘animal testing’ appears to be a background issue that most people, most of the time, prefer not to think about. It remains a known but hidden aspect of daily life. At the same time, people are vaguely aware of its provenance and recognise that the issue raises profound ethical dilemmas. One feature which helps conceal the debate from explicit public consciousness is the latent sense that other people, notably animal rights and animal welfare organisations, are raising the profile of such issues and that these are being dealt with by responsible organisations, notably government and medical establishments. Thus, even though the issue is seen as shrouded in secrecy, people appear to share a vague impression that the numbers of animals being used in research is diminishing, that research is being conducted in an increasingly socially responsible manner, and that the frameworks of policy and regulation are broadly familiar and responsive. Indeed, a couple of respondents were aware that animal testing for cosmetics is now banned in the UK.

Against such a background, the proposition that advances in the new genetics may require, as a precondition to development, a ‘*substantial increase*’ in animal testing brought the issue into sharp focus. No longer were people so comfortable in their role as passive spectators. The question of ‘justification’ became a more urgent matter, demonstrable not just to expert committees but also to the public at large. People agreed that such *additional* testing of animals may well be justified, especially on health grounds, but they would need to judge the evidence for themselves.

A second reason why the issue of animal testing in the biotechnology domain may be vulnerable pertains to the possibility of growing public debate about assumptions underpinning the social project of the new genetics overall. On medical grounds there appears currently to be strong public endorsement of the need to find new cures for hereditary disorders. Yet, as noted above, there is already the potential for the further blurring of ‘cosmetic’ and ‘medical’ boundaries as *bonafide* criteria for distinguishing between acceptable and unacceptable forms of research involving animal testing. In the domain of the new genetics growing numbers of people appear cognisant that genetic research and practices both grows from, and further enhances, a ‘set of ideals about a perfect health culture’ (Nelkin and Lindee 1995). How such ideals are constituted, normalised and maintained seems likely to raise debates, tensions, ambiguities and even scepticism amongst individuals and institutions, especially when the social impact of the new genetics is considered. For example, a recent study on the ‘New Human Genetics’ demonstrated that it was not possible for lay people to draw any simple lines of distinction between acceptable and unacceptable research and practice in the new genetics (Kerr *et al.* 1998). Based on 20 focus group discussions, clear tensions were identified in lay people’s accounts, between the desire for individual autonomy and the need for social responsibility, and between conflicting ideas of stigma, suffering and quality of life. People’s sense of the justification for increases in animal testing arising from advances in the biotechnology domain is thus likely to be contingent on their wider sense of the social project of the new genetics.

The Distinctiveness of Concerns about GM Animal Technologies

It is important to note that few people rejected the use of genetically modified animals technologies *tout court*. To most people in the groups, it appeared unrealistic to suppose that

such advances would not be developed; science had its own momentum, scientific knowledge could not be unlearned, and in a fully globalised world it would be churlish to pretend one could stop technological advance. Indeed, many people agreed with the sentiment that society had to continue to develop and to push back frontiers; to do otherwise would be to stagnate.

However, at the same time people appeared uneasy about the proposal to develop genetically modified animals, and to use such animals across diverse arenas of application. Again it is necessary to engage with the ways in which people understood such interventions as ‘going against nature’. Perhaps the most evocative illustration of this sentiment was expressed by one of the wildlife enthusiasts who responded to the proposed future applications of genetic modification of animals as follows:

M3 *I think it has less, it looks towards nature even less. The two there, the faster growing farm animals and faster growing fish, that probably frightens me the most that one because I think that has no regard for this thing called nature. It's just totally saying "sod nature", we're gonna change things, we can do better. And as I think [Sally] said earlier there's so much evidence that says, "oh no we can't". And the one I would probably be totally against would be the reduced sentience and everything. I think that has even more disregard for what should be and what is. I find that appalling.*
(Wildlife enthusiast)

This sentiment does not rely on an outright rejection of the technology *per se*. Rather, the argument is that such proposed applications do not appear to merit the (known and unknown) risks associated with the corresponding technological advance. People thus seem willing to make trade-offs in judging the boundaries between acceptable and unacceptable use; it is simply that concerns about GM animals appear to reflect a number of further elements. Such elements include the requirement to prove a *genuine and authentic need* for undertaking such procedures, commensurate with the moral act of ‘going into the laboratory and altering the DNA, speeding up the genetic alteration’, and the *anticipated likelihood of unanticipated mistakes* arising from the speed, scale and scope of such highly interventionist practices.

