

UNIVERSITY OF SOUTHAMPTON

HUMAN-ANIMAL RELATIONSHIPS: PERCEPTION,
ATTITUDES AND ETHICS

by Margaret Fidler

Doctor of Philosophy

FACULTY OF SOCIAL SCIENCE

PSYCHOLOGY

June 2001

To John, Richard and Helen

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL SCIENCE

PSYCHOLOGY

Doctor of Philosophy

HUMAN-ANIMAL RELATIONSHIPS:
PERCEPTION, ATTITUDES AND ETHICS

by Margaret Fidler

This study investigates the psychology of human-animal relationships and the extent to which our attitude to animals has changed over the latter part of the twentieth century. Empirical investigation and ethical enquiry are used to focus on both practical and moral issues.

The question of animal status has been debated since the time of the ancient Greek philosophers, and Part I looks at changing attitudes in Western society. It focuses on three key debates which have traditionally defined the status of animals compared with that of mankind: whether they have instinct rather than rationality, whether an anthropomorphic understanding of them is unscientific, and whether some can be said to have a sufficiently developed form of communication to merit the term 'language'. It is the arguments underlying these debates that have traditionally defined animal status.

Of all animals, pets have the highest status, often being treated as family members. However, claims made by pet owners about their relationships and shared systems of communication have commonly been dismissed as unscientific, anecdotal and anthropomorphic. By the use of video recordings, Part II investigates whether these criticisms are justified and examines the extent to which attributions of cognitive and affective states to animals are influenced by personal experience.

Part III addresses the question of how far the experience of living with companion animals affects people's attitudes to non-pet species, and whether there are generational differences in the perception of animals. By means of a three-generational study, it examines changing attitudes to animals over a period of seventy years, and the practical issues of how different species would be treated by each of the generations in particular situations.

Part IV investigates the extent to which two institutions, both largely concerned with moral thinking, are including the ethical treatment of animals in their courses: Christian theological colleges and university departments of philosophy.

The study thus encompasses psychological, philosophical and theological thinking in order to understand more about people's current perception of animals, and the ethical issues which define their place in our society.

CONTENTS

Chapter 1: Introduction to Thesis	1
-----------------------------------	---

PART 1

ATTRIBUTION OF ANIMAL STATUS: HISTORICAL AND THEORETICAL PERSPECTIVES

Chapter 2: Animal instinct: Human rationality	7
Chapter 3: The Anthropomorphic Debate	23
Chapter 4: Can Animals Have Language?	41

PART 2

HUMAN-ANIMAL INTERACTIONS: AN INVESTIGATION BY MEANS OF TWO VIDEO STUDIES

Chapter 5: An Exploratory Investigation into Social Interactions between two People and their Dogs	65
Chapter 6: Attribution of Cognitive and Affective States to Dogs: Pet owners versus Non-pet owners	85

PART 3

AN INVESTIGATION INTO ATTITUDES TOWARDS ANIMALS AND THE ENVIRONMENT ACROSS THREE CONSECUTIVE AND RELATED GENERATIONS

Chapter 7: Introduction	96
Chapter 8: Design of Questionnaire	104
Chapter 9: Results	113
Chapter 10: Discussion	141

CONTENTS (CONT'D)

PART 4

AN INVESTIGATION INTO THE EXTENT TO WHICH CHRISTIAN
MINISTERIAL COURSES AND UNIVERSITY COURSES IN MORAL
PHILOSOPHY ARE ADDRESSING THE ETHICAL TREATMENT
OF ANIMALS

Chapter 11: Introduction	152
Chapter 12: Design and Administration of Questionnaire	160
Chapter 13: Results	166
Chapter 14: Discussion	176
Chapter 15: Conclusion	184

APPENDICES

Appendix A. Video study reports by pet and non-pet owners.	191
Appendix B. Questionnaire used in 3-generational study.	206
Appendix C. Distribution of scores on measure of perception of animal status.	212
Appendix D. Names and addresses of theological colleges/ regional courses sent questionnaires.	216
Appendix E. Questionnaire sent to ministerial colleges/regional courses.	218
Appendix F. Names and addresses of university departments of philosophy sent questionnaires.	220
Appendix G. Questionnaire sent to university departments of philosophy.	221

REFERENCES	222
------------	-----

ACKNOWLEDGEMENTS

I would like to thank my supervisors, Professor Peter Coleman, Professor Alan Costall and Professor Paul Light, for their support, patience and encouragement in the course of this study. I have been very fortunate to have had their help. I am also indebted to other members of the university for their advice, in particular Drs. Tony Roberts and Dave Daley. Lastly thanks are due to all the participants who so generously gave their time to make the study possible.

CHAPTER 1

INTRODUCTION TO THESIS

The explicit acceptance of the view that the world does not exist for man alone can be fairly regarded as one of the greatest revolutions in modern Western thought ...

Keith Thomas, 1983:166

Over sixty years ago a coloured poster hung on a school wall. It depicted four farm animals, and alongside each was an explanation of its use: 'The cow gives us beef', 'The pig gives us pork', 'The sheep gives us mutton' and 'Hens give us eggs.' Clearly this was not the case. The animals did not give us these things. Furthermore, we did not eat pigs, we ate pork: not cow, but beef: not sheep but mutton. That particular piece of equivocation sowed the seeds of this study.

In his book 'Man Meets Dog' the ethologist Konrad Lorenz describes how he was able to enjoy a breakfast of sausages made from a pig he had personally known as a 'dear little piglet'. Once he had taken on board the fact that the pig was destined to be his breakfast, '... to save my conscience from conflict, I meticulously avoided any further acquaintance with that pig' (Lorenz, 1954). Had he been shown a field of wheat, he would hardly have avoided it until it was harvested, but he had needed to distance himself from the pig that was to be killed and eaten.

Despite changing conditions, it is still not easy to save ourselves from moral conflict about animals. Although intensive farming systems have kept animals away from public gaze, articles about the bleak conditions under which they are reared appear in the media. Even though we have less personal experience, we acquire it vicariously. Popular television programmes give fascinating information about the lives of non-human species: farm animals, animals in the wild, and those kept for companionship. In consequence, people have been struck by the fact that the lives of many of them have much in common with their own, and there has been a change of attitude towards them.

Traditionally non-human species have been seen as fundamentally different from us. Aristotle believed they had been put here for our use. Philosophers and theologians have taught that their inferiority lies in their lack of rationality, or soul, or because we had been given dominion over them. Taken together, these ideas have meant that questions about ethical treatment of animals have been largely ignored, and only within

the past few decades has moral thinking about them been considered worthy of serious study (Midgley, 1983; Singer, 1975; Linzey, 1987, Serpell, 1996). In order to understand why this change has been so slow in coming, Part 1 of the thesis examines some of the traditional arguments about the status of animals, and what has lain behind them.

There have of course been dissenters from the traditional view of animals. Thinkers such as Montaigne, Bentham and Mill rejected the idea that morality should be confined to humans. Ordinary people who have lived closely with animals have agreed with them, arguing that animals they have known well have been able to make intelligent choices and adjust their actions accordingly. Pet owners have given many accounts which demonstrated their powers of reasoning. Their accounts, however, have commonly been dismissed, especially in scientific circles. Scientists have adopted a particularly defensive stance, concerned about their own academic status, fearful of committing the sins of anecdotalism and anthropomorphism (Costall, 1996). Only recently, with the emergence of ethology, has enquiry about the nature of animals become less restricted. Ethologists, studying animals in their natural environments, are concerned less with their actual behaviour than the meaning attached to it (Midgley, 1983: 14). Their reports mostly use language that can be understood by ordinary people, and they refer to individual animals by name rather than number. Because much of their material is recorded on camera, educational and popular television programmes have been able to show intriguing glimpses of the lives of species about which little was previously known. People who have never met a chimpanzee feel they have become familiar with them through the work of Jane Goodall. In today's urban society, however, personal contact with animals is confined mainly to pets. Part 2 of the study uses an ethological approach to examine the 'unscientific' claims made by pet owners, that relationships with their animals are in fact social, two-way affairs, in which a system of communication is mutually structured.

A large body of work has now been published on pets, and especially their part in therapy programmes. This has enhanced their status still further, but the current study goes beyond this, investigating whether favourable attitudes to these particular animals are extended to non-pet species. As attitudes to animals vary widely between cultures, the enquiry focuses on those within our society. Part 3 of the thesis examines changing attitudes and moral thinking about animals.

The ethical treatment of animals has long been a very thorny issue, and it is not by accident that the topic has been systematically ignored (Thomas, 1983; Midgley, 1994; Serpell, 1996). The nineteenth century reforms to give even working animals some

protection from cruelty met with considerable resistance. Legally, animals were private property.

In his book 'Animal Liberation' (1975) Peter Singer quotes a report from 'The Times' of 1821. An Irishman, Richard Martin, brought into the British Parliament a Bill to prevent ill-treatment of horses and other working animals. The whole thing was treated by the Commons as such a tremendous joke that the reporter complained that he had been greatly hindered in his work. He had not been able to hear what was going on because the laughter was so loud. When a member asked if asses were to be protected from cruelty, someone said that Martin would be legislating for dogs next, which caused a roar of mirth, and a cry 'And cats!' sent the house into convulsions. It now seems extraordinary that cruelty to animals could be dismissed so trivially. Legislation now gives some, although not all, animals a considerable measure of protection, and almost two centuries later debates about ethical treatment of them are still hotly debated.

The importance of ethical thinking

It would be simpler to accept Aristotle's teaching that animals were put here for our use, and stop worrying about them. The trouble arises because, having evolved as social beings, we have developed a high level of empathy. We are not inevitably selfish, and commonly take pleasure in promoting the interests of our families, friends and neighbours, even at some sacrifice to ourselves.

The historian William Lecky (1838–1903) wrote 'At one time the benevolent affections embrace merely the family; soon the circle expanding includes first a class, then a nation, then all humanity, and finally its influence is felt in the dealings of man with the animal world.' This pattern, however, has not run smoothly.

Modern philosophers approach the issue from different standpoints. Peter Singer argues that we must act ethically towards animals, on grounds of equality and shared sentience, Tom Regan argues that animals have rights based on their intrinsic value, Roger Scruton that we have duties to animals which do not depend on their having rights, and Rosalind Hursthouse that cruelty is a human vice in need of correction. Peter Singer's 1997 book 'How Are We to Live?' makes the case that ethical treatment of animals is essential if humans are to achieve a happy and fulfilled life: 'People who have chosen to live an ethical life ... have invested their lives with a significance that many despair of ever finding' (1997:viii). In a rather similar vein, John Mackie (1997:194) writes 'A humane disposition ... naturally manifests itself in hostility to and disgust at cruelty and in sympathy with pain and suffering wherever they occur' (my

emphasis). Most people like to think of themselves as kindly, and avoidance of cruelty becomes essential to their peace of mind. We need to feel comfortable with how we think and act.

Attitudes and personal experience

Pets are in a privileged class, commonly treated as members of their human family (Cain, 1983; Katcher, 1983), and looking after them responsibly brings most owners a good deal of satisfaction. Whether these kindly feelings are extended to other animals is, however, less clear. Owners develop a capacity for relating to their pets in anthropomorphic ways (Chapter 5) and are then more likely than non-pet owners to use this approach in coming to understand the behaviour of unfamiliar animals of the same species (Chapter 6). It would seem plausible to suggest that it is the type of experience people have had with their pets that would affect how they feel about other species, with bad experiences leading to negative feelings and good ones encouraging more positive attitudes. Part 3 of this study also investigates whether the type of experience does affect feelings to animals in general.

Attitudes in generational context

Participants in Part 3 were drawn from three consecutive and related generations; students, one of their parents and one of their grandparents. All completed identical questionnaires asking about good and bad experiences with pets and what their views were on some key issues concerned with the ethical treatment of non-pet animals. The final items concerned attitudes to environmental problems.

Each of the three generations grew up in very different times, in different social conditions and with ideologies common to that particular period. A large majority of the study's grandparents grew up around the time of the second World War, when concern about humans clearly had priority over those of animals. Animals were reared on family farms, before the days of modern technology. Environmental problems as we know them were still to come.

Investigating family groups has the advantage that respondents are more likely to come from similar social groups, and to share economic status. As the present generation were students, their families were likely to have an interest in education and to be of average or above average intelligence. This was particularly relevant to the form and content of the questionnaire, making it possible to include questions which might have been less suitable for a random group. The first items asked respondents to consider

seven philosophical quotations, and to respond to the ideas expressed.

Today's students are likely to be better informed about current ethical issues than the older members of their family. However, family relationships are two-way affairs, with ideas between younger and older members moving in both directions. The much discussed 'generation gap' does not preclude the young and old from exchanging ideas.

To help with interpretation and clarification of responses, participants were asked to give the reason for their answer, when this was appropriate. It was important to take into account that when the oldest generation was growing up, little attention was given to the ethical treatment of animals, whereas today debates are quite common. Most of the parents were young in the 'swinging sixties', when liberation movements focused on feminism and racism. Debates about animal liberation followed in their wake.

Philosophical and Christian teaching about animals

The rationalist tradition did as much as the Christian one to dismiss animals from the moral scene, and Peter Singer's 1995 book 'Animal Liberation' addressed a subject of obvious interest which had previously been largely ignored by philosophers (Midgley 1983, 1996). The Christian church had also ignored the issue, focusing on human relationships, and how people should live with one another. Part 4 of the thesis investigates whether the changing attitudes to animals highlighted in Part 3 are reflected in the teaching of university courses in practical ethics and Christian courses in ministerial training. Moral issues are key factors in the teaching of both.

An examination of ethical thinking about animals is especially interesting in that it tells us a good deal about human psychology. Part 3 suggests that over the past three generations the status of animals has increased, with people having greater concern about some of the ways we use them. Part 4 investigates the extent to which this is now reflected in philosophical and theological teaching, and how problems to do with the relationships between humans and non-humans are being addressed.

Speaking as a modern philosopher, Mary Midgley says that identifying our real selves exclusively as soul or intellect is wrong. We cannot draw up the ladder that connects this aspect with the rest of our nature (Midgley, 1979: 196). This is an important aspect of our thinking about animals, and this enquiry examines the extent to which people are now accepting it as true.

PART 1

ATTRIBUTION OF ANIMAL STATUS: HISTORICAL AND THEORETICAL PERSPECTRIVES

Three key debates:

1. Animal instinct: human rationality.
2. The anthropomorphic debate.
3. Can animals have language?

CHAPTER 2

ANIMAL INSTINCT: HUMAN RATIONALITY

Ideas underlying the concept of instinct have always been controversial. Wundt (1832–1920) remarked that when we endeavour to get at the meaning of the phenomena called instinctive, we enter a veritable museum of opinions (cited in Wheeler, 1939:39). Yet this 'museum of opinions' has not been merely a collection of interesting and often widely differing views but has held the key in an important way as to how man has seen himself in relation to the animal world, and what his relationships with animals can, and should, be.

Many of the opinions in the 'museum' are likely to have evolved from one or other of three separate traditions; the religious or theological, the mechanistic, and the anthropomorphic or psychological one. An examination of each shows how differing concepts of instinct have played an important part in defining the status of both humans and animals.

The religious or theological approach

This took shape within the context of its historical background. Early Greek philosophers had already produced differing theories about the relationship between man and animals. In the sixth century BC, Pythagoras believed in the kinship of all animate nature and advocated vegetarianism. But Aristotle (382–322 BC) proposed a far more acceptable theory. He held that there were three kinds of soul, a vegetative soul, which man shared with plants, a sensitive soul, which was shared with animals, and a rational soul which was unique to man. Man was thus a very superior animal. It was all too easy to take on board such an attractive view of human worth and Aristotle's teaching was embraced and widely accepted. He also advanced the view that not only were animals here to be used by human beings, but that slaves and women were here for the use of more educated and rational men. This has become considerably less attractive and is now widely rejected. Today slavery is viewed as immoral, while Aristotle's theory concerning the status of women is viewed, by at least half the population, with the contempt it deserves. Both his theories were of course speculative, and unsurprisingly aroused opposition from those who continued to hold to the Platonist and Pythagorean traditions that many animals were not devoid of reason. Unfortunately, the Stoic school (300 BC to c100 AD) lent support to the Aristotelian view, which denied reason to animals, and over the following centuries their view became embedded in Western, Latin-speaking Christianity. St. Augustine

(354–430 AD) reinforced this idea to the extent that Western Christianity concentrated on one half, the anti-animal half, of the far more evenly balanced ancient debates (Sorabji, 1993:2).

In the thirteenth century the philosopher–theologian, St Thomas Aquinas (1225–1274) developed the doctrine further, stressing that because animals lacked reason, they could have no soul comparable to that of humans. Man was made in the image of God (Genesis i, 27) and alone had been given an immortal soul. When God created the world he had implanted instinct into animals and the free intelligence of angels into man.

To explain this difference by means of an example, St. Aquinas compared the rational behaviour of man to that of a sheep, who 'seeing the wolf, judges it a thing to be shunned, not from reason, but from natural impulse' (cited in Diamond, 1971:328). A lack of hard evidence appeared not to detract from the point of the account, that man and animals are distinctively separate from one another, with the difference lying in the fact that man alone has rationality, animals have instinct. Clearly the difference between instinct and rationality had come to be used in a very evaluative way.

The natural theologians

In the Old Testament, man is given dominion over all the animals, and this was seen by the natural theologians to mean that animals were put here specifically for human use. Keith Thomas (1984) cites a variety of instances where animals were seen to have been specially created for one or other of man's needs: practical, moral or aesthetic. Savage beasts were necessary instruments of God's wrath, put among us 'to be our schoolmasters', while horseflies were held to have been created so 'that men should exercise their wits and industry to guard themselves against them.' In 'The Natural History of English Songbirds', 1737, it was suggested that song birds were devised on purpose to entertain and delight mankind, while in William Kirby's book 'On the Power, Wisdom and Goodness of God as manifested in the Creation of Animals and in their History, Habits and Instincts', 1835, it was explained that even the louse was indispensable, because it provided a powerful incentive to habits of cleanliness (Thomas, 1984:19ff). The louse was thus fulfilling its part in creation by contributing to man's superiority as a cleanly being. Every species testified to the benevolence of God towards mankind.

Despite the acceptance of these bountiful gifts to man, Keith Thomas also tells us that 'there was a marked lack of agreement as to just where man's unique superiority lay (1984:31). He continues, 'The search for this elusive attribute has been one of the

most enduring pursuits of Western philosophers, most of whom have tended to fix on one feature and emphasize it out of all proportion, sometimes to the point of absurdity.' Today there are few who would accept William Kirby's teleological status of the louse, yet many see in animals a pre-ordained function of ministering to the needs of mankind.

Human superiority

A closer examination of the issues reveal that man's superiority has rested on assumptions, eliminations and arbitrary priorities. If having a soul demands rationality, and animals are not rational, then animals have no soul. Because of his rationality, man does have an immortal soul. These theological theories were underpinned by assumptions which relied on belief rather than evidence. Nevertheless, there have always been some who have questioned the lack of rationality in animals, insisting that animals, especially those with whom they have been familiar, seem to act in intelligent ways. Many demonstrate a capacity for memory, and for working out different ways of avoiding danger or of finding the food they need. They can build very elaborate homes in which to care for their young. It is difficult to believe that they act from instinct alone.

By way of explanation for such seemingly intelligent behaviour, the theological view was that instinct had been implanted in a very positive way and could in fact be seen as a reflection of intelligence. Just as birds could instinctively escape from danger, so they could instinctively build homes, even of such complexity as to defy human skill. Thus, a positive view of instinct could encompass a negative view of animal rationality. The actions of birds when nest-building were still no more than physical, although it was the 'long series of actions, having orderly causes, made and chained together' that accounted for the complexity of their building skills (Sir Kenelm Digby, 1644, cited in Diamond, 1974:242). He accounted for the birds' care of their young in the same way, reiterating the very important point that only man had rationality, only man possessed an immortal soul. The possibility that there might be any sort of spiritual continuity between animals and man was a fearful prospect. 'To predicate mortality in the soul' he wrote, 'taketh away all morality and changeth men into beasts' (cited in Thomas, 1984:123). If soul and rationality must always go together, then to allow rationality to animals would be to give them a soul and lead to the possibility of continuity between animals and man. In the theological tradition this was unacceptable.

An interesting distinction was made between human and animal instinct, through seeing human instincts in a particularly negative way - as unfortunate, 'animal' things. This idea persisted through the nineteenth century and may still surface today. Thus,

Charles Dickens (1812–1870) had his character Mr. Squeers (Nicholas Nickleby, Ch. 5) make the exhortation 'Subdue your appetites, my dears, and you've conquered human natur (sic)'. Such secular ideas were readily incorporated into the religious view of instincts, for there was the advantage that, by accepting instincts, but only in an animal way, assumptions of essential discontinuity between animals and humans remained unchallenged. The focus was shifted to those instincts which were considered to be undesirable in humans, rather than merely benign or even desirable, such as the maternal instinct. By such a manoeuvre, it could again be shown how superior man was to animals, which acted solely for the satisfaction of the appetites. In the Edward VI Prayer Book, the Marriage Service stresses that the state of marriage should not be entered into '... lightly, or wantonly ... like brute beasts that have no understanding' (The Book of Common Prayer:281). Despite the fact that some animals mate for life, whereas some humans do not, and that Charles Darwin was later to show that some animals exercised choice in their search for mates, this marriage service was still the most commonly form used until after the Second World War. Thus, although put forward as a destructive, rather than positive force, instincts could still be used to emphasise the discontinuity between man and animals.

The accusation that humans might somehow be being 'beastly' or 'brutal' or 'no better than animals' still exists. When people 'behave like animals', they are not running with the grace of deer, nor building with the skill of beavers, nor 'homing' like pigeons. The accusation is that they are acting aggressively, or immorally, cunningly, or wantonly. In the religious tradition, the threat is that they may not achieve eternal life, any more than animals can do. There are those who, somewhat wryly perhaps, have questioned the reason for such assumptions. As Mark Twain put it 'Heaven is by favour; if it were by merit your dog would go in and you would stay out' (cited in Wynne-Tyson, 1990:550). Doubtless he intended this to apply only to some dogs, and only to some humans, but it is not difficult to take his point!

Ideas about animal instincts were also considered in the writings of the clergyman, John Ray (1627–1705). He was a keen naturalist and, in line with current natural theology, saw instincts as the work of a thoughtful God. In the seventeenth century the Church encouraged people to approach the living world with a sense of wonder, although it acted as a powerful deterrant to those who might be tempted to cultivate a scientific attitude towards 'natural knowledge'. The Bible implied that God had made the Universe in perfect order, so it was considered impertinent to enquire too closely into how it worked (Sparks, 1982:75). Like Gilbert White, a few years later, Ray did not question the nature of instincts. Natural theology could accept them all, and Gilbert White even wrote that the insatiable appetite for copulation which both animals and humans displayed was 'part of the Great Design of Providence' to ensure the

continuation of every species (Sparks, 1982:81). Perhaps the more prudish Victorians were later able to derive a crumb of comfort from his observations. Nothing God-given could be bad and John Sparks would later say of him 'Gilbert White never asked too many questions about nature. To him, behaviour was a wonderful phenomenon to describe.' Thus the gentle, unquestioning philosophies of clergymen such as John Ray and Gilbert White did much to encourage a love of nature without upsetting the received theological view. Neither did they further the debate as to whether God-given instincts could rightly be used to separate man from other animals.

There were some, however, within the theological tradition who were prepared to question the idea that instinct precluded reason. When William Paley, in his Natural Theology (1802), insisted that animal instincts were the contrivances of a Grand Designer, and substitutes for rational intelligence, John Flemming (a Scottish minister) insisted that this was wrong, and that instincts could be altered by reason and habits. He wrote: 'Both men and animals got their ideas from sensory experience, formed abstract ideas by attending only to certain aspects of sensation, recalled ideas through association and anticipated future impressions in imagination' (Richards, 1987:130). This caused considerable anxiety to another natural theologian, John French, who insisted that Fleming allowed too much understanding to animals and 'detected in Fleming's descriptions unhappy implications for orthodoxy' (Richards, 1987:131). It is difficult to imagine what ordinary people must have made of these disagreements.

In fact, Keith Thomas tells how it became increasingly difficult for people to come to terms with how the dominance of other species had been secured. 'On the one hand they saw an incalculable increase in the comfort and physical well-being or welfare of human beings; on the other they perceived a ruthless exploitation of other forms of animal life' (Thomas, 1984:302). The possession of complex animal instincts, as against the vastly superior rationality of man, did not by itself seem to settle the argument for discontinuity between man and animals. There was opposition to the theological view by those who felt that there should be unity between man and other species. 'One touch of nature makes the whole world kin' (William Shakespeare, 1602).

Changing attitudes

From the mid-eighteenth century onwards there was a growing stream of concern and writing about the feelings of animals. There were those who even questioned the benevolence of the Creator to the beasts. As the editor of Bishop Cumberland's Laws of Nature had said in 1727, 'The author's scheme would have been more complete had he included benevolence towards brutes ... because we can't imagine but that Deity

takes pleasure in the happiness of all his creatures that are capable thereof' (cited in Thomas, 1984:175). While not rejecting religion, the Romantic poets challenged the dualist approach within it. There was a form of religious mysticism which saw the whole of life as one, emphasising a gentler and intuitive approach to the understanding of man, not as a superior being, but as a part of nature. William Blake (1757–1827) asked of the fly, 'Am not I a fly like thee? Or art not thou a man like me?' The part played by instinct or rationality was not seen as particularly relevant to the relationship between the species. Besides, some held that man and animals shared a degree of both instincts and rationality. Keith Thomas writes that 'in the later eighteenth century, the most common view was that animals could indeed think and reason, though in an inferior way' (Thomas, 1984:125).

The idea that animals were being unjustly treated by the theological tradition did not rest with the mystics. It seemed contrary to common sense that animal behaviour, however intelligent it might seem, was unlearned and independent of experience, due to the power of instinct. At the end of the eighteenth century Erasmus Darwin exclaimed that the power of instinct 'has been explained to be a divine something, a kind of inspiration; whilst the poor animal that possesses it has been thought little better than a machine!' He did not agree with the theological stance concerning instinct, asserting that close inspection would show instinct 'to have been acquired like all other animal actions that are attended with consciousness by the repeated efforts of our muscles under the conduct of our sensations or desires.' He argued for the continuity between animals and man, even including the lower animals, such as insects. Dismissing the idea that instinct caused them to act in a rigidly uniform way, he held that their arts and improvements 'arose in the same manner from experience and tradition, as the arts of our own species; though their reasoning is from fewer ideas, is busied about fewer objects, and is exerted with less energy.' (Erasmus Darwin, 1794, Zoonomia: cited in Richards, 1987:34,35). The idea that even the behaviour of insects had something in common with our own was far from the theological approach of emphatically distancing animals from mankind. Again, contrary to the theological view, Darwin held that nest-building in birds was the result not so much of instinct, as of observation.

Yet the notion that animals possessed instinct only, while man possessed rationality, continued to be put forward not only as proof that animals and man could never be considered in any way continuous, but also as proof that the status of animals was far below that of man. If any degree of rationality in animals was once accepted, then the concepts surrounding man's unique possession of a soul, as well as the Biblical injunction to man to have dominion over all the beasts, were potentially open to question.

The religious resistance to animal rationality was brought out strongly towards the end of the nineteenth century, by the Duke of Argyll. In an impassioned plea for acceptance of the theological view, he argued that religion was not a destructive force, but one which could also emphasise the unity of nature. Taking the bull by the horns, he wrote that 'to account for instinct by experience is nothing but an Irish bull' (Duke of Argyll, 1884:94). Neither was he at a loss to provide a firm definition for instinct, 'Animal instinct has ever been what we now see it to be - congenital, innate and wholly independent of experience' (p 93). He did not refer to human instincts, which were ignored. Instinct and rationality were seen as alternatives, so to allow instincts to human beings was as unacceptable as allowing rationality to non-human species.

Considerations of complex animal behaviour continued to cause problems, and the Duke of Argyll tackled this difficult subject, as others had done before him. His position was similar to that of Sir Kenelm Digby's, more than two centuries before. He gave an example of a duck's 'higher form of instinct and more complicated adaptations of congenital powers to the contingencies of the external world.' His example is a nice piece of casuistry, explaining how wild ducks will sometimes resort to the ploy of pretending to be wounded, but not if the threat comes only from a man,

'as against man the manoeuvre is not only useless but it is injurious. When a man sees a bird resorting to this imitation, he may be deceived for a moment, as I have myself been; but his knowledge and his reasoning faculty soon tell him from a combination of circumstances that it is merely the usual deception.'
(Argyll, 1884:101)

He explained that the manoeuvre is often resorted to when a dog is present, as dogs are almost uniformly deceived by it. The instinct which has been given to birds seems to cover and include the knowledge that the dog, unlike man, detects only by its senses. This must indeed be a higher form of instinct, for not only is the duck able to differentiate between the characteristics of dog and man, and to assess the relative danger from each, but is able to do so in the absence of any form of intelligence. The man, however, derives his knowledge from experience and reasoning. Argyll pressed home his argument by concluding, 'I know of no argument better fitted than this to dispel the sickly dreams, the morbid misgivings of the Agnostic' (Ibid:122). His argument is that Agnostics should not be denying animal instincts, for this would also be to deny God's generosity. Instincts could only be understood as a gift from God. It must of course be borne in mind that the theological debate concerning the status of animals was part of a much wider issue. In Victorian England, religion was one of the bulwarks of the State and to question its tenets was seen by some as undermining the whole social order. The anticlericalism of the French Revolution, the new scientific theories of evolution and the birth of Socialism had caused considerable anxiety.

Thus, at various times instinct in animals was either seen as a form of intelligence or the alternative to it. At times instincts in man were denied, at others acknowledged but dismissed as unimportant in that they were overridden by rationality.

In view of so many contentious theories, it is an interesting question how the concept of instinct managed to hold on so tenaciously as the mark defining the relationship of man to other animals. In many ways the religious approach reflected the selective way in which English theologians had interpreted the Bible, tending to disregard those sections which might cause embarrassment. The Old Testament teaches that 'a righteous man regardeth the life of his beast, but the tender mercies of the wicked are cruel' (Book of Proverbs, 12: 10). Isaiah (66: 3) goes even further; 'He that killeth an ox is as if he slew a man'. There was rumbling opposition to the idea of complete discontinuity between animals and man, and explanations were often demanded. Refusal to give way on the matter of animal instinct versus human rationality was necessary in order to maintain the status quo. It might be difficult to prove the hypothesis, but it was also difficult to disprove it. Added to this, it is both tempting and gratifying for individuals to be accorded superiority. 'No two men can be half an hour together, but one shall acquire an evident superiority over the other' (Attr. to Dr Samuel Johnson, 1709-1784 and cited in The Penguin Dictionary of Quotations, 1963:211). It is perhaps understandable that when not merely individuals, but an entire species, is placed at the very pinnacle of creation, the position is not readily relinquished. Also, it is a fact that intelligence is very highly valued, and man exceeds all other species in the capacity of his mind.

It is noteworthy that although the theological tradition has given a unique priority to the possession of rationality, there is nothing in the Sermon on the Mount in praise of intelligence. Yet intelligence has been used as the focal point in philosophical arguments for discontinuity between man and animals, with instinct and rationality perceived as mutually exclusive. Even if it could be agreed that they are not, there are still important questions left unanswered. Firstly, whether such a distinction is really the most relevant way of determining the relationship of animals and mankind, and secondly whether it is possible to assess the possession of either rationality or instinct in any sort of precise way. The confusion is further compounded by the lack of any agreed definition of either instinct or rationality. It does seem that this way of drawing such a distinction between animals and man must be fundamentally flawed. To conclude, it is worth noting that most of the Eastern religions have held very different views. One of the tenets of Jainism teaches that 'A man should wander about treating all creatures as he himself would be treated' (Sutrakritanga). Keith Thomas tells how when travellers came back with reports of how Eastern religions had a totally different view, and how Jains, Buddhists and Hindus respected the lives of animals,

even of insects, the general reaction was one of baffled contempt (Thomas, 1984:21). It is likely that those following these Eastern religions would have been equally baffled to learn of the Western religious approach, which fought with such tenacity to maintain the discontinuity between animals and human beings and to establish the status of man at the pinnacle of creation.

The Mechanistic approach

Animal machine

The mechanistic approach to understanding instinct and rationality was principally developed by René Descartes (1596–1650), partly with the aim of integrating it with the theological tradition. Descartes had attended the Jesuit college at La Fleche, and a substantial part of his philosophy dealt with proof of the existence of God. He was also well aware of the notorious condemnation of Galileo by the Inquisition in 1634. Despite this, his work gives prominence to mechanical explanations of life. In Part V of his 'Discourse' he suggests that we should consider the body of every animal as a machine. This scientific approach would eliminate qualities in favour of quantifiables, for mechanism held that purposes had no place in good scientific practices. Wheeler tells us that when the mechanists turned their attention to the instincts 'they ousted the concept of teleology and attacked the workable mechanical manifestations with zeal and truly marvellous success. They accepted Descartes' interpretation of animals as creaking machines, but threw his Jesuitical philosophy overboard and ended by becoming shockingly materialistic' (Wheeler, 1939:45).

The theological view of animals was thus rejected, but only at the expense of seeing animals as objects which could be studied with the rigour of scientific detachment. Interestingly, many Cartesians shunned the idea of animal instincts, claiming that instincts were motivational whereas machines had no powers of motivation (Diamond, 1974:242). It was the age of clockwork and the Cartesian argument was that animals were machines like those being made by man, except that they were made by God.

Unfortunately, their view sanctioned the use of any animal in experiments, in order that knowledge could be gained about human beings. A physiologist could use his scalpel in any way he might wish with no fear of guilt. It was held that even the most human-like creature was not conscious in the way that man is conscious and because of that was incapable of feeling pain. The animal 'machines' were quite different. It was therefore not necessary for them to lack a soul, or rationality, in order to be set apart from mankind. In this way religion and science joined together in denying any sort of status to the animal world.

It is improbable that many people saw animals as Descartes had done in the seventeenth century. For one thing, most of those who had animals to care for were unlikely to accept the view that all species were equally lacking in the ability to think. Nevertheless, the implication that different species had a common irrationality meant that there was less encouragement to inquire into such differences of behaviour as separated the flea from the chimpanzee, and the primary concern of those who worked outside the sphere of 'common sense' continued to be with demonstrating the enormous gulf that separated man from animals. The outcome of their 'evidence' testified less to a straight description of science than to an expression of cultural prejudice.

A nice alternative to the 'animal machine' approach was that proposed some hundred years after Descartes by Julian Offrey de la Mettrie, when he rejected the Cartesian view. He did not deny that animals were machines, but held that men were machines also. He did not feel uncomfortable with the idea that humans and animals are in many ways alike, and held that man was special not because he had been singled out for favour in the process of creation, but because of language development. 'The transition from animals to man is not violent,' he wrote, 'as true philosophers will admit' ('Man a Machine', 1748 edn. La Salle, Illinois, 1912, trans G.C. Bussey:103). His view was thus still mechanistic, but less divisive than that of the Cartesians, and far kinder to animals. Man, by reuniting himself with nature and 'following the natural law given to all animals, will not wish to do to them what he would not wish them to do to him' (J.O. de la Mettrie, 1748, cited in Boakes, 1984:91). We may still be reminded of La Mettrie when we wonder 'what makes us tick'.

The Behaviourist influence

Later still, the mechanistic approach to understanding animals re-surfaced with renewed vigour in the Behaviourist way of 'scientifically' studying them. This aimed to remove the guesswork from knowledge by stressing the need for total objectivity. Deliberate emphasis on empirical results meant that any evidence which had not resulted from well-controlled experiments was treated with great suspicion, if not rejected out of hand. This scientific methodology has repeatedly been questioned on grounds of reductionism. In investigations of animal intelligence, the highest form was seen as that which most closely resembled our own, despite the fact that species demonstrate not just different levels of intelligence, but different kinds. Thus, it has often been assumed that the biologically nearer to man are the 'higher' animals, the more human-like their intelligence must be. But Hebb reported from the Yerkes Laboratories that in experiments with chimpanzees to assess their ability to discriminate forms, it was

found that they learned a particular form of perception more slowly than did rats (Hebb, 1980:293). And although rats were often chosen for laboratory experiments on grounds of convenience, they were not a good choice when used, for example, to test problems requiring good visual abilities, because rats are poorly sighted.

Behaviourists rejected biological determinism and either regarded instincts as unimportant or sought a way of eliminating them. Protests about instinct theories came especially from the more radical Behaviourists such as Z.Y. Kuo, and for a while the very word 'instinct' was anathema. Yet Kuo still found he had to admit the existence of unlearned 'units of reaction', which he confined to simple reflexes. This merely shifted the debate to arguments as to the degree of complexity permissible in an unlearned response, or the proportion of a complex pattern that was instinctive (Beach, 1955:225ff). David Hartley had anticipated Behaviourism by his view of instinct in his book 'Observations of Man' (London: Leake, Frederick, Hitch and Austin, 1749). There he defined instinct as 'a Kind of Inspiration to Brutes, mixing itself with, and helping out, that Part of their Faculties which corresponds to Reason in us, and which is extremely imperfect in them' (cited in Richards, 1987:34n). Those who accepted the anti-hereditarian stance continued to argue that no list of instincts, however subtle in definition, could account for the tremendous diversity of human customs.

To some extent, anti-instinct theories concerning humans were empirically based. It had been shown that people coming from other parts of the world, with their own particular characteristics, changed after arriving in the United States to a degree that would not have been possible had they been heavily constrained by their inheritance.

Nevertheless the debates over instincts in animals remained largely conceptual (Boakes, 1984:218). Beach points out that, when considering such theories, 'it is important to note that the war over instinct was fought more with words and inferential reasoning than with behavioral evidence ... Most of the battles of the campaign were fought from the armchair in the study rather than from the laboratory' (Beach, 1955:53-54). He also goes on to say that 'the degree of assurance with which instincts are attributed to a given species is inversely related to the extent to which that species had been studied ...' (Ibid:55). It is thus reasonable to ask whether, when Behaviourists rejected the concept of instinct, they knew exactly what they were rejecting.

There are obvious political implications arising from the extent, if any, to which people are constrained by their inheritance. Biological determinism meant that little could be done to change their potentialities. Conversely, if this was not so, then their potential

could be increased by a favourable environment and an 'enabling' society. No longer could certain races be seen as innately and unchangeably unintelligent, or aggressive, or even treacherous. The status of groups who had formerly been stigmatised was greatly improved.

With animals, however, the situation was very different. When in laboratories they were able to learn to solve human-type puzzles, to respond to rewards or avoid pain, their behaviour was attributed to reflexes, often suitably conditioned, rather than to intelligence. Any credit went to whoever had designed the experiment, rather than to the animal. In the theological tradition the credit had gone to God; in the mechanical one, it had gone to the scientist. With the Behaviourists' reductionist approach to learning, the animal again failed to increase its status.

Nevertheless, difficulties continued about explaining animal behaviour according to simple principles, in view of the complex activities of so many species. The idea that animals were instinctive, unthinking machines was not borne out by everyday observation. It was reasonable to argue that even behaviour which appeared uniform within a particular species had evolved from a common community and environment, rather than by inherited instincts.

Some had disagreed with both the theological and mechanistic view. Jean-Antoine Guer (1717-1764) insisted that the ascription of instinct to animals prevented proper attempts to find a scientific explanation; for 'nothing is easier to say about whatever animals do than that they do it from instinct' (cited in Richards, 1987:24). Others held that the instinct an animal might display would often be the mechanical result of inherited anatomical structures (Richards, 1987:536-537).

In the nineteenth century Douglas Spalding had also expressed his disapproval of both the theological and mechanical way of studying animals and lamented the fact that 'with regard to instinct we have yet to ascertain the facts' (Spalding, 1873:2). He distinguished between instincts which are untaught, and those which he called 'imperfect' in that they first required some experience. Charles Darwin held yet a different view, noting that behavioural patterns were not fixed, but varied within a species and could be changed by natural selection. In his study of the behaviour of worms he explained how some intelligently adjusted some of their instincts to fit particular situations. When lining their burrows, they most frequently selected the best leaves, judging their shape and how they would best fit that part of the burrow. He concluded that the worms 'although standing low in the scale of organization, possess some degree of intelligence' (1898:98-99)

Apart from such a variety of theories, there was much confusion about the difference between what was reflex, and what was instinctive. Another problem which defied any sort of simple explanation was the extent to which instinct, like intelligence, was species-specific. There was the ever-present danger of over-generalisation.

McDougall was so aware of the pitfalls in trying to understand instincts in both humans and animals that he considered attempts to analyse them had been useless. What is more, he saw a danger arising from an incomplete understanding underlying a firm theory. 'Attribution of the actions of animals to instinct' he wrote, '... was an example of the power of a word to cloak our ignorance and to hide it even from ourselves' (McDougall, 1912:138, cited in Boakes, 1984:208). He held that both humans and animals were aware of their instinctive actions and could modify them to a considerable extent. Thus, nest-building was not just innately directed, but could well be influenced by the way that the bird had seen nests built when young. Also, the bird could improve with practice and could modify its methods according to the available material. It could make choices. Assuming this to be correct, then instinct and intelligence must go hand in hand.

There was considerable confusion. Although the word 'instinct' was used by biologists and psychologists as if it had a precise meaning, what one writer meant when talking of a particular instinct might have little in common with the meaning attached to it by someone else (Boakes, 1984:204). In 1880 William James endeavoured to compile a list of forty-six instincts, including pugnacity, modesty, jealousy and cleanliness - and even then some had 'etc.' written after them. The number of instincts was still not resolved. George Miller writes that one careful survey found that by 1924 at least 849 separate instincts had been proposed by different writers on the subject. He goes on to say 'Motivational terminology becomes confused so easily; it is almost as if we wanted to keep our terms vague and general enough to match our imperfect understanding of these very complex problems (Miller, 1962:269).