This suggests that public concerns to GM animal technologies can be seen to encompass a number of distinct elements. Firstly, they include concerns about the intrinsic character of animals, including the need for animals to retain their integrity. Secondly, they encompass concerns about animal welfare, about the maintenance of standards of care in the treatment and use of animals. And thirdly, they embrace a range of additional issues pertaining to the surrounding conditions of regulation and institutional oversight.

Indeed, the misgivings people expressed towards the applications of such technological advances appeared to be reflections of broader syndromes of mistrust towards those institutions seen as responsible for such applications. Repeatedly, the crises over BSE and GM foods were invoked in support of suggestions that institutions of science, government and agri-business were not to be trusted as key institutions responsible for overseeing such innovations – *dependent as they were on taking animals further away from their nature* – in a responsible and ethically sensitive fashion. Perceiving such institutions as being ‘in denial’ of such realities exacerbated people’s sense of the likelihood of subsequent retribution, of ‘throw backs’, of ‘nature striking back’, and of ‘us getting carried away without thinking about the repercussions’.

The Social Conditions for Public Acceptability

The acceptability or otherwise of the use of animals in the biotechnology domain depends substantially on key conditions pertaining to the ‘social constitution’ of the technologies involved (Grove-White et al. 2000). The social constitution of a technology is seen to depend, *inter alia*, on public perceptions of its consumer benefits, its intrinsic hazard potential, its knowledge sources, the industry structure, the visibility and familiarity of political-regulatory frameworks, its public idioms (e.g. its form of promotion, and of accountability) and its ‘retrievability in crisis’.

The findings in this report underline that people are not saying that they are either in favour or not of GM animal technologies, but that their responses depend on the *conditions* under which it is done. Key conditions for people appear to include, *inter alia*, the realism or fiction of ‘benefits’, the speed of innovation, the openness of public debate, the acceptance of ignorance and its consequences, and the commercial ethos of it all. On these grounds the omens are poor. Consumer benefits appear invisible and questionable, although this may be less the case in medical applications; knowledge sources are experienced as closed with the issue seen as clouded in secrecy; regulatory frameworks appear questioned and potentially inadequate; uncertainties appear under-acknowledged and long-term; public idioms remain ‘expert’-driven; and the technology is seen as potentially unretrievable.

There thus appear to be analogies between recent public attitudes to GM crops and foods, and those emerging towards GM animal technologies. But there is one significant difference. Even though people appear wary and even apprehensive towards the latter, they remain open to the possibility of regulation for the public good. Unlike GM foods where there continues to be scepticism and even hostility towards the motives of Government (AEBC 2001), who tend to be perceived as advocates of the technology, this appears to be less the case with GM animal technologies. As highlighted above, people’s message to Government was to proceed, but to proceed cautiously, slowly, openly, and with due recognition to what was at stake, both in moral and pragmatic terms.

Tacit in the commonly-held sentiment that ‘we are going too fast and need to slow down’ in relation to GM animal technologies is the recognition that we (collectively, as regulators) need to intervene, in innovation R&D as well as in scientific assessments of safety concerns. ‘Going too fast’ is a concern about the trajectory of technological innovation but it is also a concern about our current state of *ignorance*, about what we don’t know we don’t know, about the dangers associated with the likely consequences of unforeseen consequences.

This offers a timely reminder of the case for implementing new ways of engaging public opinion, prior to any publicly damaging controversy. Arguably, of key importance is the need to open up the technology ‘black box’, to find fresh ways of promoting public debate and discussion, to engage in two way ‘interactive’ modes of understanding (Grove-White *et al.* 2000), to seek more active public involvement in discussion of GM animal technology matters (POST 2000), and to acknowledge institutionally not just ‘uncertainty’ as a scientific issue but also ‘ignorance’ about unforeseen consequences as a societal issue (Wynne 2001a, 2001b).