The mechanistic notion that instincts were just implanted in animals as an alternative to intelligence, became increasingly challenged. Evolutionists again took up the Lamarckian theory on the inheritance of tendencies to behave in certain ways, and accepted the view that the innateness of ready acquisition of an action by a living creature must be the result of arduous practice on the part of its ancestors (Boakes, 1984:204). Although criticising Lamarck's view that instinctive action is guided by some central purpose, they accepted his view on inheritance. It was George Lewes who made this theory popular, calling it 'lapsed intelligence'.

Lapsed intelligence

George Lewes' theory could be applied to both animals and man and, because actions leading to instinctive behaviour had begun by involving some perception of their consequences, animals joined man as being accorded the capacity for rational action. In humans, the example is sometimes cited of an experienced driver who, in an emergency, 'instinctively' jams on the brakes – he has done it so often that he no longer needs to work out how to do it. Similarly, animals which had first performed an action, perhaps by imitation, and had then continued doing so, could enable their offspring, possibly over many generations, to perform the action unthinkingly. On this view, instinct depends upon intelligence.

Anyone using lapsed intelligence to explain not just human, but animal, instinct is open to a charge of extending human-like psychology to non-humans, and thus committing the sin of anthropomorphism. But, as Wheeler points out, all our science is necessarily anthropomorphic in that man, himself a highly developed animal, could not interpret other animals except in terms of himself. He may run the risk of attributing to animals a greater development of intelligence than they possess, but scientific methods of observation and experiment are quite adequate to control and rectify this tendency. It is thus 'impossible to regard anthropomorphism as such a very terrible eighth mortal sin' (Wheeler, 1939:47).

The Anthropomorphic or Psychological approach

The anthropomorphic approach to understanding instinct has been incorporated into the science of ethology. This has as one of its premises that 'certain dispositions and behavioral patterns have evolved with species and that the acts of individual animals and men must therefore be viewed in the light of innate determinants.' (Richards, 1987:20). One of ethology's earliest aims was that the student of Animal Behaviour should seek to study his subjects in their own environment, not transport them straightway into surroundings specially adapted for human requirements and standards. This was of course very different from the behaviourist approach. Ethology sought to establish the anthropomorphic tradition as of scientific value, although there had previously been advocates of the approach as making common-sense. In doing so, it has been largely successful, despite continuing opposition.

No longer are instinct and intelligence to be seen as mutually exclusive, or even separate, and anthropomorphic explanations give animals a status which, if certainly lower than humans regarding intellectual capacity, is at least comparable. Unlike

Behaviourism, the anthropomorphic approach is not reductionist about learning.

The implication is that even insects can make mental and social progress through their own efforts. 'It seems to me' said Wheeler, 'that even the lowest organisms have a glimmer of intelligence and that all organisms have a truly astonishing ability and tendency to form habits. If this is true, a very feeble intelligence could conceivably build up in the course of ages a considerable and complicated fabric of instincts and structures ...' (Wheeler, 1939:49-56). This far more positive view of animal capacities, gave them an achieved, rather than ascribed, status.

The anthropomorphic account thus implies that the intelligence of all animals, not just the 'higher' species, is comparable to that of human beings. The difference is one of degree, rather than of kind. Instinct is less basic than intelligence, and instead of instinct and intelligence being alternatives to one another, they may go hand in hand. In this way there is mental continuity between humans and animals.

Historically, there has been considerable resistance to this view. Darwin's belief in the continuity between man and animals was hard for the God-fearing Victorians to accept. While most were prepared to admit that animals had changed during the course of evolution, they wanted to retain their belief that man was different, and indeed, special. They were not merely being asked to accept a theory, they were being asked to question their beliefs and assumptions. Today there is still resistance to the idea of continuity between man and animals - or, as those who wish to promote the opposite view tend to say, between man and other animals.

It is obviously true that some animals (including man) have a greater capacity to learn, and need to learn some things rather than others. Social animals in particular must acquire the skills of co-operation. Today the most commonly held anthropomorphic view is that both man and animals are not so much constrained by their innate capacities, as directed by them. Yet the prejudiced thinking which has surrounded the word 'instinct' continues. Because of this, and because of the various ways in which the concept has been used, some modern ethologists, such as Marian Stamp Dawkins, feel that the word should be done away with altogether (Dawkins, 1986:68).

The point of this chapter has been to argue that the term 'instinct' is an especially tricky one, which needs to be handled with great caution. There have been different approaches to understanding what it is all about and the extent to which it constrains or initiates animal progress. Its relationship to intelligence, if any, has been seen as especially relevant in defining the status of animals compared to that of man.

Ideological and political overtones, and entrenched attitudes, have affected whether there has been acceptance or rejection of the part it has played in the notion of continuity, or discontinuity, between animals and human beings, and therefore the relationship that can, and should, exist between them.

The extent to which animals and humans are similar continues to be controversial, and debates surrounding anthropomorphic approaches to understanding animals have been especially heated. Because of their importance in helping to define our attitudes and responsibilities to animals, they will be considered in more detail in the next chapter.

CHAPTER 3

THE ANTHROPOMORPHIC DEBATE

'Just as the theologians tell us – and logically enough – that if there is a Divine Mind, the best, and indeed only, conception we can form of it is that which is formed on the analogy, however imperfect, supplied by the human mind; so with 'inverted anthropomorphism' we must apply a similar consideration with a similar conclusion to the animal mind. The mental states of an insect may be widely different from those of a man, and yet most probably the nearest conception that we can form of their true nature is that which we form by assimilating them to the pattern of the only mental states with which we are actually acquainted. And this consideration, it is needless to point out, has a special validity to the evolutionist, inasmuch as upon his theory there must be a psychological, no less than a physiological, continuity extending throughout the length and breadth of the animal kingdom' (G J Romanes, 1892:10)

.....

Romanes is alluding to the time when the anthropomorphic approach as a way to understanding God was still acceptable. It had long been thought that the only way for man to conceive of another being was in terms of himself. Also, the Biblical teaching was that God had said 'Let us make man in our own image, after our likeness' (Authorised King James Version, Genesis 1, xvi).

Over time there developed considerable hostility to this approach. If God were to be ascribed human characteristics, this could lead to the inclusion of man's imperfections. Anthropomorphism became denounced as a heresy, and the term 'anthropomorphic fallacy' was introduced into theological thinking.

Later still there was a fundamental shift in meaning, as anthropomorphism was used to denote the attribution of human characteristics not to God, but to animals. This again aroused hostility. Animals had been created to serve man (Genesis, 1, xvi). It was impious to attribute to them qualities which had been given to man alone. To do so would be guilty of the 'anthropomorphic fallacy'. The notion of heresy was thus transferred.

How did this slippage in meaning come about? Although it is obviously illogical to attribute to animals all human characteristics, it is equally illogical not to attribute some to them. Yet despite this, scientists tended to side with the theologians.

Because the debates surrounding the concept of anthropomorphism have been so controversial, and have had such an important influence on the status which has been accorded to animals, they are worth a closer examination.

.....

There has never been a time when man has not sought to understand animals. One of the oldest and simplest ways of gaining such knowledge was by assuming that, because animals had many characteristics similar to his own, he could understand them in terms of himself. Yet despite the fact that it might seem 'natural' to understand animals in anthropomorphic ways, those who have done so have always been subject to criticism. For instance, Aristotle (384–322 BC) has been criticised by psychologists on the grounds that 'his interpretations of behavior were teleological and often naively anthropomorphic' (Carl J Warden et al, 1935:3).

Others have tried to defend Aristotle from this attack, arguing that he did draw a hard and fast distinction between animals, whom he saw as lacking reason, and rational man. In fact, Aristotle believed in the principle of continuity between animals and man. In the Historia Animalium he wrote:

'In the great majority of animals there are traces of psychological qualities or attitudes, which qualities are more markedly differentiated in the case of human beings. For just as we pointed out resemblances in the physical organs, so in a number of animals we observe gentleness or fierceness, mildness or cross temper, courage or timidity ... Some of these qualities in man, as compared with the corresponding qualities in animals, differ only quantitatively; that is to say, a man has more or less of this quality, and an animal has more or less of some other' (cited in McFarland, 1981:259–260).

Implicit in the anthropomorphic view is the notion that, by reflecting on our own thoughts, feelings and intentions, we can come to understand ourselves. It is then possible to take the process a step further, attributing to others the same sort of inner experiences that we have.

Obviously the anthropomorphic approach is likely to be more relevant when considering the mental life of those most like us. The less like ourselves others are, the greater the risk of making a wrong judgement. The approach could well be less reliable when trying to understand the inner experiences of people from other cultures, and even more so when considering members of other species.

Writing in 1913, H J Watt highlighted some of the possibilities and difficulties:

'... for the purposes of science, it is convenient and temporarily sufficient to suppose that, when we read the record of any sequence of experiences, we consider what kind of experiences would find the same or similar expression in ourselves. We can, then, understand that the more the expressions of any creature resemble our own, the surer will be our estimate of its experience, while the less the similarity between its expressions and ours, the weaker will our inference be. This is the reason why the study of the minds of children, insane persons, and animals, progresses so slowly' (Watt, 1913:12)

Yet, despite its limitations, it is clear that those who have lived and worked among animals have constantly used the anthropomorphic approach. The reason for this was, quite simply, that it worked. They had sufficient knowledge of their animals to know that many of their needs and desires were similar to their own. If hungry, they sought food. If hot, they would seek shade. If startled, they showed signs of fear. If bored, they became restless.

Farm labourers also knew that animals could be taught many complicated operations – it was unlikely that they could ever have been persuaded to accept doctrines which denied them thought. Shepherds never doubted the sagacity of their sheepdogs (Thomas, 1984: 126). They knew from experience that, like humans, animals might vary in temperament. Keith Thomas tells us that, although in the seventeenth and eighteenth centuries the work of Descartes was disseminated in England, the country threw up few defenders of the Cartesian position (Thomas, 1984:35). The idea that animals were mere unthinking 'machines' was not a popular one, even among intellectuals. The philosopher David Hume was later to reiterate the popular position, arguing that animals had the power of 'experimental reasoning'. He added that if they were not guided by their reason in their ordinary actions, then 'neither are children; neither are the generality of mankind in their ordinary actions and conclusions' (cited in Thomas, 1984:125). In urging the rationality of animals, he was merely restating what many uneducated persons had always believed.

While the Cartesian argument denied any possibility of coming to understand animals anthropomorphically, because they lacked rationality, the views of David Hume made the approach seem viable. Scientists, however, continued to be sceptical.

Thomas Huxley (1825–1895) was to be partly responsible for the very sceptical attitude that came to permeate animal psychology. He claimed that the increasing

knowledge about the nervous system had served to strengthen Descartes' claim that animals lacked consciousness, and suggested that mind was an 'epiphenomenon', a mere effect, with no causal power. However, he considered that we, too, are 'conscious automata' (Boakes:19–21) and in this way he was prepared to admit to the continuity between man and animal.

The views of Lloyd Morgan (1852–1936) were to some extent in agreement with those of Huxley. He stated firmly that he did not regard himself or animals as automatic beings, but nevertheless found evidence that some acts were in a sense automatic. He suggested that the automatic act may be accompanied by consciousness, but the controlled act is guided by consciousness (cited in Boakes 1984:37). There was no question of consciousness being denied in either human or animal.

Because of its central place in the understanding of mental life, the concept of consciousness is very important to the anthropomorphic debate. If animals lack consciousness, then they do not share with us any of the variety of inner experiences that we, as humans, have.

Animal consciousness

There may be degrees of consciousness, depending on the complexity of the nervous system. Jonathan Glover asks what kind and degree of complexity of behaviour counts as the manifestation of consciousness, and suggests that although the answer to such a question is not yet able to be determined, it is still possible to avoid arbitrary conclusions:

'At least with our present ignorance of the physiological basis of human consciousness, any clear-cut boundaries of consciousness, drawn between one kind of animal and another, have an air of arbitrariness. For this reason, it is attractive to suggest that consciousness is a matter of degree, not stopping abruptly, but fading away slowly as one descends the evolutionary scale' (Glover, 1977:49).

There seems to be no reason for regarding at least the 'higher' animals as being less aware of their environment than ourselves, although animals must experience their worlds in different ways from us, and also from other animal species. It is the complete denial of animal consciousness that militates against anthropomorphism.

Few of us would deny that we are conscious beings, so it follows that in order to understand the mental life of animals anthropomorphically, it must be agreed that they, too, are conscious. However, there is a real problem in that there is still no general agreement, even among scientists, as to what consciousness really is. It is generally agreed that without consciousness it is not possible to think, to remember, to plan, to have emotions or to feel pain. These are some of the main components. They do not, however, provide a firm definition.

Marian Stamp Dawkins has highlighted the different meanings attached to conscious states and the problems this causes:

'With so many different meanings of 'conscious' it is no wonder that it is difficult to produce a simple straightforward definition. Indeed, perhaps we should not even try to find one, for, given the evident diversity of conscious states, it could be positively misleading. I shall therefore use consciousness to mean simply an immediate awareness but stress that consciousness comes in many forms and that its nature is deeply mysterious to us' (Dawkins, 1993:5).

Rollin points out that talking about animal consciousness at all is often considered to be unscientific.

'There is, perhaps, no area in which compartmentalization on the part of scientists is more evident than that of animal consciousness ... Professionally, researchers in these areas are trained and committed to the notion that talking about animal consciousness is 'unscientific'. After all, most will tell you, we cannot experience animal minds' (Rollin, 1990:23).

Rollin's view suggests that the question of animal consciousness and mental experience is not a comfortable topic for many scientists. He attributes this partly to the fact that those engaged in experimental work involving the use of animals are worried about the moral implications of allowing them consciousness. They thus have an interest in accepting, even to a limited extent, the 'beast machine' philosophy of Descartes. The Cartesian view certainly solved the most pressing ethical problems of scientific researchers. Rollin adds:

'Most scientists, like most non-scientists, are moral, conscientious people, and would have difficulty inflicting pain, injury, fear and other unpleasant experiences on anything they believed could suffer as they themselves do. ...

Much of the appeal of Descartes's notion that animals are machines with no mental lives must have derived from the mollifying effect which this view of animals would have had on the psyches of researchers in the growing new science of physiology ...' (Rollin, 1990:24).

This sort of warning is echoed in the writings of Marian Stamp Dawkins. If we do decide that other species are conscious, then this will profoundly affect our attitudes and could completely change our ideas about what it is morally acceptable to do to them. Such an admission would bring them inside the circle that so many people draw around the human species (Dawkins, 1993:6).

Kennedy dismisses the notion of animal consciousness, classing it along with other aspects of 'compulsive anthropomorphism' (Kennedy, 1992:28), although he later admits to doubt '... although we cannot be certain that no animals are conscious, we can say that it is most unlikely that any of them are.' Hard-liners such as Kennedy seek proof in the name of science. 'In point of fact, the hypothesis that animals are conscious is not a scientific one, since it cannot be tested' (Kennedy, 1992:31,32). Consciousness should therefore be ignored, even if not denied. Humphrey also wrote in this vein, '(It is) no accident, I think, that human beings are as far as we know unique in their ability to use self-knowledge to interpret others. If that ability could exist without consciousness, let someone prove it to me. If any other animal possesses it, let someone tell me what evidence he has' (cited in Kennedy, 1992:23). Yet this raises another question; how does he know that we can interpret even another human being in terms of our own self-knowledge? We can of course ask other humans, but their answers may be liable to error, so surely cannot be regarded as scientific proof.

The behaviourist view that subjectivity and consciousness are not legitimate objects for study has constantly been attacked by dissenting psychologists. As long ago as 1920 William McDougall claimed that neither animal nor human behaviour could be explained without postulating the existence of mental substance. Criticising the behaviourist approach, he wrote that in their fashion behaviourists 'are enabled to choose such facts as fit their particular philosophy, and to ignore all those which do not fit' (cited in Rollin, 1990:221).

It has to be admitted that it is still impossible to provide Humphrey with the firm evidence he seeks. But because of this, it does not make sense to ignore some very strong pointers. Giving weight to such pointers may indeed make some scientists feel uncomfortable, but those who feel that animal consciousness, even though not

empirically testable, still makes good sense, feel just as uncomfortable about denying it. They continue to seek ways which might eventually prove their hypothesis.

Stephen Walker takes a neurobiological approach as a means of assessing the likelihood of consciousness in animals. There are important similarities in the brains of humans and vertebrate animals and this would suggest that their mental lives have much in common:

'... human thought is intimately connected with the activities of the human brain; other vertebrate animals apart from ourselves have very complicated brains, and in some cases brains which appear to be physically very much like our own; this suggests that what goes on in animal brains has a good deal in common with what goes on in human brains' (Walker, 1983:xiii)

Griffin supports the view that non-human animals should be regarded as self-conscious subjects with thought and feelings of their own, but accepts that this continues to be something of a heresy in ethological and psychological circles (Griffin, 1984, cited in Ingold, 1988:7). He argues that such attributes are likely to have come about as the result of the evolutionary process for both man and animal. The kinds of selective pressures which might have promoted the development of conscious awareness in humans should have been equally at work on other species with which humans have had close and lasting contacts. 'Thus to the extent that the human hunter benefits from forecasting the reactions of the deer, so the deer benefits from being able to predict the hunter's prediction, and to confound it by exercising autonomous powers of intentional action' (Griffin, cited in Ingold:7). In a similar way, it would be an advantage to a predatory animal such as a wolf to be able to predict the reactions of the deer and to confound them.

It seems that there may be double standards at work when allowing consciousness to humans but not to animals. Ingold says that as a condition of being considered conscious, the animal should be supposed always to think before it acts, but points out that much of what we ourselves do, quite consciously and intentionally, is not so premeditated. The animal that does not premeditate and plan is not just an automaton, but a conscious agent who acts, feels and suffers, as we do (Ingold, 1988:8).

Mary Midgley has also highlighted some of the double standards used in understanding consciousness in humans as against that of animals. In humans it is acceptable to explain behaviour in terms of culture or free-will, in animals the range

of concepts which are described as the conscious side of experience are taboo. This is often done by oversimplifying animal behaviour, so that pre-programming can be made to account for very complex behaviour (cited in Ingold, 1988:38-39).

Robert Boakes discusses the view taken by Romanes in 1884 and which still seems a useful approach to the problem:

'When we perceive that the activities of other people resemble what we do ourselves, then, on the basis of analogy, we attribute to them minds like our own. And the same holds with regard to animals: to the extent that their behaviour is analogous to ours, then they possess minds' (Boakes, 1984:27).

This is also the position of Robert Yerkes, who rejected the behaviourist approach in favour of introspection as a method of analysing subjective experience:

'There is no question, in the mind of the person who really knows animals, that the higher vertebrates possess a great variety of sense qualities and feelings ... The more liberal among psychologists are at present inclined to believe that at least some animals ... experience conscious complexes which are much like ours' (cited in Boakes, 1984: 153).

The most significant words of this quotation from Yerkes may well be his reference to 'the mind of the person who really knows animals'. It seems likely that such a person would be prepared to consider additional evidence, even when it is not scientifically testable. Those who object to this say that such a liberal approach must become, at least to some extent, merely intuitive. This may be justified, but it is worth noting that intuition can sometimes serve us well. It is often claimed by those who have worked closely with animals that they have an intuitive understanding of their moods and needs.

In day-to-day life we constantly make decisions as to how we will act in different circumstances. We base our decisions not only on what we know can be definitely proved, but on what we see as important. If we are interested in animal welfare and consider that the possession of consciousness is an important issue in deciding how they should be treated, then even in the absence of absolute proof, we may point to the many factors which suggest that they are conscious, and will give animals the benefit of any doubt.

If, however, it is convenient or intellectually more satisfying to believe that, without one hundred per cent proof of its existence, consciousness should be denied to

animals, then the appeal is made to scientific rigour.

Scientific rigour

Within science is the belief that there is a distinct method by which to arrive at true knowledge. Moral considerations and valuational questions have no part to play. As science is concerned with rationality, it should not be mixed up with the non-rational. Because emotion is tied up with feelings, possibly even with sentimentality, it must be firmly excluded. Also, science is believed to be clearly demarcated from philosophy, which can be better classed along with theology or art or poetry. Putting them in the same category might have been acceptable when science was in large part speculation, but since then it has become separate, a 'real' science, a discipline concerned with hard facts.

Rollin suggests that it was a scientific revolution that changed what counted as fact, from that which was presented to the senses to that which could be expressed in the language of mathematics. Physics may be seen as the master science, the 'real' science, with the consequence that the validity of the various other sciences is determined by the extent to which they approximate to physics. Even ethology, he says, still feels more comfortable with quantifiable observations, rather than qualitative ones. There is a distrust of sciences which are too close to common sense (Rollin, 1990:12, 13).

Established scientists issue dire warnings to others embarking on their field of study. David McFarland warns that 'anthropomorphism plays a large part in sentimental attitudes towards animals, and such attitudes can easily result in misinterpretation of animal behaviour. When the scientist sees an animal behave in a human-like way, he must guard against immediately attributing human motivation or emotion to the animal' (McFarland, 1981:16). Similarly, John Fisher tells us that 'anthropomorphism ... tries to inhibit consideration of positions that ought to be evaluated in a more open-minded and empirical manner' (cited in Bekoff and Jamieson 1990:96).