In such regards regulatory systems need to get to grips with the key conditions underpinning public acceptability (and unacceptability) of GM animal technologies. There is an urgent need both to identify what these conditions are, and to support and cultivate government action to ensure such conditions prevail. This could be a role for the AEBC.

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APPENDICES

Appendix 1 TOPIC GUIDE (Household pets)

INTRODUCTION

What household animals do you have and tell me one thing you like, and one thing you are not so keen about having them

1. HOUSEHOLD ANIMALS

How did you come to decide to have your animals? (Explore factors)

Who needed persuading? What kind of choice was it?

How has having animals affected everyday life?

What does this involve?

What is good/ not so good about it?

What is it that builds a good relationship?

Do you think of animals as part of the family? (In what way?)

What do animals add/ contribute to the family?

Is this different from the time of your parents?

How are your animals different from each other?

How do they interact with each other? (Explore stories)

How do you think life is like for your animals? (Explore imaginations)

Do animals have particular 'personalities'?

How are animals different from human beings?

Do you or your children have any special interest in other animals?

In what way are animals important for you/ them?

Do you encourage/ discourage this? (Explore)

Are there people who are particularly good with animals?

What kind of qualities do they possess?

Do you think of yourself as a person who cares about animals? Which ones

Is there a kind of pecking order?

(RANK)

How has having your animals affected how you think about other animals? (Explore other factors)

Think of a memorable animal you have known (Probe in what way)

(40 MIN)

2. SPECIALIST/ WIDER USES OF ANIMALS

Do you experience animals in more professional/ specialist contexts, either at work or as a hobby?

(Explore, if any)

How is this different from your experience of your animals?

More broadly, think of the different ways in which animals enter our lives?

(LIST)

(Add to list, as meat, clothes, pests, wildlife)

How do you think of animals in these different aspects of our lives?

(Explore what these differences are)

In what ways is this different/ the same as the forms of contact we were discussing with our household animals?

Why do we feel differently about different animals?
(Explore feelings of inconsistency/ contradiction/ dilemmas)

Is there a paradox here?

Imagine what a person from another planet would say about this?
Are there occasions when you reflect on these feelings?
Do you feel there is much you can do about this? What?
Would you like to do more?

Do you find this hard to talk about? (Why)?
(20 MIN)

3. ANIMALS AND SOCIETY

What are the key changes in how we, as a society, are using/ treating animals these days?

(LIST)

(Add to List, Vegetarianism, Changing practices in Zoos, re-introduction of beavers,
Conservation of wildlife, intensive production of animals for food)
(RANK in terms of significance)

Are there trends here?

What is contributing to these trends?
Are these conflicting? In what way?

How do we, as a nation, treat animals?

What is distinctly British in our relationship with animals?

Using ANIMALS FOR RESEARCH (On FLIP CHART)

Is this an important issue?

Why have we (not) discussed this up to now?

How are animals used for research?

What are the different reasons why are animals used?
(LIST add to list, medical use, new foods and cosmetics)
When is it justified? not justified?
(Explore differences within group)

How many animals are used in research?

What kinds of animals are used?
Why are different animals used?
Why are humans not used? Should they?
Are you aware of alternatives?

Where are the boundaries in this domain?

What kind of criteria should be used?
Are there/ should there be different considerations for different animals?
Do you feel confident (or not) with current regulations?

How do you feel when we are having this discussion?

BOARD ON RECENT CONTROVERSIES INVOLVING ANIMALS

(Montage of Images and Headlines on veal protests/ growth of vegetarianism, Huntingdon Life Sciences attacked by animal rights activists, protests over Zoos, animal testing, pro- and anti-hunting)

What do you think is going on here?

How do you understand these trends?
Are there sections you identify/ not identify with?

Why do certain animals cause controversy and not others?

Are you members of these kinds of organisations?

How would you describe your feeling towards them?

What do you think about the representation of this?

What role does the media play in this?

How do you feel about the politics of this?