In The Penguin Dictionary of Psychology (1985) there is an entry on Anaclitic Depression, which is described as the severe progressive depression found in infants who had lost their mothers and did not obtain a suitable substitute. 'Although the original usage of the term was linked closely to mothering in humans, recent research has shown that the syndrome is a general phenomenon and occurs in other species, particularly primates, where there is a dramatic lack of 'creature

comfort' during early childhood. The connotations of the term have broadened to reflect these findings' (my emphasis. Arthur S Reber, (ed), 1985:30).

However, this same dictionary warns that the anthropomorphic fallacy is 'most often committed by those unsophisticated in animal research' (Ibid:41). It goes on to say that the tendency to say that a rat that is consuming a food pellet after a reinforced trial is 'enjoying itself' is almost irresistible, but it is unnecessary and misleading. One should be careful not to imbue non-humans with what may be species-specific characteristics.

Yet, assuming that the food pellet is of a kind acceptable to rats, does not common sense tell us that, knowing that the rat has been kept hungry, and observing that it is now eating steadily and without hesitation, we can say that it is finding the food enjoyable? Is not one form of pleasure the ending of discomfort such as hunger? The rat may not express its enjoyment as we would do. It may not smile and say 'that was good'. But in its own way it is surely not unreasonable to hold that in the circumstances it is enjoying itself. Had the rat stopped eating almost immediately after it started, and spat the food out, our conclusion would have been different. But it didn't. How unsophisticated in animal research do we have to be to fall into the error of misinterpretation? Warnings may well be needed that we should not attribute all human characteristics to other species, but do students of science need to be told to shun any degree of anthropomorphic understanding? It would seem more sensible to warn them that such an approach should be selective and must be based upon a sound knowledge of the non-human species in question. In any case, it is not uncommon for scientists themselves to show a decided ambivalence with regard to their own use of anthropomorphism.

Professor Rollin has recorded some of the professional 'double standards' he has met among his scientific colleagues at Colorado State University. He suggests that these have come about because the ideology that surrounds science has made it imperative for them to be seen as strictly 'objective'. They must keep clear of the dreaded 'anthropomorphism'. 'The scientist guilty of this fallacy', he says 'may kiss his or her credibility goodbye' (Rollin, 1990:24). This, however, forces them into a dilemma.

The unstated presupposition of a great deal of psychological research is that mental states such as fear and anxiety are analogous in humans and animals, and that studies with animals provide valuable insights into their nature in humans (Rollin, 1990:116). The testing of analgesics is routinely done on animals. If animals can

be valid models for human pain, that commits us to the acceptance of a human-like mental state in the animal, which is capable of experiencing pain and from which drugs may offer relief. If there is no subjective experience of pain, then there is no point to the research.

Such a dilemma is built into experiments which use animals but '... in actual research contexts, a blind eye is turned to the commitment to anthropomorphism, the accusation being trotted out only when someone tries to confront the question of animal mentation head on' (Rollin, 1990, p 26). Similarly, the physical disanalogies between humans and animals, which are often quite glaring, do seem to be acceptable when using animals to model for human biological processes. What is more, although the scientific approach prevents researchers from talking about animal mental states at work, few are able to adhere to its precepts in their daily lives, where even behaviourist scientists give way to ordinary common sense (Rollin, 1990, p 28). Thus, among his colleagues, the commitment to shunning anthropomorphism disappeared outside the laboratory; 'I found that very often such a stance was donned along with a laboratory coat, and that in their non-scientific garb, most scientists used the same mentalistic locutions in talking about animals as the rest of us (Rollin, preface, p xii).

He relates how, at a scientific seminar on laboratory animal welfare, where many of the participants were senior scientists, most of them made use of mentalistic terms such as 'happy', 'bored', and 'suffering', but, when asked to justify this, stressed that they were talking in quotes - 'When are the animals quote happy end quote?' When it was put to them that they either had to embrace the view that animals had mental experience or to reject it, and that the quotes were simply unhelpful, they went on to argue that we could not know that other people's experiences are like ours either (p 28-29). This of course did nothing to resolve their dilemma.

A friend of Rollin's, whom he describes as a 'sophisticated senior scientist and veterinarian' has kept cattle for many years and was prepared to share with him his insights into bovine mentation. As there is so little literature on cattle psychology, Rollin suggested that he ought to write it up. He replied, 'I have enough for a book, and I have no doubts about its validity. But I would never say this stuff to any of my colleagues, or put it in writing, even though anyone can determine its truth for himself. They would dismiss me as a kook even if they have had similar experiences themselves.' (Rollin, 1990:31). Yet, despite this extraordinary situation, others, too, have been surprised by this partisan attitude in the world of science.

Having studied the chimpanzees in the Gombe for some years, Dr Jane Goodall discovered that, in the 1960's, 'it was not permissible – at least not in ethological circles – to talk about an animal's mind. Only humans had minds. Nor was it quite proper to talk about animal personality. Of course everyone knew that they did have their own unique characters ... but ethologists, striving to make theirs a 'hard' science, shied away from the task of trying to explain such things objectively. One respected ethologist, while acknowledging that there was 'variability between individual animals', wrote that it was best that this fact be 'swept under the carpet.' Goodall comments that at that time ethological carpets fairly bulged with all that was hidden beneath them (Jane Goodall, 1990, pp 11, 12). She also tells how, as she had not had an undergraduate science education, she had not realised that animals were not supposed to have personalities, or to think, or to feel pain. 'I had no idea that it would have been more appropriate to assign each of the chimpanzees a number rather than a name when I got to know him or her. I didn't realize that it was not scientific to discuss behaviour in terms of motivation or purpose ... The editorial comments on the first paper I wrote for publication demanded that every he or she be replaced with it, and every who be replaced with which' (p 12).

Yet ethologists are not always so sensitive to such guidelines. D. R. Crocker found that they may be more ready to attribute human motives and emotions to their subjects in their popular presentations than in their scientific writing – and that the popular accounts may come closer to what they really believe (Crocker, 1981).

Crocker compared John Mackinnon's work on orang-utans as published in *Animal Behaviour*, 1974, and his popular work 'In search of the Red Ape' (Collins, 1974). He also compared the academic account of George Schaller in 'The Mountain Gorilla' (University of Chicago Press, 1963) with his book, 'The Year of the Gorilla' (Collins, 1964). He also examined the two works of Keith Laidler on orang-utans, one, 'Action, gesture, symbol', written for a scientific audience, and the other, called 'The Talking Ape' (Collins, 1980) for wider reading. Finally, he did the same thing with the publication on the Gombe chimpanzees by Jane Goodall in 'Animal Behaviour', 1971, and her very popular book 'In the Shadow of Man' (Collins, 1971).

In the popular version by Mackinnon the animals were even given names, 'Tom' and 'Tom's shy girlfriend', instead of 'the male' and 'the female'. Goodall's chimpanzees also have names, 'Fifi', 'Leakey' or 'Olly'. Compared to the scientific accounts, we feel we get to know them.

Crocker comes to the conclusion that 'the great advantage of the nature books is that, written off guard, their philosophical assumptions are on show for all to see. 'Instead of trying to wipe out subjectivity from the scientific literature, and succeeding only in toning it down enough to blend in with the surrounding facts, we ought to make it explicit. ... I think it is valuable to know how the observers personally see their subject' (p 313). In her book 'In the Shadow of Man', Jane Goodall describes one of the female chimpanzees by saying that 'she glanced at him with an expression that looked exactly like the smirk a little human girl might be expected to give under similar circumstances' (p 123). Such an account enables the reader to learn as much about Jane Goodall as about the chimpanzees, and after that he can bear it in mind. There is no attempt at neutrality. 'While the scientific mode invites us to listen critically, the nature books unveil a drama' (p 312). Crocker also suggests that perhaps, by being subjective, these accounts come closer to exposing what the scientist really thinks (p 305). Having come to see the two approaches as complementary, he says '... it seems to me that the interpretation that carries the author's conviction is usually the popular one, the academic one coming across as cautious, but also as mealy-mouthed. ... My bet is that the popular informs the academic rather than the other way about' (p 311).

Jane Goodall suggests that the situation is changing, as ethologists come to the same conclusion. In her later book 'Through a Window', she says 'Gradually it was realized that parsimonious explanations of apparently intelligent behaviours were often misleading' (1990, p 15).

Crocker is not advocating that scientific rigour should be relaxed, but that the meaning should not be ignored, because it is important to understanding. The trouble with the complex social behaviour of primates is that 'the meaning is where the meat is' (p 313).

Within science, there seems to be an increasing tendency to attribute to animals characteristics hitherto thought exclusively human. This is because observations of animal behaviour have forced the conclusion that they do indeed possess these characteristics. Crocker argues that anthropomorphism had become unacceptable because it was not backed up with accurate observation. It has to be admitted that at times, rather than taking an objective perspective, we tend to think what we want to be true, and this can affect our judgement. We become prejudiced.

Prejudiced thinking

Prejudiced thinking about animals, as about humans, has a long history. In Jacobean times, women were sometimes thought to be nearer the animal state, so there were those who maintained that they had no souls. These discussions closely paralleled the debates concerning animals. The Quaker, George Fox, once met a group of people who held that women had 'no souls, no more than a goose' and beggars were animals because they spent all day seeking food (Thomas, pp 41-45). Those repressed or unwanted by society could be ascribed the supposed attributes of animals.

Traces of this prejudiced way of looking at animals and humans seen to be animal-like have never really gone away. Even today, those who are accused of brutal or beastly behaviour are being criticised for what is considered to be acts appropriate only to an animal – the aggression of the tiger, the slyness of the fox, the filthiness of swine, or the lowliness of the worm.

Modern philosophers, such as Peter Singer and Tom Regan, have compared this kind of prejudice to that of racism, and called it speciesism. The line has been moved to include women and members of other races, but only to be re-drawn in another arbitrary way. Thus, identifying with another person's needs and feelings may be called empathy, but doing so with those of an animal is called anthropomorphism.

As has been pointed out, the current meaning of the word 'anthropomorphism' is itself the subject of prejudice. In its original form it meant the endowing of God with the form and habits of man, which was an intellectual and theological error. It was thus regarded as a stigma.

The biologist A. D. Darbishire showed how, when the meaning was directed no longer at God, but at animals, this stigma was inappropriately transferred. Those who wished to avoid granting intelligence, purpose, design and human attributes in general to non-human animals 'perpetuated a successful fraud' (cited in Wheeler, 1939:48). Even 'the great length of the word, and its constant repetition, may in some degree account for its impressive effect and for its anaesthetic influence on the critical faculty' (p 47). Darbishire also explained that:

'... One of the easiest ways to convince an audience of the untruth of an idea you wish to disprove is to apply to that belief a word which had already been brought into discredit and obloquy. If you can persuade the audience

that the word fits, the trick is done. In the case of the word anthropomorphism the audience needed no persuasion; they hated the idea that an animal had a soul; they liked to think of the organism as a machine, they liked their mechanical theory of evolution and they liked a long word. The belief that a non-human animal has an intelligence at all comparable to their own was branded with the word anthropomorphic, and flung into the ash-bin of exploded superstitions. It was an argument which effected the temporary expulsion of this belief; it was abuse. It was the very essence of abuse – which is calling things names' (A. D. Darbishire, cited in Wheeler, 1939:47-48).

Avoiding the pitfalls

Wheeler points out that all our science is necessarily anthropomorphic by reason of the fact that man himself is merely a highly developed animal and 'therefore could not if he would interpret other animals except in terms of himself' (Wheeler, 1939:47).

Kennedy suggests that anthropomorphism is to some extent unavoidable as '(it) is probably programmed into us genetically as well as being inoculated culturally'. Viewing this programming as a type of genetic disease, he adds more optimistically, 'That does not mean the disease is untreatable. We humans can defy the dictates of our genes' (Kennedy, 1992:167).

The question which Kennedy raises is not whether we can but whether we should defy the dictates of our genes. This question is being addressed by those seeking to establish the justification for, and status of, anthropomorphism as a way of understanding animals. That there are pitfalls is admitted, but to what extent can they be avoided?

Essentially, when using the anthropomorphic approach to understanding, it is necessary to consider which are the features we share with animals and which are complementary, or even species-specific. Also, the behaviour of animals is by no means always obvious to us. Marian Stamp Dawkins writes:

'Behaviour that at first sight looks odd or irrelevant to us, as naive observers of what the animal is doing, may turn out to have very great relevance. For example, junglefowl cocks that 'oddly' peck at the ground during a fight actually seem to be the ones most likely to win the fight in the end' (Freekes 1972, cited in Dawkins, 1986:80).

Thus, we should not jump to the conclusion that the animal behaviour that is being observed is irrelevant, just because we ourselves cannot understand its relevance (Dawkins, 1986:80).

It is coming to be recognised how important it is that the 'natural' behaviour of animals should be studied in realistic ways. Historically in the zoo world, perceived resemblances between man and the other primates have led to intuitive efforts to provide the animals with some of the things appropriate to human comfort. They have been given neat, tidy houses, with vertical, flat, smooth walls, clean floors and outside areas which have been prettily gardened. These primates have in fact been seen as 'generally destructive, messy children' who need looking after, instead of being recognised as competent individuals who, in the wild, are responsible for finding their own food, forming social relationships, rearing and protecting offspring and travelling around their territory or home range' (Redshaw and Mallinson, 1991:18).

Increasingly accurate knowledge of primates has led to zoos undertaking environmental enrichment programmes which are putting the results of some of these misconceptions right. Naturally occurring behaviours are enhanced, so that not only the physical, but also the psychological well-being of the animals is improved. Data collected from observations of animals in the wild have helped to focus on the real needs of primates. (Ibid, p 24).

In other ways, however, primates may be so like us that a direct anthropomorphic approach to understanding them may indeed be appropriate. After thirty years spent in Africa, observing and describing the behaviour of chimpanzees, Jane Goodall reports:

'All those who have worked long and closely with chimpanzees have no hesitation in asserting that chimpanzees have emotions similar to those which in ourselves we label pleasure, joy, sorrow, boredom and so on ... Some of the emotional states of the chimpanzee are so obviously similar to ours that even an inexperienced observer can interpret that behaviour' (Goodall, 1986:118)

Marian Stamp Dawkins has tackled the difficult question of how we can understand what preferences particular animals have, in view of the fact that we do not share a common language. She has undertaken some ingenious experiments which show that it is often possible to find ways of determining their choices, and what matters to

them, and has also reported on similar experiments. For instance, an animal that indicates by its behaviour that it gives such high priority to something that it is prepared to forego an extra chance to feed 'is saying a great deal about the importance it attaches to that particular thing, and the extent to which its life is dominated by the need for it' (Dawkins, 1993, p 159). She reports that hens, offered different types of artificial wire floors, chose the ones with the finer wire over those which were coarser (a choice which at first seemed surprising) but that if offered the choice of flooring in which they could scratch and dustbathe - 'then even the previously favoured wire-mesh floor is quickly abandoned in favour of floors consisting of peat, earth or wood-shavings' (p 153). She is investigating in a scientific way the needs of animals from their own viewpoint. Anthropomorphism tells us that animals, like us, have feelings and preferences, but there is still the need to investigate further, in order to determine what these are. They will vary between one species and another.

The philosopher, Peter Singer, says the question which should be asked is 'How would I like that done to me if I were that being, with the sensitivity and preferences that being has?' (Singer, 1987:150; my emphasis).

'To imagine oneself in the situation of another creature is likely to lead to error when one naively assumes that some other creature must have all the same feelings as a human being; it's entirely proper when it draws on the best available information about the nature of that creature and what it's likely to experience. To form an opinion as to what a pig or a whale or a fish is experiencing is certainly not easy, but at the same time we shouldn't give up the task as hopeless. Where speech is lacking, we can still use other kinds of evidence: observations of behaviour, and also knowledge of the nature of the brain and nervous system of the animal in question. This may not be enough to produce certainty, but it does mean that we're not merely guessing' (p 151).

A shared language is not necessary in order to appreciate the feelings of a being we know really well, as parents of young babies know. If we choose to be sceptical about animal minds because without language we have no direct access to them, we must extend our scepticism to the minds of other people also (Rollin, 1990:37).

Those who are neither scientists nor philosophers but have lived with wild animals in their natural surroundings have provided useful information as a result their experiences. In East Africa, Joy Adamson adopted two orphaned lion cubs and hand-

reared them. Later she made it possible for them to be returned to the wild. Her book, 'Born Free, A Lioness of Two Worlds' showed considerable insight into the nature of the cubs and became a best-seller.

'It was two days before the cubs accepted their first milk. Until then, whatever trick I tried to make them swallow diluted unsweetened milk only resulted in their pulling up their tiny noses and protesting, 'ng-ng; ng-ng', very much as we did as children, before we had learned better manners and been taught to say 'No, thank you' (Adamson, 1990:4).

We are also told how one of the cubs, Elsa, first experienced salty water, '... the first mouthful of salt water made her wrinkle her nose and pull grimaces of disgust' (p 33).

How else could the richness of these descriptions be conveyed without the use of anthropomorphic analogies?

But anthropomorphism is not merely a literary device. Despite the sceptics, it is still valued by modern scientists and philosophers. It has always been accepted by the many ordinary people who have kept animals, and come to know them as friends and companions. Kennedy writes: 'I think we can be confident that anthropomorphism will be brought under control, even if it cannot be cured completely' (1992:167). Nevertheless, while there may at times be a need for more control, there would be far more lost than gained by a 'complete cure'.

Used with intelligence, sensitivity and caution, anthropomorphism is an important and valid way of coming to understand animals.

CHAPTER 4

CAN ANIMALS HAVE LANGUAGE?

Washoe must be the most talked-about chimpanzee of all time. Taken from the wild and brought up by the Gardners in as human a way as was compatible with her anatomy and nature, she could be said to have become part of human society. The Gardners set out to prove that, though incapable of spoken words, Washoe was able to learn Ameslan (American Sign Language) and to use it effectively. They concluded that her language skills were similar to those of a young child.

Their findings provoked a range of dramatically different responses. At one extreme was joyful acceptance. Washoe had shown that a shared human-animal language was possible and had demonstrated her kinship with mankind. She was blazing a trail to bridge the gap which had long divided the human and animal worlds.

Others reacted with unease, even alarm. There was a threat that apes might come to be seen as another type of 'human', or at least too human-like for comfort. The very idea was taboo. Stories in which creatures could be half-man and half-animal were part of ancient mythology, but had no part to play in modern Western culture. The boundary separating animal and man had long been firmly drawn. Should it be broken down, who could foresee the consequences? Where would it all end?

Yet others, mainly in the scientific community, reacted to the Gardners' research with considerable suspicion and a large degree of cynicism. They held that parts of the data were based on anecdotal evidence, and that the methodology was suspect in other ways. Perhaps some animals had developed systems of intentional communication which could be used in a language-like way among themselves, although even this was a matter of debate. But no animals possessed the level of intelligence which could enable them to share our language. There was no way they could enter into 'conversation' with human beings.

Traditionally, our view of language development is closely tied to our view of intelligence. Animals are said to be dumb because they have no language. What is more, they are too dumb to develop it!

By the 1960's, the 'Chomsky language revolution' was under way. Because it

stressed the primacy of syntax over semantics, Chomskyans maintained that the Gardners had merely confirmed that there was little room for anything that might be called chimpanzee 'language'.

According to Chomsky, studies of animal communication only 'bring out more clearly the extent to which human language appears to be a unique phenomenon, without significant analogue in the animal world' (Noam Chomsky, 1968:67). This raises the question of what might be allowed as an analogue, let alone a significant one. To add to the confusion, there has never been an agreed definition of what language actually is. Thus, when asked whether they considered that Washoe really had language, the Gardners pointed to the difficulty of making a distinction between one class of communicative behaviour that can be called language and another class that cannot (1969:671).

Does it really matter whether animals can be allowed a language capacity? Mary Midgley (1983, 1996) stresses that it is certainly an important matter for the animals, in that it affects the moral status that we, as humans, are prepared to accord them. It must also be an important matter for us, if only because the 'animal language' debates have had such a long history and show little sign of abating. It is worth having a closer look at these debates to see what lies behind them.

Who has language?

There is no doubt that human language involves skills which other species lack. Noam Chomsky insists that because these skills are uniquely human, language irrevocably separates mankind from all other animals.

Thus, three centuries after Descartes, Chomsky unreservedly accepted the Cartesian position that there is a chasm between humans and animals which can never be bridged:

'Anyone concerned with the study of human nature and human capacities must somehow come to grips with the fact that all normal humans acquire language, whereas acquisition of even its barest rudiments is quite beyond the capacities of an otherwise intelligent ape – a fact emphasised, quite correctly, in Cartesian philosophy.'