(30 MIN)

4. ANIMALS AND BIOTECHNOLOGY

‘Recent scientific advances have promised to help understand the genetic make-up of life. For example, the Human Genome Project is the largest project ever taken in the Life Sciences. It aims to sequence the entire DNA (the building blocks of life that carry genetic information) in humans. This will facilitate comparison with the DNA of other species. By mapping the DNA it is anticipated that we can identify sites of genetic difference, including the underlying genetic sources of certain abnormalities and disorders. These advances offer considerable potential for the development of new medicines and drugs, especially in the field of hereditary diseases.

But, one by-product of such advances is the likely considerable increase in animal testing. Substantial numbers of animals will need to be tested if we are to determine whether these new drugs are safe. Already some pharmaceutical companies, anticipating this need, are seeking permission for a number of new animal testing laboratories.’

Has anyone heard about the Human Genome Project? What?

Has anyone thought of its implications for animal testing?

Is this surprising?

What do you think about this?

Do you think this is justified?

Under what circumstances?

(Explore)

How should we think of the animals involved in testing?

What kind of rights do they have?

(Debate)

How far should we go?

What are the boundaries in this sphere?

Should scientists/ drug companies be trusted in this domain?

How should the Government be thinking about this?

Have you heard about the possibility of GENETICALLY ALTERING animals?

Have you heard? What? What do you think is involved?

Who is thinking about this? And why?

Now I am going to introduce ways in which people are thinking about this

‘We now possess the skills to alter the genetic make-up of animals. By altering the genetic material it is anticipated that we can modify the characteristics of animals in very precise ways. The process involves transferring a gene, commonly a human gene, from one animal species into another. Animals altered in this way are called transgenic. Through this kind of process it is possible to produce transgenic animals designed to manufacture pharmaceuticals, organs for xenotransplantation, animal models for research, and other transgenic animals.

Possible future applications of genetic modification of animals include:

- Cows that produce milk with lower cholesterol and enhanced nutrients
- Faster growing farm animals and faster growing fish
- Farm animals with reduced sentience to make them less distressed by farm conditions

- Cats that do not cause human allergies
- Cats that have their hunting instinct reduced/removed
- Mosquitoes that cannot transmit parasitic diseases such as malaria which are bred to replace, at least locally, wild populations
- Sheep or cows that make pharmaceutical products in their milk
- Pigs that are bred to produce organs, such as hearts, that can be xenotransplanted into humans

What is going on here?

How does this make you feel?

Is what sense are these animals natural?

Does this differ from conventional selective breeding? (How?)

Could you imagine having a genetically modified pet?

Why? Why not? In any circumstances?

How would you feel about genetically modified farm animals?

Would this change how you think about the countryside?

What kind of boundaries should be established? (How far should be go?)

Think of a genetic modification of an animals you approve of/ disapprove of

What I think about the genetic modification of an animal I feel

(30 MIN)

Appendix 2: GROUP SPECIFICATION

GROUP 1. HOUSEHOLD PETS

Venue: Recruiter's home in Thornton, Lancashire

	Quota
Men	4-5
Women	4-5
'Animal' people	8
Aged 35-50	8
At least one teen-age child	8
Those who own and regularly walk dog	8
C2D	8
Locality	Suburban

GROUP 2. NO ANIMALS

Venue: Preston

	Quota
Women	8
Aged 25-40	8
Never had a child	2-4
No household pets/ no real interest in animals	8
C1C2	8
Locality	Urban

GROUP 3. WILDLIFE GROUP

Venue: Recruiter's home in Thornton, Lancashire

	Quota
Men	4
Women	4
Aged 30-50	8
Active interest in Wildlife	8
Active Bird Watcher	2-4
Vegetarian	2-4
BC1C2	8
Locality	Suburban

GROUP 4. SHOOTING/ FISHING

Venue: Small Hotel in Thurnham, Lancashire

	Quota
Men	6
Women	2
Aged 45-70	8
Those who own and regularly walk dog	4-8
Active in shooting birds of prey	4-5
Active fishermen	4-5
ABC1	8
Locality	Rural

GROUP 5. EXTENSIVE FARMERS

Venue: Small Hotel in Thurnham, Lancashire

	Quota
Married Couples (4x2)	8
Sheep and Dairy Farmers	8
Aged 30-60	8
C1C2	8

GROUP 5. INTENSIVE FARMERS**Venue: Small Hotel in Thurnham, Lancashire**

	Quota
Married Couples (4x2)	8
Pig and Poultry Farmers	8
Own Large Farms	4
Aged 30-60	8
BC1	8

GROUP 7. HOUSEHOLD PETS**Venue: Recruiter's home in Wimbledon, London**

	Quota
Men	4
Women	4
'Animal' people	8
Aged 35-50	8
At least one teen-age child	8
Those who own and regularly walk dog	8
C2D	8
Locality	Suburban

GROUP 8. NO ANIMALS**Venue: Recruiter's home in Wimbledon, London**

	Quota
Women	8
Aged 25-40	8
Never had a child	2-4
No household pets/ no real interest in animals	8
C1C2	8
Locality	Urban

ANNEX

Research on Uses of Animals and Public Opinion in the UK

(1) Animal Experimentation

Facts and Figures

Home Office Figures show that in 1998 2.57 Million animal experiment procedures were performed

Of these, the number of procedures performed according to species were:

• mice	1.64 million
• rats	567,000
• fish	122,000
• birds	106,000
• guinea pigs	62,000
• rabbits	41,400
• sheep	36,000
• reptiles/amphibians	14,500
• pigs	11,700
• hamsters	10,600
• dogs	8,200
• gerbils	6,200
• primates (monkeys)	4,000
• cats	1,600
• ferrets	1,200

(source: *Home Office 'Statistics of Scientific Procedures on Living Animals, 1999)*

The number of animals used halved in the 20 years to 2000.

Animal experimentation procedures (1988) were carried-out by:

• Commercial companies	41.5%
• Universities/medical schools	35.2%
• Government Departments/public health labs/NHS hospitals	7%
• Charities/non-profit organisations	4.5%
• Other public bodies	11.8%

(source: *Home Office 'Statistics of Scientific Procedures on Living Animals, 1999)*

Public Opinion On Animals Experimentation

MORI recently conducted a quantitative survey study on behalf of the Medical Research Council (MRC) into 'Animals in Science and Medicine'. Key findings on public attitudes and opinions include:

The phrase ‘animals in research and medicine’ was spontaneously associated by respondents with:

- animal suffering or cruelty 33%
- medical research 12%
- cures for cancer or AIDS 5%

When asked to rate their interest in the issue of animal experimentation, respondents answered as follows:

Very interested	14%
Fairly interested	53%
Not very interested	24%
Not at all interested	8%
Don't know	1%

Most people endorsed animal experimentation for ‘medical purposes’ (albeit with qualms):

	<u>Always Justified</u>	<u>Sometimes</u>	<u>Never</u>
Research into life- threatening diseases	42%	35%	19%
Testing potential new medicines	21%	45%	30%
To learn how cells work	13%	43%	34%

Other areas of animal experimentation elicited the following responses:

	<u>Always Justified</u>	<u>Sometimes</u>	<u>Never</u>
Researching animal diseases	31%	48%	31%
Improving livestock welfare	24%	43%	27%
Improving livestock e.g. woollier sheep, leaner meat	4%	17%	73%
Testing chemical used in the workplace	8%	25%	61%
Testing safety of household products	4%	15%	77%
Testing safety of cosmetics	4%	9%	85%

When asked if they ‘*trust the scientists not to cause unnecessary suffering to the animals being experimented on*’:

- 56% disagreed
- 29% agreed

- 91% agreed and only 3% disagreed that ‘there needs to be more research into alternatives to animal testing’
- 72% agreed that ‘animal experimentation will always be used for research purposes’ (15% disagreed)

- 26% agreed that ‘the Government should ban all experiments on animals for any form of research’ (55% disagreed)

However:

- 65% felt that they ‘would like to know more about animal experimentation before forming a firm opinion’ (18% did not)
- 86% admitted that they did not know a lot about the regulations regarding animal experimentation
- 65% nevertheless professed distrust in the regulatory system