(Chomsky, 1968: 66–67)

From the time of Descartes, there had been a steady stream of evidence from scholars endeavouring to disentangle the arguments as to whether animals should, or should not, be allowed to have 'language'. Many of the debates stressed that the crucial factor must be whether or not animals had reason, or sufficient reason, for such a capacity. Despite this, there had long been a feeling among ordinary people who kept animals that, whatever the intellectuals might say, their animals were not mindless 'automata' and that the line dividing them from us was by no means a distinct one (Thomas, 1984:124). Learned men, however, continued to address these issues energetically, partly because of their important implications for political and theological doctrines. Their discussions were seen to be serious and important ones. Keith Thomas tells how, at a public disputation at Cambridge, in the company of James I, the subject of the debate was whether or not dogs could reason, and that these men were 'not just playing a donnish game; they were grappling with a topic of notorious philosophical perplexity' (1984:125). Hostility to the erosion of the man-animal language distinction led to a demand that 'all fables which ascribe reason and speech to animals should be withheld from children' (Henry Swinburne, 1635, cited in Thomas, 1984:127). Yet these writers seemed to be fighting a losing battle, for ordinary people continued to perceive the boundary between man and beast as far less distinct than they would have liked.

With the growth of comparative anatomy in the later seventeenth century, matters became even more alarming. In his 'Systema Naturae' of 1758, Carolus Linnaeus totally rejected the distinctions between 'rational' animals (humans) and 'irrational' ones (non-humans) and not only classified man as part of the animal creation, but placed people in the same order as that which included not just apes but even bats. To make matters worse, in 1774 the Scottish sage Lord Monboddo 'in pursuit of his thesis that speech was not universal among human beings, asserted that the orang-utans were not animals at all, but a race of men who had not yet learned to speak ...' (ibid:127-30). It is likely that the idea of being classed so close to orangutans caused a specific anxiety. These apes were alarmingly human-like in appearance, even without having a latent capacity for man's language.

The questions being raised were indeed undermining beliefs which had been held for centuries. Prior to Darwin, man's position had been firmly established at the top of creation, a position which had been given to him as a divine right. The idea that this might not be so was unthinkable. It seemed quite obvious that man's intelligence set him above and apart from other living things.

This comfortable position continued to be undermined. An abstract of a paper by

Sir John Lubbock, MP, FRS, read at a meeting of the British Association in 1885, was published in the journal 'Nature'. Sir John reported that when looking through the standard works on the intelligence of animals, he had been unable to find anything very helpful. 'However' he said, 'considering the very limited powers of savage men in this respect - that no Australian language, for instance, contains numerals even up to four, no Australian being able to count his own fingers even on one hand - we cannot be surprised if other animals have made but little progress' (Lubbock, 1885:45-6). Savages were not 'normal humans'.

His fellow Victorian, F. Max Muller, was less hesitant. Man was an intelligent being. The title page of his book 'The Science of Thought' (1887) proclaimed:

'No language without reason - no reason without language.'

It is noteworthy that Muller was totally unworried by the fact that there is not, and never has been, any consensus as to just what reason and intelligence are, nor for that matter has there ever been agreement on an acceptable definition of language. Over the years, definitions have risen and fallen, while the goalposts marking what it takes for language possession have shifted around.

This seems to have been particularly so in the twentieth century, when, after many years of mere assertions, empirical work was undertaken to assess whether animals do in fact possess intelligence, rather than reflex systems, and whether some seem to have a capacity beyond mere communication. With the rise of ethology, and its strong preference for studying animals in their natural settings, significant work was done on intraspecific communication, even among the 'simpler' creatures, such as bees.

Karl von Frisch (1950) and Donald Griffin (1981) were able to show how the bees could pass on accurate information about food sources by means of symbolic dances. It is difficult to be precise about how much of their behaviour is innate and how much is not, but it would certainly seem that not all of it is pre-programmed (see also Gould and Gould, 1983). Because bees can also demonstrate a capacity for choice in what they wish to communicate, Donald Griffin is happy to talk of the 'language of bees', and although Professor Bernard Rollin writes that Griffin's work provoked reactions of outrage (Rollin, 1990:253), this was mainly among the scientific community. Ordinary people seemed to enjoy hearing about the bees' newly recognised capacities, and television programmes of bees dancing their 'language' became popular. It would, however, be an exaggeration to claim that the

news of their 'dance language' was earth-shattering. Had these ordinary people been asked if they would now allow that bees had 'language', they would probably have said something rather evasive, such as 'Well, perhaps a sort of language.' After all, language has traditionally involved speech, not dancing.

In a rather similar way, the general reactions to reports of the alarm calls of vervet monkeys were also benign. Many people had never even heard of vervets, let alone seen one, but it was rather remarkable that they evidently had different sorts of warning calls, depending on the type of predator (Seyfarth, Cheney and Marler, 1990). It had been shown that if a 'leopard' call was given, the vervets made for the tall trees; if an 'eagle' call, they ran into the thick bushes; if a 'snake call', they would peer around at the ground. With hidden loudspeakers, it had been possible to broadcast the calls a sufficient number of times to validate the results showing that the vervets' responses were not just random or accidental. Later still, when the research was extended, it was found that they had special kinds of grunts, one to indicate the approach of another group of monkeys, another the approach of a subordinate companion, and yet another, a group of baboons. The vervets even had a special call to warn of the approach of unfamiliar human beings (Schmeck, 1980, cited in Noske, 1989:133). Again, there followed reports in the media which were received with interest. The general impression created seemed to be that no-one was greatly surprised – monkeys had long been known to be highly intelligent creatures. So if the term 'vervet language' was an over-estimation of their abilities, 'communication' seemed too parsimonious. No precise definition to separate language from communication has ever been established, but there was of course no suggestion that the vervets would be able to communicate with us – their language certainly fell far short of that.

In 1997 (22 December:16) a 'Times' article reported the findings of Professor Con Slobodchikoff of Northern Arizona University, that the language of prairie dogs also had different alarm calls for different threats, including those from hawks, coyotes, domestic dogs and human hunters. In response to different circumstances, he had recorded over a hundred different sounds. But again, a vocabulary of specific sound-responses would be an over-simplified description of language.

But what of the higher apes? Chomsky himself made the distinction between language acquisition in man and that of 'an otherwise intelligent ape' (1968:3).

Cultural attitudes

The great apes have long constituted a mystery and have held an intense fascination for mankind. They are obviously similar to us in many ways. Even before it was known how phylogenetically close to us they are, their similarities aroused conjecture. Yet feelings towards them can still be ambivalent. They may seem too human for comfort.

At the time of Descartes, the great apes were unknown in the Western world. It was not until the seventeenth century that they were discovered by explorers, and knowledge of their way of living has only been acquired within the last few decades (Midgley, 1983:59). When the first apes were brought to this country, they caused much speculation, and the account which Samuel Pepys wrote in his diary of 1661 makes fascinating reading:

'By and by we are called to Sir W. Battens to see the strange creature that Captain Holmes hath brought with him from Guiny; it is a great baboone, but so much like a man in most things, that (though they say there is a Species of them) yet I cannot believe but that it is a monster got of a man and she-baboone' (Diary for August 24, 1661, cited in Eric F Ward, 1983).

Pepys goes on to suggest 'I do believe it already understands much english; and I am of the mind it might be taught to speak or make signs.' Thus he equated the animal with humankind (or at least, half-humankind) and suggested a capacity for language. If he was right, both concerning the baboon's language ability and its hypothesised parentage, what might the ape have to say? Pepys himself had the robust and natural curiosity of his day, but in later years his account must surely have caused many a shudder among the moralistic Victorians. It is worth remembering that although the notion of man and animal holding 'conversations' together has long had a fairy-tale quality, such a romantic image may have hinged upon the notion that it could never in fact become reality. In contrast to man, animals are simply too 'dumb' to have language.

Certainly among children, live chimpanzees are fascinating. Although few of us have seen a chimpanzee in the wild, the days of the Chimpanzee Tea Parties are unlikely to be forgotten by those who made pre-war visits to the London Zoo. A small 'family' of chimpanzees were brought out, to sit at a long table where plates and mugs awaited them. As the keeper filled the mugs and passed round the biscuits, the chimps began their performance. They seemed to enjoy it all, and children

loved it. When they dribbled their mugs of milk over the heads of their next door neighbours, or threw the occasional plate into their laps, they were doing the very things that some children had themselves been restrained from doing, and many doubtless envied them their happy state of autonomy. No-one could fail to be struck by the many similarities and capacities that chimps shared with humans, and especially children. Although keeping some animals in zoos has rightly come in for criticism since that time, it must nevertheless be true that thousands of children grew up with a greater degree of understanding and affinity towards chimpanzees as a result of these brief encounters.

In stark contrast was the image of gorillas portrayed by the Hollywood 'horror' film 'King Kong' in the 1930's. The monster 'gorilla' was specifically designed to strike fear into cinema-goers and was undoubtedly successful in doing so. The portrayal of a man-like ape, larger and more savage than even the most savage of human tribes, was indeed a fearful one. Few people had actually seen a live gorilla and this was well before the days of David Attenborough's programmes on television. It was easy to take on board the idea of a vicious and savage monster thundering, crashing, and screaming through human towns, lacking the restraints imposed by even a modicum of civilisation. It is difficult to say just how far this portrayal was generally seen as either authentic or unrealistic, but it did little to encourage a sympathetic attitude towards gorillas. Later, Schaller's account of gorillas in the wild showed them to be remarkably gentle creatures, frequently settling disputes about social hierarchy or territorial possession by gesture and eye contact, rather than by fighting (Schaller, 1964).

All too often fantasy and reality have become merged, so that apes have been seen as alienated and 'failed' human beings, lacking man's restraint, his understanding and his language, and thus outside the realm of civilised society.

Nineteenth century anthropologists were much concerned with their findings of human skulls, and in measuring them with a view to assessing racial superiority. Few had personal experience of the cultures that could so easily be downgraded as a result of these investigations, and even less experience of non-Western creatures such as apes. In those cultures where humans and apes shared common territories, a very different view emerged. In Malay the term 'orang-utan' has been translated as 'old man of the forest' or 'reasonable being of the woods'. Only in this century, when Western scientists have observed apes in their natural surroundings, have they found it increasingly difficult to explain a good deal of their behaviour without making reference to human-like capacities (H. Lyn White Miles, 1993:43).

Such cultural attitudes were typified by two extreme positions. Firstly, there were the unrealistic expectations of those anxious to prove their own high opinions of animal intelligence. They felt that the injustices suffered by animals were to a large extent due to an underestimation of their capacity for reason. At the other extreme were the unrealistic fears and prejudices of those who felt threatened by the possibility that there might be an equation, especially in terms of intelligence and language, between man and animals.

It was against this background that, in 1966, Allen and Beatrice Gardner had set themselves the task of teaching a chimpanzee to use a form of human language.

Teaching language to apes

Although previous attempts had been made to get an ape to 'speak', none had been successful. In the 1940's, and after six years of intensive work, K. and C. Hayes had to report that their chimpanzee, Viki, had learned only four sounds that approximated to English words (Gardner and Gardner, 1969:665).

The Gardners reasoned that if spoken language was an inappropriate medium of communication for the chimps, it would be worth trying American Sign Language (ASL), the gestural system of communication used by the deaf in North America. They chose the chimpanzee for their research not only because of its undoubted intelligence, but 'of equal or greater importance', because of their sociability and capacity for forming strong attachments to human beings. The Gardners (1969:664) wanted to emphasize this trait of sociability, as it seems highly likely that it is essential for the development of language in human beings. Chimpanzees are physically incapable of pronouncing spoken words and ASL seemed to fit in with their natural gestural style of communication and it was also an advantage that it was in current use by human beings. The early linguistic environment of the deaf children of deaf parents is in some respects similar to the linguistic environment that they could provide for their experimental subject, and this would permit some comparative evaluation of the chimpanzee's eventual level of competence. Also relevant in deciding on the use of ASL was that manipulatory mechanical behaviour comes naturally to chimpanzees. Even caged laboratory animals develop begging and similar gestures spontaneously, and individuals that have had extensive contact with human beings have displayed an even wider variety of communicative gestures (Gardner and Gardner, 1969:664-5)

When the Gardners first acquired their young chimpanzee she was estimated to have

an age of between 8 and 14 months. They named her 'Washoe' (for Washoe County, the home of the University of Nevada where they were working.) They were well aware that there would inevitably be some problems. Chimpanzees are very strong; a full-grown animal is likely to be three to five times as strong as a man, pound-for-pound. Washoe had not been laboratory born, so coupled with her wildness, her great strength could later present serious difficulties.

At the outset they were sure that Washoe could learn to make various signs in order to obtain food, drink and other things she might want. But for the project to be a success, they felt that something more must be developed. They wished her not only to ask for objects but to answer questions about them and also to ask questions herself. In other words, they wanted her to develop behaviour that could be described as 'conversation', and they thus set about providing the sort of environment that should be conducive to this. Washoe's confinement was to be minimal, about the same as that of human infants. 'Her human companions were to be friends and playmates, as well as providers and protectors, and they were to introduce a great many games and activities that would be likely to result in maximum interaction with Washoe' (ibid:665,666). All her human companions were required to master ASL and to use it almost exclusively when in her presence - not only with her, but with each other. If they spoke English among themselves, and only signed to Washoe, it might make it seem that big chimps talked, while only little chimps signed. This did not mean that her environment was a silent one. When with her, the human beings laughed and made sounds of pleasure or displeasure, they used whistles and drums in some of the imitation games and clapped hands for attention. The rule was that all meaningful sounds, whether vocalized or not, must be sounds that a chimpanzee could imitate.

Chimpanzees are good imitators. From the beginning of the project Washoe was bathed regularly. One day, during the tenth month, she bathed one of her dolls in the way that she was normally bathed herself, took it out and dried it with a towel. This is a type of imitation that is thought to be very important in the acquisition of language by human children (Gardner and Gardner, 1969:666) and subsequent opportunities for imitation were provided, so that the trainers could capitalise on it. Indeed, some of the signs that Washoe learned seemed to have been originally acquired by delayed imitation. She was used to having her teeth brushed after every meal. In the tenth month of the project, Washoe was visiting the Gardner home and found her way into the bathroom. She noticed the mug full of toothbrushes and spontaneously signed 'toothbrush'. She had had no reason to use the sign before, because the brushes were always within her reach, and it seemed

unlikely that she was asking to have her teeth brushed. The Gardners concluded that when she named them it was for no obvious reason other than communication. By the fourteenth month she might call for her toothbrush in 'a peremptory fashion when its appearance at the end of a meal was delayed' (ibid:667).

It was some months before they were able to exercise control over Washoe's imitation of gestures. Getting her to imitate was easy and she did so quite spontaneously, but getting her to imitate on command was another matter. Pressed too hard, Washoe could become completely diverted from her original object; she could well ask for something entirely different, run away, go into a tantrum or even bite her tutor. Many a human mother has had similar problems with a fractious two-year-old.

Like human children, she began to extend her vocabulary, sometimes in inappropriate ways. Having learnt the sign for 'flower' she would make that sign when opening a tobacco pouch or when entering a kitchen filled with cooking smells. She was conceptualising 'flower' in terms of smell, rather than shape or colour. Small children, having learnt the word 'dog', may well extend the word inappropriately, and announce the presence of a dog in a field when pointing to a cow, or a pig. In fact, Washoe demonstrated that the sort of errors she was prone to make were similar to those of children at this stage of language learning.

Washoe did not put together sentences, but her early use of 'signs in strings' was spontaneous. As soon as she had eight or ten signs in her repertoires, she began to use them two and three at a time. Their order appeared idiosyncratic, and she might sign 'open food drink' when she wanted a drink from the refrigerator, or 'open flower' when she wished to be let through the gate to the flower garden. Again, young children do not always achieve either the correct word, or the correct word order.

By the time of the Gardners' first report, in 1969, Washoe could use 30 signs quite spontaneously. Although many were nouns, not all of them were. She could give the signs for 'more', 'up', 'go', 'hurry', 'out' and so on (1969:668-671).

At times her signs were unclear, and her tutors would then sign to her how they should be done and so try to get her to repeat them with greater precision. Again, we are reminded of what happens when young children slur a word, or mispronounce it. Adults or older children may then say the word slowly and emphatically, encouraging the child to repeat it more accurately. Like Washoe, children may thus

acquire some of their early language by instrumental conditioning, and this may indeed be a critical stage in their language acquisition.

Further studies were undertaken by R. and D. Fouts in 1993, after Washoe had been transferred to their care. It had been questioned whether she could pass on her knowledge of sign language to another chimpanzee and video recordings proved that she was indeed able to do this, often by active teaching. One video recording showed Washoe teaching a younger chimp the sign for 'come'. She would first orient towards the youngster, then sign 'come', then approach him, and then retrieve him. She gradually faded this, so that she stopped retrieving him, and then she stopped approaching him and finally all she had to do was orient and sign.

Interestingly, like us, Washoe would on occasions also 'talk to herself'. She would sign to herself the names of things she saw in magazines. Fouts remarks that 'when private signing occurs in humans, it is considered to be overt thought – the person is thinking aloud' (1993:34, my emphasis). Even more significant in demonstrating her level of understanding was that as she looked at herself in the mirror, one of the Fouts asked her, in sign language, 'Who is that?' She signalled back 'Me, Washoe' (cited in Midgley, 1979:227). She must certainly have given pause for thought to those who had so vehemently denied language to animals on the grounds that they lacked self-consciousness.

It is worth noting that Roger Brown had written 'Once again, and for the third time this century, psychology has a home-raised chimpanzee who threatens to learn language' (Brown, 1980:87, my emphasis.) Perhaps, then, it should not have been surprising that when Washoe's accomplishments first hit the scientific community, 'the news immediately provoked a storm of bitter protest' (Goodall, 1990:17).

A series of criticisms followed the publication of the Gardner project. It was held that there were serious observational and recording errors. The Gardners were accused of being too ready to give Washoe the benefit of the doubt when her signs were unclear. It was also assumed that any lack of clarity was Washoe's 'fault', while the fact was ignored that her trainers had had to learn ASL especially for the project so were not themselves particularly fluent. It is worth noting that deaf people who have seen films of Washoe understand her signs easily and deaf children are particularly captivated (Wardhaugh, 1976:175).

Other critics insisted that Washoe could be taking her cues from her trainers, rather than understanding the meanings of the signs – the so-called 'clever Hans

effect'. The fact that the diaries kept of Washoe's signings were only written up at the end of each session was seen as a serious methodological weakness.

Anticipating such criticisms, the Gardners were strict in their record-keeping. When a new sign was introduced, they waited until it had been reported by three different observers as having occurred in an appropriate context and spontaneously. The sign was only then added to a checklist, and two such checklists were filled out each day. They recorded that by 1975 Washoe's vocabulary had reached 160 words. But it must be allowed that, by the very nature of the project, it was impossible to achieve the same degree of exactitude which could be incorporated into tightly controlled laboratory experiments. Washoe's confinement was purposely minimal. Although the Gardners were 'strict behaviourists' (Desmond, 1979:86), they were keen to stress the creativity, and positively encouraged freedom of expression. When Eugene Linden visited Washoe in 1976, he reported an exchange which was of special significance.

Roger would sometimes tickle Lucy. The chimps enjoyed this. But he had never asked her to tickle him. He decided to surprise Lucy with a novel challenge, signing 'Lucy tickle Roger.' Linden described what happened:

'Lucy was sitting beside Roger on the living room couch. She sat back for an instant confused. Almost testingly, she said 'No, Roger tickle Lucy.' Roger again signed 'No, Lucy tickle Roger.' This time I could see comprehension brighten Lucy's eyes. Excited, she jumped onto his lap and began tickling him, while he rocked backwards uttering little grunts in imitation of chimp laughter
(Linden, 1976: 99)

How could the meaning of this incident be conveyed in strictly behaviourist terms of stimulus and response? When Linden relates how 'comprehension brightened Lucy's eyes', we are given a picture which vividly explains what happens, although it would be impossible to test it empirically. It is from the description of Lucy's facial expression that we are alerted to her dilemma, and how she finally resolved it. His account provided evidence that Lucy had successfully negotiated a conversational exchange.

Fouts has recorded that Lucy came to interpret the difference between signs for 'you tickle me' and 'tickle Roger' on other occasions, thus demonstrating a perception of the correct word order, and the simpler rules of syntax (ibid: 103). Syntax has been the subject of much debate and heated argument when it comes to

allowing whether apes have 'language'. It still bristles with contention:

In Chomsky's opinion, it is not the resemblance which language shows to other communication systems that is important, but rather what specifically characterises human language itself. The sophistication of its syntax is a feature which makes our language unique. The Gardners have never claimed that either Washoe or later subjects could rival human language in the complexities of its structure, but some of the protagonists in the debates have chosen to emphasise those aspects of human language which are unique to man. Other components, which the apes were able to share, have been largely ignored.

The impasse in the syntax controversy caused Fouts to remark that linguists had 'jumped to the conclusion that the essence of language was syntax and that Washoe didn't have it' (1977:121).

It seems highly unlikely that human language in its early evolutionary stages was 'grammatical' in the Chomskyan sense. Even in everyday modern speech a great deal of the meaning in any verbal message is supplied by the social environment. The shared meanings are the very essence of language, and misunderstandings inevitably occur when meanings are not shared. Errors of syntax may well be so obvious, or so commonly used, that they can safely be ignored.

Those who complained that the apes were being judged unfairly pointed out that 'a child's variable word order argued its innate mastery of grammar; an ape's condemned it irretrievably' (Desmond, 1979:44). 'When a baby says 'drink', the mother reads into the word the sentence 'I want a drink'. Similarly, when Washoe signed 'out', it meant that she wanted to go out. So why is there this double standard? The Gardners pointed out that the linguists were insisting on a more rigorous standard of testing the apes than they would normally expect from child language studies.