More generally on trust (in terms of the provision of honest and balanced information), highest ranked were vets (56%) and animal welfare groups (54%); amongst the lowest were pharmaceutical companies (4%), governments (6%), and the media (8%)

Other salient statistics:

- 8% of UK adults are paid-up members of an animal welfare organisation (source: MORI for *New Scientist*, 1999)

(2) Animals & Farming in the UK

Facts and Figures

In 2000, the Ministry for Agriculture, Fisheries and Food (MAFF) published a report detailing the state and scope of agriculture in the UK. Some of the main findings, regarding the use of animals in farming, were as follows:

Total cattle numbers	11,133,000
Total sheep	42,261,000
Total pigs	6,482,000
Total fowl	155,000,000

- between 1999 and 2000, the numbers of cows and sheep fell around 4%, and the numbers of pigs around 11%
- In 2000, 843 million poultry were slaughtered¹

²Foot and mouth disease facts and figures:

- As of 3rd September 2001, there had been 1,998 confirmed cases of the disease
- 3,802,000 animals have been slaughtered
- loss of income to the farming industry amounts to some £1.5 billion
- loss of income to the tourist industry amounts to some £4billion

¹ the figure of 155 million denotes the number of head of poultry at the point of audit – June 2000. However, given the 6-week life span of poultry grown for meat, the total number of poultry slaughtered in any given year will inevitably far exceed the number in existence at any one time – hence the total slaughter figure of 843 million

² Source: Countryside Agency, 2001

Public Opinion about Farming and Animals:

In a recent survey study (2001) by the Food Standards Agency (FSA):

- 90% of UK adults eat fresh meat on a regular basis
- 69% are concerned about the safety of raw meat

In a recent NOP (March 2001) poll:

- 82% of UK adults said they would like to see a return to more traditional methods of farming, even if this meant paying more for food

In recent poll (May 2001) conducted by NOP Solutions for Compassion in World Farming (CIWF):

- 86% of the British public stated that they wanted the European Union to ban the keeping of laying hens in battery cages

According to an NOP survey for Animal Aid (1998):

- 76% of 15-24 year olds believe that animals suffer at the time of slaughter

According to a Taylor Nelson Paul survey for the RSPCA (June 2000):

- 25% said animal welfare was their number one priority when choosing fresh meat
- 80% said they would like to see better welfare conditions for Britain's farm animals

(3) Organic Farming the UK

Fact and Figures

According to a Report by the Soil Association (2000):

- By April 2000, over 400,000 hectares of land were being organically farmed in the UK
- Organic production accounted for 2.3% of agricultural land area
- Registered organic producers numbered over 2,800
- Of those considering conversion to organic farming, the majority were extensive livestock farmers, the second largest were dairy producers, and the third were poultry enterprises
- the total retail value for organic foods was £605 million
- the UK organic market grew 55% over 1999-2000

In the year 2000:

- Over 65% of UK households made an organic food purchase, as compared to 37.2% in 1998
- 7% of consumers were responsible for 57% of organic purchases
- A third of UK adults claim to have eaten organic food³

³ source: Countryside Agency, 2000

(4) Vegetarianism in the UK

According to the Minitel Vegetarian Foods Report (2000):

- 1999 sales of vegetarian foods were worth £399 million
- 10% of those polled at no red meat

According to an ICM poll for the Daily Telegraph (April 2001):

- 9% of UK adults 'don't eat meat'
- 10% of women 'don't eat meat', and 7% of men

In comparison with an NOP poll conducted in 1992:

- 7% of women respondents were vegetarian
- 4% of men were vegetarian
- According to this survey, 4% of respondents in the Midlands and North were vegetarian, as compared to 9% in the South
- By class, 18% of AB households contained at least one vegetarian, 16% of C1 households, 12% of C2 households, and 10% of DE households

According to the Food Standards Agency's 'National Diet and Nutrition Survey (2000):

- 10% of 15-18 yr old girls claimed to be vegetarian or vegan
- 1% of 15-18 yr old boys claimed to be vegetarian or vegan

According to the JMA Student Omnibus study (2000):