Linguists countered that their standards were not double. In a child, a certain lack of syntax was acceptable because it was obvious that the child would acquire it later on (Desmond, 1979:45). So children had potential language; it was only being brought forward a little. But this must be a very partisan explanation of possession of syntax in young children and non-possession of syntax in chimpanzees. In order to tackle the question empirically, the Gardners examined the utterances of human two-year-olds, recorded them, and compared them to Washoe's. They reported that 'transcripts of Washoe's spontaneous signing ... are strikingly similar

to transcripts of the spontaneous speech of children' (1974:734). This was at first accepted as reasonable, but later turned out to have a sting in its tail. Shifting the goalpost, Limber wrote that 'Washoe, like most children during their second year, has achieved a considerable degree of proficiency in using arbitrary symbols to communicate. This is not to say, however, that Washoe, or most two-year-old children use a human language' (Limber, 1977:280, my emphasis). The goalpost had been safely moved – neither young children nor chimps could be allowed to have language.

Because the syntax debates had proved so contentious, Dr Herb Terrace from the Oklahoma Center for Primate Studies took a young chimpanzee called Nim and began work with a view of settling the matter once and for all. Like Washoe, Nim began stringing words together, but with considerable repetition. Asking for a banana, Nim might sign 'Banana me me me eat.' Terrace felt that such repetition could not be compared to human sentences. Yet might there be a reason for such repetition? We may repeat words for emphasis, 'Stop, stop that', just as poets may stress words by repetition: 'Oh, happy happy day'. Could it be that Nim regarded a repeated sign as carrying more weight? 'Banana me me me eat' might have meant to Nim 'Banana me Me ME eat'. But who can say? At any rate, Terrace finally reported that Nim's sequences did not have the syntactic structure of sentences (Desmond, 1979:49). In fact, the shifting of goalposts within the ape/man debates has been a constant problem.

William Mason has suggested that the old question of whether man and ape were different in kind or just in degree depends on where we look for an answer:

'For example, at the level of speech – in the sense of vocalized language – the contrasts between man and ape are manifestly qualitative. On a different level, let's say the ability to form concepts, or to combine various acts or subroutines into larger functional units, the differences appear to be matters of degree' (Mason, 1976:293).

Perhaps too much effort has been put into trying to see ape and man as equal. Although the two species share well-marked similarities, each is a different sort of primate, unique in its own way. Failure to recognise this has 'boomeranged to the detriment of the ape, who is now judged according to an impossible human standard which should never have been set. By any other standards, Nim's achievements would have appeared staggering' (Desmond, 1979:49,50).

There have been two strands in the ape language debates, which at times have become tangled. The first has to do with whether Washoe, or other apes, can really be shown to use language among themselves. The second seeks to establish whether Washoe can seriously converse with humans – in this case her experimenters – by using a shared language. The former has been easier to establish. If it is accepted that the essence of a shared language is that some form of symbolic communication – in this case signs – is common to both users, then clearly Washoe had 'language'. She was able to use signs to indicate and name people and objects in a way recognisable to those who understood Ameslan. She would comment 'dog', when a dog passed the window, or even if she came across a picture of one in a magazine. Are chimps unique in this respect?

At about the same time as the chimpanzee experiments, Penny Patterson began a similar study with her gorilla, Koko. She reported that Koko had been able to learn the names of a number of things quite easily, especially things which she liked. Thus she had learned signs for berry and soap 'within minutes'. However, Koko had to be repeatedly coerced to learn the sign for 'egg' because she so hated them (Desmond, 1979:52). The matter of motivation has been largely ignored, yet it is so obviously important to children's learning. Any failures by apes to learn 'language' have been readily ascribed to a lack of innate ability or intelligence. Why should chimpanzees be motivated to learn our language? Few humans are driven to master theirs.

It would certainly appear that motivation is often not as strong as the experimenters would wish. An Ameslan-using chimp called Bruno showed little interest in mimicking the strange movements he was asked to perform. Fouts says that when he first started to teach him the sign for 'hat', Bruno would look at him with mild curiosity as if to say 'I'd really like to help you, but I can't for the life of me understand what it is you want me to do.' After a while, Fouts got somewhat exasperated and threatened Bruno. Bruno immediately started signing 'hat, hat, hat' (Linden, 1976:126). Although this account is anecdotal, it must strike a chord with many who have had similar sorts of experience with children, or dogs, who for reasons of their own do not wish to understand!

So why are linguists unwilling to give apes the benefit of the doubt? Why do they concentrate only on those aspects of speech which are uniquely human and ignore the fact that others are shared, and also that context and motivation are of immense importance?

It is also frequently overlooked that the apes are learning what is for them a second language, and also a highly specialised one which has probably taken millions of years to evolve. In their natural settings, apes understand their worlds against the background of a different frame of reference. By gestures and facial expressions they can render words superfluous. The intricacies of their languages are not to do with syntax, but, as Noske has pointed out, with extraordinary subtleties of gesture, stance, eye contact, the recognition of sounds, sights and smells, and furthermore a capacity to know by a process of abstraction which are important and which can be safely ignored (Noske, 1993:266). A too abstract notion of what language is has been quite disastrous to the apes who have in fact shown a truly remarkable ability to acquire a useful number of the salient features of ours. Their newly acquired skills are not vocal, and they do not demonstrate a sophisticated use of syntax, but does this mean that they are not basically linguistic? It is not just the mastery of complex grammar that marks someone out as having 'language'. Were this so, many humans would be linguistic failures. There is, however, a common assumption that a degree of intelligence must go along with language.

Like language, intelligence is a controversial concept, one which has attracted many definitions, but none universally acceptable. In a social world, it must surely require intelligence to survive at all, although different circumstances require different kind of adaptations, different sorts of intelligence. Many psychologists have taken far too narrow a view of what intelligence is, seeing it as the capacity to solve problems, but only ones of a special kind. Yet problems vary from one society to another, and societies themselves change. Because intelligence has a practical value, its assessment will always entail value judgements. Washoe would not survive in a Government think-tank, but would have the edge on the experts when it came to survival in the rainforest. When we speak of 'intelligence', we need to be clear what sort of intelligence we are talking about. And as with intelligence, so it is with language. Both take many forms and cannot be defined in any sort of unitary way.

Chomsky's analysis of language sees it as an idealised affair, uniquely structured by its particular human form. Thus, he does nothing to further the cause of the apes. Because of his abstract approach to language, many potentially revealing areas of investigation were closed, or were ceded to others as rather uninteresting areas for research (Wardhaugh, 1976:206, 207). By separating form from function, deep structure from surface structure, and competence from performance, he made language into something which only humans could possess. Chomskyans valued complexity for itself, and what language was able to achieve seemed of lesser

importance. Yet language seldom exists on such a high intellectual plane. In its idealised form it is not the sort spoken by ordinary people as part of their social, everyday lives. It is just as much function, substance and performance as it is form, system and competence (ibid:207) and one of its most essential functions is that of social maintenance. Common gestures and common words provide for a shared system of communication within a particular society. Jane Goodall and others have pointed to the remarkable similarities in the social organisation of chimpanzees and those living in non-technological human societies. It is therefore not unreasonable to find commonalities in both. There will also be differences. As Mary Midgley has remarked, language is not an all or nothing affair, a 'yes-or-no business ... a single, indivisible, sacred heirloom ...' (1980:226). There is a wide variety of both features and functions.

Another unhelpful approach was part of a more general movement to bring serious studies of human behaviour into a framework of empirical investigation (Harris, 1981:37). In the eyes of too many modern scientists, observation and interpretation are not enough. Results of experiments must become measurable and quantifiable, so cognitive aspects of animal behaviour are only investigated when they can be measured and controlled. But are scientists prepared to say that any animal trait which cannot be measured does not exist, or is the prerogative of humans only?

We have developed something of an obsession with tests, measurements and statistics. It seems that we find it hard to accept that not everything worth studying must be measurable, or at least measurable with any degree of precision. Patterson's gorilla Koko was in fact IQ tested. She scored about ninety, although Patterson claims that this does not really reflect her true intelligence. Asked where it would run in the rain, a child correctly answered 'house', but Koko answered 'tree' and lost a point' (Desmond, 1979:57). It would seem that the ape must compete on human terms or not at all.

Wardhough suggests that the experiments with Washoe did try to capitalise on the chimpanzee's 'language' strengths, rather than exploiting weaknesses. But as Harris points out, should these be seen in terms of 'strengths' and 'weaknesses' at all? Are they not merely 'differences'? (1981:176-7).

A common anthropocentric view of evolution is that as each species advances it becomes nearer to the most advanced species of all, man. The one that has 'language' which approximates most closely to man's is doing best. So if the claims

for 'language' in apes are unacceptable, the animals on the rungs of the ladder beneath are hardly worth considering. This is of course not everyone's view. Donald Griffin saw nothing incongruous about speaking of the 'language of bees'.

Not all animals would profit from the possession of language. Those which are solitary have no need of it. Thomas Nagel has pointed out that 'blindness, or near blindness, is not a misfortune for a mole, nor would it be for a man, if that were the natural condition of the human race' (Nagel, 1979:9). No animal should be classed 'higher' or 'lower' on the basis of language possession. Each has what it needs for success within its ecological niche – otherwise it would not be here at all. Man and ape are not in competition with one another. Each is unique. We seem to find this hard to accept.

Species prejudice has dogged the language projects. Grammar is emphasised at the expense of symbolic content. When Washoe acquires a language of words, it is claimed that language must have sentences. When she produces simple sentences, then language must consist of complex ones. The fact is ignored that it is extraordinary that apes can string words together at all. Their language 'explosion' is being compared with man's enormously long exposure to language development. Human language is one of the defining characteristics of modern man, whereas the apes are starting almost from scratch. By any reasonable standard, they have made remarkable progress.

Why then are scientists eager to deny them even a simple form of human-like language, and why should language possession determine the limits of our moral concern? Midgley says that it is often assumed that we only owe duties to beings capable of speech (1996:115) although why this should be so is unclear. Allowing that some animals possess a degree of language would pose no threat to mankind. She suggests, however, that what might happen is that it would then become much harder to exclude them from moral consideration, in particular that of using them as experimental subjects.

It is important to recognise that language was not bestowed on modern man in its entirety. There was no sudden cut-off point before which we lacked language and after which we had it. Yet we tend to see it not only as the hallmark of mankind, but the epitome of our moral worth. For centuries, humans without language were treated as outcasts.

Language as status.

From the time of Aristotle, language has been seen as conferring a special status on mankind. Speech was revered as the vehicle of thought. The deaf were therefore incapable of profiting from education or instruction. When in 685 AD John of Beverly, Archbishop of York, taught a deaf youth to speak intelligibly it was seen as a miracle, one that led to the archbishop being canonized (Scott, 1870, cited in Groce, 1985:100).

In the seventeenth century the idea that the deaf could benefit from special schools was denied by leading intellectuals. When John Bulwer, a contemporary of Milton's, suggested a school for the deaf, his idea was treated with amused contempt:

'I soone perceived by falling into discourse with some reationall men about such a designe that the attempt seemed so paradoxicall, predigious and Hyperbolicall, that it did rather amuse than satisfie their understandings ...'
(Bulwer, 1648:102, cited in Groce, 1985:101).

Even in the nineteenth century, the deaf were seen as sub-human. They were 'in a degraded condition ... little superior to that of the brute creation (Henry B. Camp, cited in Groce, 1985:102). To make matters worse, the deaf had the double misfortune of being lumped together with the retarded and the insane (Lane, 1984: 133; Groce, 1985:98).

In modern Western societies, handicapped individuals have too often been expected to adapt to the ways of those without handicaps. It is, however, worth noting that there have been exceptions, especially when the minority is accepted without bias. On Martha's Vineyard, where deafness was common enough to have become part of the island's way of life, sign language was so mingled in the conversation that it was possible to 'pass from one to the other, or use both at once, almost unconsciously ... the mutes are not uncomfortable in their deprivation, the community has adjusted itself to the situation so perfectly' (reported in the Boston Sunday Herald, 1895; cited in Groce, 1985:53). Groce writes that 'the most striking fact about these deaf men and women is that they were not handicapped, because no one perceived their deafness as a handicap (ibid:110).

Interestingly, young deaf signers were taken on as assistants in the Gardners' project. They came to be helped in two ways. Firstly, because 'the deaf in Reno developed a new sense of their language's worth' (Stockoe, 1976:16) and, secondly,

because the stranglehold that speech had previously had on language was inevitably weakened. In their turn, the Gardners were helped by the deaf assistants. They were enabled to learn at first hand something of the richness and potential of Ameslan, and so to use their skills more effectively. Thus Washoe, and everyone else, benefited from the three-way exchange. Language was truly shared.

There is no doubt that language can bring with it a change of status. This is well illustrated by the case which was fought over Penny Patterson's gorilla, Koko.

Koko was acquired by Patterson on loan from Stamford Zoo. Being a sickly creature, her value was put at only five thousand dollars. However, Koko flourished to the extent that she was later valued at some twenty thousand dollars. As she was a female in breeding condition, the zoo demanded her return for 'productive use', and in April 1977 Patterson was given ninety days to meet the knock-down price of twelve thousand five hundred dollars, or Koko would become the property of the zoo.

Patterson held this to be unethical. Koko had grown up with her, much as a child might have done. She had only to be a few minutes late for her evening visit to Koko's caravan for the gorilla to become anxious. In fact, she maintained that being thrown in a cage with a bunch of gorillas 'could kill her' (Desmond, 1979:60). While Patterson was desperately trying to find a sponsor for the money, the giant company Rolex came to the rescue, with a cash reward in recognition of her work. Theodore Sager Meth, a Newark attorney, had investigated the case and had given it as his opinion that having language, that is human language, had made all the difference to Koko. He claimed that:

'The gorilla doesn't exist any more. Under normal circumstances, the only thing this animal doesn't have that we do is language. Now you have changed it ... You have given it the pernicious gift of language. If it has never been one before, it is an individual now. It has the apparatus for the beginning of a historical sense, for the contemplation of self. ... Her right to remain in a meaningful relationship with the people she has known is greater than the zoo's property rights. This is the whole history of jurisprudence over the past 75 years - that the property rights must give way to individual rights. In this case you have an ape that has ascended' (cited in Harold T. P. Hayes, 'The Pursuit of Reason', The New York Times Magazine, 12 June, 1977:22).

Thus Meth's pleading, which had done so much to win Koko a type of freedom,

highlights what could be a serious ethical problem. Growing up with our ways, and with human language, means that the apes no longer belong with their own kind.

Jane Goodall was forcibly struck by the problem when she first met the chimpanzee Lucy. She describes how much the encounter disturbed her:

' ... Lucy, having grown up as a human child, was like a changeling, her essential chimpanzeeness overlaid by the various human behaviours she had acquired over the years. No longer purely chimp, yet eons away from humanity, she was man-made, some other kind of being. I watched, amazed ... She selected a glossy magazine from the table ... Occasionally, as she leafed through the magazine, she identified something she saw, using the signs of ASL ... Jane Termerlin (who was Lucy's 'mother'), translated: 'That dog', Lucy commented, pausing at a photo of a small white poodle. She turned the page. 'Blue' she declared, pointing then signing as she gazed at a picture of a lady .. wearing a brilliant blue dress. And finally, after some vague hand movements - perhaps signed mutterings - 'This Lucy's, this mine', as she closed the magazine and laid it on her lap' (Goodall, 1990:10-11).

So Lucy was able to use her language to comment on the things around her, much as we might do when, passing someone in the street, we mutter 'Nice day', without necessarily expecting an answer. Lucy, like us, did not use language merely to make demands.

When apes have become 'humanised', even to the extent of learning to use our language, they have very special needs, not just physical, but cultural and psychological. We have changed them, and with that goes a moral responsibility towards them. Until this century, it would have been culturally inconceivable to suggest extending the moral community to include animals (Rollin, 1993:206), but things are changing. Society has begun to focus its attention on the plight of disadvantaged groups, not just the deaf, but people with other handicaps, those in the Third World, and so on. There is a strong argument that animals should be brought within this emerging ethic, and it does seem that this idea is gaining support.

The work of Jane Goodall, the Natural World films of David Attenborough, and reports of the ape language projects are meeting with an enthusiastic response from people who until recently would not have been expected to show this degree of interest. Leaving aside the objections of some scientists who still insist that no animal can really have language, Rollin suggests that 'the sort of communication that does go

on certainly counts as language in the minds of ordinary people' (1993:214, my emphasis). These people are intuitively on the side of the apes. Sadly, intuition is not enough. When these apes needed protection, it was not always forthcoming.

Eugene Linden has documented how, by the late 1980's, when some of the experiments were being terminated, some of the apes, having been treated as 'honorary humans', were turned over to zoos or even laboratories (Linden, 1986, cited in Rollin, 1993:217). They had no Theodore Meth to plead their case, and Goodall's worst fears were realised. Having learned a version of human language, they were now discarded into a life as inappropriate for them as it was unacceptable. The Cartesian view of animals as mere 'machines' has never completely gone away.

Meth had been right – human language, the pride of our species, had been a 'pernicious gift' to the apes. Koko had been helped to 'ascend' and thus acquire rights as befitted one so much closer to Homo Sapiens. But some of the others had been granted language at too high a cost. The fact that language and culture cannot be separated had been ignored.

Allowing other animals to have language is not just a matter of loosening definitions. It is the recognition that, although each species is unique, there are important things that they have in common with us. If some aspects of our language can be shared with them, and if we take the trouble to learn what we can of theirs, we can consider their similarities to us, as well as their differences. We will be in a better position to make informed, rational decisions as to what their moral status should be.

PART 1: AN OVERVIEW

The underlying theme of these three debates has been a concern with preserving man's superior position in the natural world. It had long been feared that if this position were once weakened, humans would face a very bleak future. Indeed, this could be the case when primitive groups of people lived in isolated and harsh conditions, but the situation in the modern industrial world is very different. We have a wide range of resources to meet our needs, and animals are commonly used primarily for economic ends.

Keith Thomas has pointed out that it is only in recent years that Western societies have questioned the idea that the world exists for man alone, and why this idea has taken so long to come tells us much about human psychology. Even when thinking about other people, it has frequently been convenient to assume that some groups are

less entitled to ethical consideration than are others, and such discrimination has been particularly detrimental to animals.

If animals had instinct rather than rationality, it followed that they had no freedom of action, and must be outside the sphere of moral concern. This was a way of thinking that became habitual. Charles Darwin wrote that 'men are called creatures of reason when more appropriately they should be creatures of habit' (cited in Phillips, 1999: 130). It was only with the emergence of ethology as an academic discipline that the mould began to be broken. Ethology gave scientific respectability to what pet-owners had long known, that many animals possess some cognitive capacities, though often in simpler form. They are not governed solely by instinct, and can make decisions and communicate quite well with those who wish to do so. Further, their relationships are not just passive, one-sided affairs. Interactions may be mutually structured and social. However, with so little empirical evidence, many people have remained sceptical about such claims.

Thus, Part 2 of this thesis investigates whether relationships between people and their pets can be defined as truly social. Video recordings focus on whether their system of communication is mutually structured, and whether each is able to interpret the other's responses in a meaningful way.

PART 2

HUMAN-ANIMAL INTERACTIONS

Two video studies:

1. An Exploratory Investigation into Social Interactions between Two People and their Dogs.
2. Attribution of Cognitive and Affective States to dogs: Pet owners versus Non-pet owners.

CHAPTER 5:

AN EXPLORATORY INVESTIGATION INTO SOCIAL INTERACTIONS BETWEEN TWO PEOPLE AND THEIR DOGS

INTRODUCTION

People are social beings and all life is essentially social in character. It has been argued that caring for other living things is part of our biological makeup (Katcher and Beck, 1988; Cain, 1983). Edward O. Wilson's 'Biophilia hypothesis' goes further, suggesting that opportunities for interacting with other species are essential for our psychological and intellectual growth. Thus, the concept of biophilia embraces the sociobiological importance of human altruism and helping behaviour (1993:22, 457). If nurturing behaviour has conferred evolutionary advantages on us, then caring for other living things, whether plants, dogs or babies, might well represent an important human need. But caring for plants is very different from caring for dogs and babies. It can hardly be described as a social activity. Successful social relationships require a set of skills, including shared knowledge of the other, a means of communication, and reciprocity.

Interactions between people and their pets have long been perceived as one-sided affairs, with the person taking the initiative in stimulating the animal and keeping the exchange going. Animals have been seen as passive, if compliant, partners. However, until the 1970's the same assumption was made about mothers and their infants (Reddy et al, 1997:247). The scepticism directed against the social competence of babies was not allayed until researchers such as Stern (1985) and Trevarthen (1993) used micro-analysis techniques to examine the fine timing and co-ordination of these interactions. Reddy has reported that a rhythmic system of turntaking is set up, with the infant stimulating the adult to join in a pattern of address and reply. There is evidence of conversational-like exchanges, with repeated callings by the adult, 'often complementing what the infant has done with enhanced mimicry' (Reddy et al, 1997:250). The mutuality of such early communication may now be taken as read (ibid:267). If mutual structuring of interactions should prove also to be the case when people interact with companion animals such as dogs, then developmental research may provide us with an interesting and relevant parallel.

As in the case with pre-lingual children, both verbal and non-verbal exchanges are used for communicating with animals. Words do not need to convey precise meanings. Vocalization is of obvious importance, verbalisation less so. What

matters is that the stimulation within the interaction be kept going, a shared skill by which each contributes something important to the 'conversation'.

The present study investigates the nature of interactions between two people and their dogs. To do this, video recordings were obtained under conditions which were minimally disruptive. Because the purpose was to examine the structure of good, high-quality relationships, it seemed most fruitful to select as participants dyads where these were already well established, and to record in everyday, familiar surroundings. The sequences were then analysed to identify some of the more conspicuous qualities which might define their interactions as distinctively social, and by doing so to contribute to a neglected field of enquiry.

METHODS

I set out to identify people who not only enjoyed the company of their pets but appeared to be sensitive to their needs. I began by talking informally to dog-owners in my own town of Lymington, who were either walking their dogs in the park or out shopping with them. The latter seemed likely to be a particularly fruitful source. Their dogs had been brought along at some inconvenience when it might have been easier to leave them at home. It was enlightening to see what happened when they entered the shops, many of which did not allow dogs inside. One lady had only had her adult 'rescued' dog a week or two and asked if in the circumstances I would mind her for a very short time while she called in at the library. She returned promptly and we talked about the reasons for adopting a homeless animal, rather than getting one from a pet-shop or breeder. Her views were particularly interesting, and later she became a most helpful and valuable participant in the study.

Participants

I approached 18 people who were out with their dogs and asked if they would be willing to take part in a study concerning the way people communicated with their dogs, and that this would involve video recordings. Eight of them (45%) agreed to take part, and to allow me to film interactions in their homes. Although all of these were co-operative and willing, early in the filming it became clear that not all would be suitable for the purposes of the study. Some, for instance, wished to demonstrate various types of 'good' behaviour and 'tricks' they had been able to teach their dogs, whereas I was seeking 'unstaged' sequences in everyday situations. My priority was to capture examples of high quality social interactions. Two ladies,

however, were particularly suitable, not only because they clearly had very close relationships with their dogs but because they interacted with them quite naturally and comfortably in their homes. Both ladies were articulate and sympathetic to my study. Both had retired from employment within the past three years and lived alone with their middle-aged dogs.

1. Before she retired, Valerie, who was in her mid-sixties, had worked as a tutor radiographer. As her mother lived with her until she had died three years previously, she was able to have the dog as a puppy, even while working full-time. Her dog, Tessa, is a neutered King Charles spaniel, as was her previous dog. Now nine years old, Tessa has since puppyhood been used to being left alone for an hour or two in the house or car. She is a very friendly and outgoing dog, and is Valerie's constant companion. She is encouraged to be sociable with other people and with other dogs, but Valerie is anxious lest she could be stolen. Tessa sleeps in a basket at the side of Valerie's bed.

2. Betty (who had approached me outside the library) worked as an airline stewardess when younger. She is now in her sixties, and retired. Recently, wishing to find a small dog who needed a good home, she had approached The Dogs' Home, Battersea, and had been to see them twice, initially to take advice about a suitable dog for her, and a second time because the dog chosen was ill in the hospital there, so not yet ready to be re-homed. The small, black, terrier-type dog had been found, probably abandoned, in a London Street, and the vet estimated her age to be about four years. She had been neutered. Betty does not drive. She brought the dog back from London by two trains and a taxi and named her Mitzi. At first Mitzi was extremely nervous of people, but she is now lively and fast growing in confidence. When possible, Betty takes her to meet friends and neighbours and has started leaving her alone in the house for short periods of time. She says she now finds that Mitzi is not distressed by this, although she is always delighted to see her back again. At night, Mitzi sleeps at the side of Betty's bed.

Procedures

I explained to Valerie and Betty that I was interested in how dogs fitted in with their owners, and asked if I could come to their homes to video-record some of the interactions between them. Both were very willing to let me do so, and both owned video/television sets. Neither sought anonymity and were happy for me to use their real names.

The interactions were recorded on a camcorder, a manual Panasonic, X16 Digital Zoom Camcorder, Model NV-A7B. It is not only simple to use, but is ideal for confined conditions. Because this model is compact, it has the advantage of being relatively unobtrusive. In conjunction with this, I sometimes used a tripod to mount the camcorder (a Bilora, model PRO 930-S). I kept a notebook handy, to write down other items of interest as soon as possible after they were said, or had occurred.

At the first visit, I recorded a short sequence of approximately 2 minutes, to test for light, focus, and the reactions of dog and owner, and played these back on the video sets before leaving. Both Betty and Valerie suggested there were other, and probably more stimulating times and places for the recordings. There were periods of the day when it was usual for them to spend time on a one-to-one basis with their dogs. I arranged to return at these times, a few days later. Valerie, however, noted that Tessa was not acting naturally when I was there. Very aware of my presence, she several times came over to investigate either me or the camera. Because of this distraction, and although Valerie had never used a camcorder, she suggested that it might be better if she did some recording without me. I wrote down some camcorder procedures, and hints I had found useful, and left it and the tripod with her. We discussed which interactions Valerie could more usefully record when she was alone with Tessa, and a few days later we viewed the results together. Valerie explained some of the subtleties of the interactions which she felt could only be correctly interpreted in the light of her past experience with Tessa.

Betty preferred me to do the recordings. In fact, unlike Tessa, Mitzi seemed little affected by the camcorder or by my presence.

Besides allowing me to record in her house and garden, Betty suggested we went to the nearby park, where she and Mitzi played a game of 'football' most days. As it was a windy day, the microphone picked up some background noise, but this did not affect the interaction itself. On another occasion, I recorded shortly before Mitzi's dinner time - a time when Betty said they usually 'played around a bit together' and when Mitzi seemed to expect that she should devote time exclusively to her. As evidence for this, she offered to try to read a newspaper then, to see what Mitzi's reactions would be. That recording was one of the clearest instance of the dog attempting to take the initiative in an interaction. She did so almost as soon as Betty began reading. The recordings thus showed not only some of the daily interactions between them, but how the dog reacted when these normal patterns were interrupted.

The recordings remained flexible, and when we felt that we or the dogs had had enough, we stopped. As far as possible we adopted a light-hearted approach. There was no attempt to provide a 'test' in a controlled or rigorous way, as might be the case with animal behaviour studies carried out in laboratory conditions. It was an essential feature of the study that participants should interact in as natural a way as possible. Extracts of the recordings were selected according to how well they demonstrated everyday social interactions between the dogs and owners. All the recordings were completed within four weeks.

Extracts from various recorded interactions were later transferred to a conventional video tape and a clock was superimposed. This made it possible to identify and discuss features arising from individual frames, and to calculate and compare the lengths of specific interactions. For the analyses, I selected typical examples of mutually-structured interactions. Others could have been chosen equally well to demonstrate the same features of the interaction. The analyses are by pair.

RESULTS

FIRST PAIR - VALERIE AND TESSA

5 Episodes: (in clocked sequences on Video 1)

- (1) 11:43-14:30 (2) 21:10-27:40 (3) 27:50-34:04 (4) 34:16-38:45
(5) 38:53-45:08.

Interactions of special interest include the following episodes:

1. 11:43-14:30. Valerie is playing the piano, while Tessa clearly objects. Valerie says this is standard behaviour on Tessa's part, as she feels excluded. She is, however, rewarded for 'good' behaviour, with a dog biscuit. The 'conversation' between them centres on how long Tessa must wait for her reward. (This episode was recorded in my absence.)
2. 21:10-27:40. Tessa is lying on the chair when Valerie approaches. She invites Tessa to follow her into the kitchen, where she is given a biscuit. Valerie then settles to reading the newspaper, but Tessa has other ideas, and during a shared 'conversational exchange' makes her wishes clear. Despite mounting excitement on Tessa's part, she is finally disappointed.
3. 27:50-34:04. Valerie is sitting on the sofa near a small table, having her

3. 27:50–34:04. Valerie is sitting on the sofa near a small table, having her supper. Tessa clearly hopes for a tit-bit. Her persistence in the face of refusal is worthy of note, and she is not mollified by a pat. Throughout the sequence, there are good examples of body language and shared gaze.

4. 34:16–38:45. The second piano-playing episode again demonstrates the mutuality of communicational exchange, with each playing an active part. A comparison with episode 1 shows that, far from being random, the methods of communication are repeated in similar situations. The piano-playing is followed by a 'conversation' in which dog and owner express different points of view.

5. 38:53–45:08. There is clear evidence of shared enjoyment as Valerie rubs and scratches Tessa. Tessa wriggles and presses against her hand, which Valerie's empathic expression shows vividly how much she identifies with Tessa's enjoyment. This episode is of special interest in that it demonstrates well their mutual sensitivity to each other's wishes. While the dog would like to continue the interaction, she becomes aware that her owner wishes to be peaceful, and they finally settle down quietly together. (This episode was recorded in my absence.)

1. Mutual Gaze

Gaze and head movements are often co-ordinated, with gaze direction and head turning constituting important signals (11:48, 12:08, 12:26, 14:03.) Withdrawal of gaze frequently indicates an ambivalent or negative signal, a breaking off of the interaction. Conversely, the re-establishment of gaze is often the signal for the interaction to be re-started or continued (21:32). Mutual gaze may be accompanied by other forms of body language as well as by verbalisation or vocalisation (22:46).

1.1. From frame 11:48. Valerie plays the piano, and Tessa is at her side. Valerie says she does not like her playing the piano so is sometimes rewarded for good behaviour with a biscuit. Having played for a short while, Valerie turns her head towards Tessa. Mutual gaze is established (13:13). Tessa holds this gaze, but Valerie turns away to play. Tessa looks away twice, but quickly fixes her gaze back on Valerie's face (13:40–13:50). She inches nearer and wags her tail until mutual gaze is re-established (14:03).

1.2 Tessa is on the chair. Valerie takes the initiative by calling to her, then approaches, tickles her, and shakes her paw. Tessa responds by seeking mutual gaze, which is soon established (21:38).

1.3 Here, Tessa takes the initiative in seeking and establishing mutual gaze. Valerie quickly responds, by holding out her hand to Tessa (23:29).

1.4 Valerie is sitting on the chair. She is talking to Tessa as they hold mutual gaze over an unbroken period of 22 seconds (22:24–22:46), and then again for a further 17 seconds (23:05–23:22). When Tessa yet again seeks mutual gaze, Valerie responds by holding out her hand to her in a welcoming gesture (23:31).

1.5 After wandering away, Tessa initiates the interaction by raising her head to look into Valerie's face, at the same time wagging her tail. She keeps her head raised, focussing on Valerie's face, while Valerie talks to her (24:12–24:40).

1.6 As Valerie is eating, she reaches out to stroke Tessa, but on this occasion Tessa breaks gaze and withdraws (28:40–29:00). Valerie interprets this as indicating that it is food, not stroking, that Tessa wants, and gives her a tit-bit (29:27). She says 'You're a good pup, you are, you're a good pup' and mutual gaze is established (30:18).

2. Head gestures not co-ordinated with mutual gaze.

2.1 Valerie uses a series of head-nods or sideways movements to emphasise her question to Tessa, 'What do you want?' A sideways gesture of her head indicates the direction of the kitchen, inviting Tessa to follow her there (21:49). She continues by repeating 'What do you want?' (twice), accompanying each question with head-nodding.

2.2 Head-nodding is a central feature in Valerie's interactions with Tessa. There are many instances when she nods, or uses sideways movements of her head. From frame 22:29 Valerie nods her head 52 times in just over 2 minutes.

2.3 Head gestures may be accompanied by other body language. While Valerie wags her head, she leans well over towards Tessa, asking 'D'you want me to stop?' (35:29).

3. Repetition of words and/or gestures

In contrast to communication between adults, but as is the case with adults and small children, repetition is used frequently by both Tessa and Valerie.

3.1 Tessa repeats her sequential pattern of body language (tail wagging, jumping, gazing), which culminates in sharp barking, on both occasions when Valerie is playing the piano (12:35-12:44, and from 34:30). Valerie sustains these interactions by repeatedly turning her head to look at her.

3.2 Valerie repeats her open-hand gesture, accompanying the words 'No, there's no more' (25:00-25:02). She also repeats the words she uses 'I think you've had quite enough ... yes, I do ... quite enough' (25:15). Similarly, she repeats the question 'Are you hungry? Are you? Are you very hungry?' (25:54-26:01). She asks twice 'Who's my gorgeous girl? Who's my gorgeous girl?' (26:15, and three times, 'D'you object? Do you object? D'you object?' (35:19-35:24).

4. Expressions of endearment, or courtesy

Verbalisation:

4.1 Valerie freely uses words to express endearment. Several times she greets Tessa with 'Tess, hello my love.' Her tone of voice expresses great affection.

4.2 Words are used to express approval and appreciation: 'Who's my gorgeous girl?' (26:25).

Vocalisation:

4.3 Valerie puts her head on one side and makes a 'kissing noise'. She also uses clicking and 'tching' sounds, smiling and laughing (25:30).

4.4 After Tessa has made snuffling sounds, Valerie mimics them in an amused and friendly way (24:28-24:30). This is not serious teasing. Her tone of voice and facial expression are clearly affectionate and she laughs in an affectionate way.

4.5 There are occasions when Valerie clearly demonstrates her empathic response to Tessa's feelings. During these she makes use of empathic words, sounds and facial expressions (39:18-39:32).

Courtesies reflecting Tessa's status within the home:

4.6 When Valerie plays a wrong note on the piano, she spontaneously exclaims 'Damn' (35:09) but immediately turns to Tessa and adds 'Beg your pardon' (35:11).

4.7 Although Tessa is nine years old, Valerie calls her a 'pup'. She says 'You're a

good pup ... you are ... you're a good pup' (30:13). This mirrors the way that in our society even mature women may be referred to as 'lovely girls' or 'girl friends'. This is considered more courteous than accentuating age.

5. Turn-taking as a pattern of responses. (Sequence with mounting excitement.)

Valerie sits down to play the piano (34:25) and Tessa comes alongside her. She jumps up, with her front paws on Valerie's lap, tail wagging and wriggling, giving an appearance of restlessness (34:30-4:44). She increases the speed of tail-wagging and, as Valerie plays, gives a short, snuffly bark (34:44). Valerie continues playing and Tessa gives a series of louder, sharper barks (34:48). She then prods Valerie's arm and jumps around on her hind legs, giving a series of soft whines. When she gets down, she continues jumping, tail-wagging and barking. In an extended sequence of 48 seconds, Tessa is taking the initiative in trying to establish communication. Valerie finally responds. She stops playing and turns to look at Tessa. They quickly establish mutual gaze (35:16). Valerie then gives a series of emphatic nods and sideways shakes of her head. She asks 'D'you object? Do you object to that?' This leads to increased excitement on Tessa's part and she barks excitedly while Valerie is speaking. Valerie gets up. She interprets this stage of the interaction as her having been manipulated into giving way to Tessa's persistence, because she says 'Oh, you scalliwag ...' Tessa sits down, seeking and then holding mutual gaze. Valerie shakes her paw and gives her a biscuit and a pat. She asks 'Now can I play? Can I play now?'

Tessa clears up the crumbs on the carpet and walks away into the kitchen. Valerie gives her a biscuit and pats her (38:07).

The interaction is over. At the height of Tessa's excitement, she barks while Valerie is speaking, but co-vocalisation would appear to be unusual and occurs only when there is a high level of excitement. Turn-taking in 'conversations' is the norm.

6. Sequence of interaction which is winding down

If infants can sustain a dynamic engagement interaction by turn-taking and negotiation (Reddy et al, 1997), can a dog such as Tessa do the same?

In frame 39:10, Valerie is sitting on the sofa with a mug of coffee and a book. Tessa moves closer and initiates the interaction by pawing at her leg and wagging

her tail. They then establish mutual gaze, and Valerie leans forward and pats Tessa, who raises her head and moves closer still. Valerie then rubs Tessa, making empathic noises along with an empathic expression. As she does so she says 'Ooh, that's lovely ... That's lovely. Ooh, fantastic' (39:28–39:33). She moves to the side of the sofa, making a sideways head-gesture of invitation to Tessa to jump up beside her. Tessa does not respond. Valerie opens her book and begins reading.

Tessa seems disconcerted. She walks to the other side of Valerie's leg, adjusting head position in order to re-establish mutual gaze (39:52). Tessa breaks their mutual gaze momentarily, but quickly turns to re-establish it. She wags her tail.

Valerie says 'Come on', again jerking her head sideways to invite Tessa to come up beside her. She makes a kissing sound and again says 'C'm on', repeating the same head gesture of invitation (40:23). She pats Tessa, who turns briefly away and then back again (40:36). It would appear that she wants further stroking and rubbing.

Valerie resumes rubbing her, again with an empathic facial expression and making empathic sounds (40:50). She seems aware of Tessa's strategy, because she laughs in an affectionate way, before picking up her book and again gesturing to Tessa to come up beside her.

Tessa appears mollified. She turns and jumps up beside Valerie (41:02). Valerie says 'There, now' in a conciliatory tone, adjusting her position to give Tessa extra space. Once again mutual gaze is established (41:11). Valerie smiles, looking at her and making kissing sounds (41:18), then speaks softly as she fondles her.

Tessa waves her tail gently (a slower and calmer movement than wagging), turns and lies down beside Valerie. Valerie glances briefly at her (41:40) before going back to her book, giving Tessa another quick glance and a quiet stroke (41:44). She is taking care not to over-stimulate her.

Tessa now looks away. There is no attempt to establish mutual gaze. Valerie reads, but continues gently fondling Tessa. She does not appear to be initiating further interaction, merely stroking Tessa in a reassuring way. When she stops, Tessa glances quickly at her, but, like Valerie, does not seek mutual gaze. As Valerie sips her coffee, Tessa again looks briefly at her, while Valerie strokes her gently (41:50–42:09).

Tessa licks her paw. Each is by now concentrating on different things. Valerie is

reading and sipping her coffee, while Tessa nuzzles into the sofa (4:38). Once again Valerie gives her a quick sideways glance and makes a quiet, 'kissing' sound, but this seems merely to be maintaining the status quo, rather than initiating further interaction. She puts down her cup, strokes Tessa lightly, and returns to her book. Mutual gaze is established so briefly and casually that it would seem neither is initiating further interaction. Valerie nods and whispers, before looking away again (43:20). Tessa then also looks away (43:22), as she snuggles down beside Valerie.

Finally, Tessa shifts her position slightly and Valerie gives her a gentle pat, before walking away. There is no response from Tessa and it would seem that she is asleep (45:07-45:15).

From frame 41:48 onwards, the interaction has been winding down, with neither partner actively responding to the other. Together, by the to-and-fro of dialogue, they have negotiated a compromise, and have demonstrated the sensitivity that can exist between human and dog.

7. Proxemics and tactile communication

Proxemics:

There is no evidence that either Valerie or Tessa wishes to draw a spacial barrier around herself. Bodily contact is mutually sought. Thus, as Valerie sits on the sofa, Tessa approaches her without any hesitation and paws at her leg (39:13). Almost immediately, Valerie leans over and pats her. Tessa raises her head and moves closer still. Valerie moves over to make room on the sofa for Tessa, who jumps up and snuggles tightly against her, before settling to sleep (45:07-45:15). Seeking bodily closeness is one measure of the intimate and trusting relationship which exists between them.

Tactile communication:

Valerie approaches Tessa and greets her by shaking her paw (21:32-21:35). Later, as Valerie sits at the piano, she jumps up and rests her front paws on her lap (34:20). She paws at Valerie's arm, and later at her leg (34:33-35:05, 39:14). Later in the sequence Valerie rubs/scratches/pats Tessa, while indentifying with her pleasurable response (39:17-39:32, 39:40).

8. Sequence demonstrating some of the above features of interaction (24:40-27:30).

Valerie nods and shakes her head while talking to Tessa. Tessa responds by shifting from one side of Valerie's legs to the other, adjusting her head in order to maintain mutual gaze. She wags her tail constantly, and gives two sharp barks, still maintaining her gaze. Valerie interprets Tessa's actions. She says 'I know what you're saying - I know.' She leans forward, extending her arms and opening her hands so that the palms are flattened and facing Tessa. She repeats this negative arm/hand gesture twice more in quick succession, saying 'I think you've had quite enough - I do - I think you've had quite enough.' At first, Tessa stands very still, with alert stance. Then she turns her head and withdraws her gaze.

Valerie looks away, but then back again, and they re-establish gaze. She nods emphatically, and repeats 'Quite enough', again emphasising her words with the same arm and empty-hand gesture, before adding 'Honestly I do.' Tessa stands very still, apart from a slight waving of her tail. Although holding gaze, she does not respond when Valerie laughs and makes 'tching' noises. Valerie picks up the newspaper, and Tessa looks first away then quickly back again. She starts to wriggle and, as Valerie looks at her, wags her tail (hopefully?) again. Valerie would seem to waiver. She asks 'Are you very hungry? Are you? Are you very hungry?' Laying down her paper, she re-establishes gaze with Tessa, then puts her hand under her chin, in a gesture of thinking or considering what to do next. Tessa gazes intently at her face. Valerie nods four times and at the third laughs gently. Tessa wriggles around, still holding gaze. She has held this gaze for 11 seconds, with only a momentary break while scratching. As Valerie continues making head gestures, Tessa increases the speed of her tail-wagging. Valerie slides forward and tickles her, twice asking 'Who's my gorgeous girl?' as she pats and fondles Tessa.