- 8% of students were vegetarian, and 1% vegan
- Male vegetarian amounted to 4%, and female 11
- 18% of the sample did not eat red meat

According to an NOP Poll for the National Consumer Council (March 2001), as a result of the foot and mouth outbreak:

- 29% are considering (or have stopped) eating meat
- 35% are considering (or have stopped) eating red meat

According to a MORI poll conducted for the Mail on Sunday (March 2001), since the foot and mouth outbreak:

- 11% of adults eat less meat than usual
- 10% of adults don't eat meat

(5) Hunting in the UK

Facts and Figures

According to the Burns Committee Report on Hunting With Dogs (submitted to the Home Secretary in 2000):

- hunting generated £15.6 million of income in 1999
- it *directly* supports an estimated 710 full-time jobs (or full-time equivalents – FTE's)
- When indirect employment is considered the total number of jobs dependent upon hunting is estimated at between 6,000 and 8,000 FTEs

- Additional dependants on hunting include rural veterinarians, horse trainers, stable staff, farriers, transporters, feed and forage merchants – all of whom could expect a negative impact in hunting were banned
- It is estimated that hunts organise nearly 4,000 functions a year (including dinners, dances, trials, competitions, dog shows, clay pigeon shoots, etc.), and attended by an estimated 1.25 million people in total

The hunts:

- there are 178 fox hunts, participating in 74 days hunting per year
- there are 3 deer hunts, participating in 97 days hunting per year
- there are 83 hare hunts, participating in 53 days hunting per year
- there are 20 mink hunts, participating in 42 days hunting per year

The Animals:

- An estimated 15,000 foxes are killed by registered hunts each year; foot and gun packs account for another 7,000-10,000 foxes
- stag hunts account for 15% of the total number of around 1,000 stags culled each year i.e. stag hunts kill about 160 animals a year
- about 200,000-300,000 hares are shot each year
- mink hunts account for about 400-1400 mink per year
- according to the Countryside Alliance's figures, registered hunts put-down approximately 4,000 hounds a year (most of whom are considered to have reached the end of their lives as useful pack hounds)

Public Opinion about Hunting

According to a MORI Poll, for the Mail on Sunday (2000), when asked 'to what extent do you support or oppose a ban on hunting with dogs in Britain':

- 46% said 'strongly support'
- 13% said 'tend to support'
- 16% said 'neither support nor oppose'
- 10% said 'tend to oppose'
- 13% said 'strongly oppose'
- 2% said 'don't know/no opinion'

The NOP poll for The Guardian (December 2000) found:

- 48% wanted hunting banned
- 14% wanted to allow it

(6) Animal Welfare and Animal Cruelty in the UK

Facts and Figures

In Britain today⁴:

⁴ Source Animal Aid, UK, 2001

- Over half of households have a pet
- there are about 7.2 million cats
- there are about 6.5 million dogs
- there are about 1.2 million rabbits
- there are about 0.9 million hamsters
- there are about 135 million ornamental fish⁵
- 8% of UK adults are paid-up members of an animal welfare organisation⁶

However:

- someone calls the RSPCA's animal cruelty helpline every 19 seconds
- in 2000, the RSPCA investigated 126,000 complaints and answered a total of 1.5 million calls
- Prosecutions for harm to animals rose by 17.5% from 1999 to 2000
- In 1991, over 129,000 exotic birds were imported into the UK – over 19,000 of these died within a few weeks
- In 1995, the RSPCA estimated that about 1,000 dogs are needlessly destroyed each day (by animal welfare organisations, vets, the police and local authorities)
- It is estimated that there are around half a million stray and unwanted dogs on Britain's streets
- in 1995, the RSPCA alone destroyed nearly 15,000 dogs, 20,000 cats and 36,000 other animals

A recent study about animal cruelty with 1,000 children (aged between 10 and 16) by researchers at Manchester Metropolitan University found that:

- more than half had 'first hand knowledge of harming animals'
- Incidents included shooting cats, strangling ducks, dropping concrete slabs on cats' heads, blowing-up frogs and toads

⁵ Source: Aquanaut, 2001

⁶ source: MORI for *New Scientist*, 1999