Tessa looks away, towards the kitchen, where the biscuits are kept, and raises her head, seemingly as an invitation to Valerie to follow. But Valerie walks off in the opposite direction.

Tessa stands stock still for 15 seconds. She looks at Valerie's retreating figure, glances away from her and then back again, before jumping up on the chair which Valerie has recently vacated. (Valerie says she is not allowed on that chair.) Tessa then fixes Valerie with a stare which in humans would be interpreted as a baleful/disappointed/disgusted one. What is more, she holds the stare for a full 20 seconds (27:07-27:27). Such a gesture on the part of a human child would almost certainly be interpreted as one of disapproval or indignation.

SECOND PAIR: BETTY AND MITZI

5 Episodes: (in clocked sequences on Video 1)

- (1) 00:09–03:12; and 03:25–05:48 (2) 06:04–08:39
 (3) 08:43–09:49 (4) 10:50–13:25 (5) 13:40–16:56

Interactions of special interest include the following:

1. 00:09–03:12, and 03:25–05:48. Sequences of 'prime time', in which Betty and Mitzi play together, 'talk' to one another, seek bodily contact, and engage in various forms of playful interaction.
2. 06:04–08:39. Betty and Mitzi are in the park, playing an energetic game of 'football'. This sequence provides a nice example of turn-taking in action.
3. 08:43–09:49. Betty and Mitzi are back home after their game. Mitzi lies on the floor by the sofa, while Betty at first encourages further activity. However, Mitzi now seems tired. Betty's sensitivity to Mitzi's tiredness is expressed by means of a gentler tone of voice and peaceful, quiet stroking.
4. 10:50–13:25. Betty is sitting on her garden seat, trying to read her newspaper. It is nearly Mitzi's supper time, and she has other ideas, 'asking' for her supper in a variety of different ways.
5. 13:40–16:56. Betty is in her living room, reading a magazine. Again, Mitzi encourages her to stop, as she is hoping for some biscuits. Betty well understands, but playfully teases her. Mitzi demonstrates a variety of ways of communicating her wishes to Betty.

1. Mutual Gaze

Mutual gaze is a rather less prominent feature in communication than it is with Valerie and Tessa. Betty and Mitzi sometimes prefer other ways of initiating or maintaining their interactions. Nevertheless, gaze is still a powerful signal and from time to time is used to initiate or re-start an exchange.

1.1 Mitzi sits very straight and alert, looking up at Betty's face. It is the time of day when she and Betty often have a game together, and Betty has not yet indicated

that she is ready to play. As Mitzi looks up at her, Betty leans over and returns her gaze. Each is now acting as a stimulus to the other (01:57–01:59).

1.2 A lively terrier, Mitzi appears to favour active and energetic games. Betty takes hold of one end of a rag toy and Mitzi holds the other end in her mouth. They pull at the rag alternately, with sustained, jerky movements. As they tug, each gazes at the face of the other (03:33). Gaze and eye contact between humans serve to indicate warmth, interest and involvement in the interaction (Duck, 1991) and it seems likely that this is the same with people and their dogs. There is little evidence of real aggression, despite the rough-and-tumble nature of the game. Mutual gaze may well enable each player to monitor the effect that such mock-aggression is having, and neither inflicts any harm.

1.3 As Betty leans over Mitzi, stroking and tickling her, Mitzi looks up and gazes into her face. At the same time, Betty looks down into hers (09:10–09:15, 09:23, 09:50). There is a clear sense of communication being monitored, and a two-way process.

2. Head gestures not co-ordinated with mutual gaze

Because mutual gaze is a less central feature of communication than with Valerie and Tessa, purposive head gestures play a less prominent role. However, Betty moves her head constantly, as she watches Mitzi or anticipates her actions.

2.1 Betty leans backwards, encouraging Mitzi to draw closer (01:30) or bends her head forwards in a protective gesture, while petting Mitzi (01:40).

2.2 Betty leans towards Mitzi, watching and caressing her (11:55–12:00).

3. Repetition or words and/or gestures

Betty uses long runs of word or phrase repetitions:

3.1 'Mizzi, Mizzi, Mizzi, Mizz. Are you a good girl? Are you a good girl? Are you? (00:56–01:00).

3.2 'Oh, you're such a good girl ... such a good girl ... (01:25–01:30).

3.3 During one of the game sequences, Betty repeats playfully 'Oh, you rascal.

Oh, you rascal. Oh, hoo .. hoo .. hoo ..' (3:33-3:38). The words may be varied slightly, with the same meaning kept 'Aren't you a lovely girl, eh? Aren't you a beautiful girl?'

3.4 Hand-clapping is central to Betty's interactions with Mitzi. Single, or a series of, claps are used in much the same way as Valerie uses head-nodding. During one sequence of 3 mins. 4 secs, Betty claps her hands 41 times on 26 separate occasions (00:51-03:55).

3.5 Mitzi engages in sequences of body gestures, such as tail-wagging and paw circling (03:24-03:40, 11:26-11:36, 11:40-11:59 and 12:58-13:17). Sitting on her haunches, she reaches up with her front legs, circling each paw alternately. Betty says that one day she began to do this quite spontaneously, and is so proficient at it that she suspects she may have found it an excellent way of attracting attention before she came to live with her (Mitzi is a 'rescued' dog). It seems likely that she would have been rewarded for it in some way – the windmilling of the white 'socks' on her front paws makes the sequence a most engaging one.

4. Expressions of endearment, or courtesy

Verbalisation

4.1 Like Valerie, Betty frequently uses words of endearment, praise and affection. These also reflect Mitzi's status as a family member. She asks rhetorical questions which not only confer praise but testify to their close relationship, 'Are you a good girl? Are you? Are you your Mummy's poppet?' (00:56-01:00, 01:04).

4.2 Another time Betty says 'Oh, you're such a good girl. Such a good girl' (01:25-01:30), and 'Bring it to your Mummy, bring it to your Mum' (02:32-02:37)

Vocalisation

4.3 Betty laughs a lot as she interacts with Mitzi. She also makes sounds which are empathic of Mitzi's excitement, 'Oh, hoo, hoo, hoo ...' (03:05).

Courtesies reflecting Mitzi's status within the home:

4.4 Like Valerie, Betty seeks permission from her dog. During their game, she asks 'Can I play with it? Can I play with it?' (03:23), and a little later asks 'Do you want to play some more games?'

4.5 When Mitzi lets Betty take the ball from her, Betty says 'That's nice .. Thank you' (05:33). No child could be given a more courteous lesson in good manners.

4.6 Even words normally considered pejorative are spoken in such a playful and affectionate tone of voice that they are in no way discourteous. When Betty says 'Oh, you rascal...' it is clear that no criticism is intended. This is reminiscent of the way people address young children in play.

4.7 Betty uses a number of nick-names for Mitzi, especially when they play together. She encourages Mitzi with 'Mizzles ... come on ... Mizzles' (02:45) and another time 'Oh Mizz' (13:00)... Is it Mizzi's bickie time?' Again, this mirrors the language used to babies and young children (Hirsh-Pasek and Treiman, 1982; Rogers, Hart and Boltz, 1993).

5.1 Turn-taking as a pattern of responses

From time to time, Betty and Mitzi engage in a form of ritualised communication, such as when playing their version of 'football' in the park. The following sequence demonstrates turn-taking in action:

Mitzi has the ball. As she sees Betty approaching, she leaves it and moves backwards (06:03). Betty then kicks it to her (06:07) and leans forward, with her hands on her thighs, as Mitzi plays with it. She then claps her hands and opens her arms wide, and Mitzi passes the ball back to her (06:13-06:18). Betty kicks it away again, calling 'Come on, come on' as Mitzi chases after it (06:25). Mitzi then rolls the ball towards Betty, pushing it along the ground with her nose and chest, before standing back so that Betty is again free to kick the ball (06:35). Betty kicks it back to her, encouraging her to return it by clapping her hands, and again calling 'Come on ...'. Mitzi leaves the ball free for her, and Betty again returns it (06:54). Mitzi then 'dribbles' the ball along the ground, before jumping back, leaving it free again for Betty to return it (06:57). This time, Mitzi plays with the ball herself, and seems reluctant to return it. Betty claps and calls 'Hey! Come on'. She runs up to the ball and Mitzi backs away again (07:20).

There is a vivid sense in which the game works so well because its rules, structured by turn-taking, are mutually understood. There may be more than one signal to the other player. Betty calls to Mitzi at the same time as she gestures, while Mitzi barks as she wags her tail and dribbles the ball back. Before she quite reaches Betty, she stands back, allowing Betty to take her turn. The game is a nice

example of turn-taking in action.

5.2 Negotiation in an interaction which is winding down

(Betty and Mitzi have just returned from 'football' in the park, and Betty thinks they might continue playing a little longer at home. But Mitzi is tired and does not wish to do so. She lies on the floor, leaning against the sofa, while Betty kneels beside her.)

Betty fondles Mitzi's head and says 'You're a lovely girl, aren't you? Aren't you a beautiful girl? (08:42). Mitzi lies even more flatly against the floor. She does not encourage further stimulation, and does not seek mutual gaze. She raises her front leg, exposing her underneath, a symbolic gesture in dogs of trust and compliance. Betty smiles, says 'Come on' and makes kissing noises. She claps her hands and again says 'Come on'. Mitzi turns over a little, but continues lying flat and looking at the floor, still avoiding mutual gaze. She shows no interest in the ball lying beside her. Betty claps once more and says 'Come to your Mum' (08:56) but Mitzi makes no effort to move, nor to look up at her face. Betty smiles, and far from remonstrating, gazes down at Mitzi and fondles her head gently, saying 'You're a good girl, aren't you?' She pillows Mitzi's head in her left hand, while stroking it gently with her right (09:00), before changing to stroking her tummy instead. She repeats 'Such a good girl, aren't you? Such a good girl.' From frame 09:12, she has been murmuring softly rather than speaking aloud, and her gestures are unhurried. She continues tickling Mitzi, saying 'Oh, oh, isn't that lovely? Oh Miz.' She is still; smiling and looking down at Mitzi, who rolls over further against the sofa, making no attempt to seek mutual gaze (09:32-09:35). Betty encourages her once more, saying 'Come on' and clapping her hands, but again Mitzi makes little response. She rolls over but keeps looking downwards. Even when the ball is rolled under her chin, she ignores it.

Up to frame 09:46, there are two contrasting modes of interaction. Betty is encouraging Mitzi to play, while Mitzi prefers to rest. From frame 09:46, Betty changes to falling in with what Mitzi wants. She does nothing more to stimulate her, continuing to interact with her, but in a gentle and calm way.

It is clear from this episode that Betty's interaction with Mitzi has not proceeded in a preconceived and automatic way. Appreciating that Mitzi's mood is one of tiredness, Betty has adopted a passive approach. She gives way easily, with sensitivity and affection.

6. Proxemics and tactile communication

Proxemics:

As with Valerie and Tessa, there is little evidence that dog or owner wishes to maintain an area of personal space. Although space is maintained during the 'football', this is because it is an integral part of the game. In quieter moments, close bodily contact is mutually welcomed and becomes a central feature of the interactions. Proximity is almost immediately followed by bodily contact of some kind. Thus, when Betty kneels a few feet from Mitzi, Mitzi rushes to snuggle up to her (01:56-01:59). Bodily nearness and tactile communication go hand in hand.

Implicit in a desire for bodily nearness is mutual trust. When Betty gives a biscuit to Mitzi, she does not move away with it, but eats it beside Betty's lap. Even before she has finished, Betty is stroking and fondling her (00:35-00:55).

Tactile communication:

Tactile communication is mutually welcomed and sought. Thus, when Betty kneels and leans backwards, Mitzi immediately accepts this as an invitation to rush up against her chest (01:56-01:59). As Betty fondles Mitzi, she leans over until their faces are almost touching. Mitzi responds by placing her front paws on Betty's shoulders (00:08-00:15). When Mitzi snuggles up to Betty, Betty cuddles her (01:18-01:26).

It is also worth noting that, not only in the games sequences but in most of the others, both dyads demonstrate a clear element of playfulness. There is much smiling and laughter on the part of the ladies, much tail-wagging and nuzzling on the part of the dogs. One cannot but be struck by their shared exuberance and playfulness. Indeed, it is reasonable to suggest that these play an important part in making close relationships with pets so rewarding, and which in particular circumstances has been shown to enhance human wellbeing (For an overview of such benefits, see Serpell, 1996:89-107).

CONCLUSIONS

These two video studies demonstrate the close and affectionate relationships that can exist between dogs and their owners, and also the effectiveness of their communicational skills. There is evidence that many of the 'conversational exchanges' are

mutually structured affairs.

It has now been established that interactions between infants and their carers are also mutually-structured. Infants and adults alternately focus on the face of each other, regulating both attention and affect. Far from being passive partners, infants stimulate their carers to join in a pattern of address and reply (Reddy et al, 1997:250).

The sequences reported here show this also to be the case with dogs and their carers. The interactions are mutually structured, with gaze being used to initiate, maintain and terminate interactions. As in the case of infants and adults, there is a pattern of turntaking, repetition and enhanced mimicry as reported by Reddy.

Both Valerie and Betty include the dog's name, or nickname, far more frequently than they would do if talking to another person, and use shorter, repeated, sentences. This is in accord with the findings both of Hirsh-Pasek and Treiman, 1982, and of Rogers et al, 1993. Clearly, the fewer word types used, the more repetitive utterances are likely to be. The study by Mitchell and Edmonson (1999) found that most commands to control a dog are friendly, rather than 'commanding', and are frequently used to support, rather than change, the dog's actions. They may, for instance, be used to encourage the dog to continue playing, and to create a sense of involvement. This was clearly the case during Betty's game of 'football' in the park.

The advantage of a video study is that it records not just the event, but the way it happens. Standard measures of behaviour which record fixed states, without describing the dynamic transitions, refer to state rather than style. Françoise Wemelsfelder, 1999, has stressed the importance of noting an animal's demeanor when actions are performed, in order to achieve a real understanding of its behaviour. This calls for a qualitative, rather than quantitative, approach and, despite less inter-observer validity, may be a useful way forward.

Only in the last thirty years has it been accepted that even very young infants can actively engage in communication (Reddy et al, 1997:247). However, today it is accepted that the mutuality of such mother-infant exchanges 'may now be taken as read' (ibid: 267). Daily interactions between infants and those close to them merge into social relationships.

The same scepticism has been directed at animals. Scientific opinion has held that

we should be highly cautious of attributing human qualities to animals, and the cognitive capacities of 'dumb animals' have not been taken seriously (Chapters 1-3). Human-animal relationships have been seen as essentially one-sided and man-made.

Video recordings in this study provide evidence that this is not always the case. The dogs initiate, regulate and maintain communication with their carers, much as human infants are now known to do. Also, like babies, they can interpret the responses of the other. If we accept that human infants are thus able to form social relationships, we must allow that, in quite similar circumstances, dogs are able to do the same.

Valerie and Betty had no hesitation in attributing to their dogs intentional actions and human-like emotions. However, in interpreting these sequences, no measures of inter-observer reliability were obtained. The next study therefore examines the extent to which observers use the language of intentions and emotions in describing the actions of dogs which are not known to them, and whether having lived, or not lived, with pets influences their perceptions and understanding of them.

CHAPTER 6: ATTRIBUTION OF COGNITIVE AND AFFECTIVE STATES
TO DOGS: PET OWNERS VERSUS NON-PET OWNERS

INTRODUCTION

This study is concerned with the interpretation of the behaviour of dogs in mentalistic or psychological terms, and whether previous experience of living with dogs or cats as pets influences the extent to which this anthropomorphic way of understanding dogs' behaviour is used.

The ascription of human characteristics to animal species has long been a contentious issue (Chapter 3). Even when studying our closest biological relatives, the chimpanzees, Jane Goodall found that her research was criticised on grounds of anthropomorphism. She had not realised that it was considered unscientific to discuss the chimps' behaviour in terms of motivation or purpose and was taken by surprise when scientists were suspicious of her accounts (1986:118). In a similar way, pet-owners who describe their animals' behaviour in terms of intentions, emotions and cognitions, may be perceived as unscientific and sentimental (Serpell, 1995). It would seem that reports based on general experience and detailed observation count for less than those that are carried out in the artificial but controlled conditions of a laboratory.

Yet many people who have spent years working closely with animals do in fact take an anthropomorphic and commonsense approach to understanding them, because they find it works well. Mary Midgley has pointed out that although elephants do not behave just as we do, the mahouts had to be able to interpret their basic feelings, judging whether the animals were pleased or angry, frightened or suspicious, cross or tired. Had they not been able to do so, 'they would not only have been out of business, they would simply be dead' (1992:214).

The two participants in the previous study had no hesitation in interpreting their dogs' behaviour in mentalistic and psychological ways. They attributed to them cognitive skills and emotional states based on analogies with their own, and without which their interactions and systems of communication would not have been possible. This raises the question of whether they would attribute these characteristics not only to their own dogs, but to others too. Further, are those who have not had the experience of living with a family pet less likely to interpret animal behaviour mentalistically?

This study investigates whether a history of pet ownership is a significant factor in shaping the ways in which people interpret the behaviour of animals other than their own pets.

As in the previous investigation, dogs were used as the target species because they are one of the commonest of companion animals and are often perceived as 'members of the family' (Cain, 1983; Katcher, 1983).

METHODS

Participants:

At the end of a meeting of first-year University of Southampton psychology students, volunteers were invited to take part in this study. They were told this would involve watching and describing five short videotaped interactions between dogs and their owners, and writing brief accounts of them. The whole project would be completed in about half an hour and the reports would be anonymous.

Video Clips:

Prior to the investigation, five videod sequences had been selected from recordings made for the Chapter 5 study. Thus, they had not been 'staged' in any way, but had occurred naturally in the course of day-to-day events. Neither dogs nor owners were named. The clips ranged in length from 15 to 49 seconds, and had been chosen because there were opportunities for describing the dogs' behaviour in psychological terms.

The five clips were as follows:

Episode 1: Supper in the living room. (Duration of clip 17 seconds). This showed a spaniel sitting at the feet of its owner while she was eating. She reached out to stroke the dog, but the dog moved away to avoid the stroke. The sequence was selected because it seemed to lend itself to description of what the dog wanted; an obvious interpretation being that the dog wanted feeding, not stroking.

Episode 2: The game of 'football'. (Duration of clip 30 seconds). The sequence showed the owner and her small terrier playing 'football' out of doors. Each time the ball was kicked, the dog retrieved it and appeared to leave it at the owner's feet for her to kick again. This sequence lent itself to description of what the dog understood about turn taking and the rules of the game.

Episode 3: Resting after lunch. (Duration of clip 20 seconds). This recorded a daily after-lunch routine. The owner would watch the television News, before taking his

Border Collie for its afternoon walk. The clip lent itself to description of the ways in which the dog tried to communicate its desires to its owner.

Episode 4: Response to owner's questions. (Duration of clip 15 seconds). The owner is talking to her dog indoors. At one point she asked excitedly 'Where's the squirrels?', whereupon the dog rushed to the window and looked out. The central issue here is the extent of the dog's understanding of what was being said.

Episode 5: Interaction sequence. (Duration of clip 49 seconds). The fifth and final episode showed the owner fussing over her dog but then walking away rather abruptly. The dog looked after her for a while, apparently disconsolate, and then jumped up on the chair that she had been sitting in. The interest here centred on how the dog's behaviour would be interpreted in relation to the events that preceded it.

PROCEDURE

Students ($n = 33$) watched the video sequences in groups of six to eight, sitting before a conventional television monitor. Each was given a clipboard and pen and a printed sheet of paper, with spaces on which to describe each of the five videotaped episodes. At the top of the sheets was typed 'please write a brief account (2 minutes allowed) saying what you think was going on, focusing particularly on the dog.' It was explained that each video clip would be shown twice, with a few seconds in between, and after the second showing of each there would be an interval of two minutes for writing the report. The two-minute timing was in fact extended slightly on occasions when some participants had clearly not finished writing.

At the end of the reporting, participants completed a short questionnaire, giving their gender and age and indicating whether they had lived with a cat, dog, or both, for a period of at least two years. The stipulated period of two years was to exclude those who may have had a dog or cat for a very short time, such as when looking after neighbours' animals while they were on holiday.

On the information given in these questionnaires, the reports were divided into two sets, those written by pet owners who met the criteria above, and those by non-pet owners who had not had this experience.

Out of the initial 33 reports there were 20 pet owners but only 13 non-pet owners, so to get an even split, the same group of students was again approached, and a further 7 non-pet owners volunteered to take part.

Originally it had been intended to use more differentiated categories (different types of pets, different durations, etc.) but the restrictions on sample size and the likelihood of resulting complexities contraindicated this.

RESULTS

The modal age of the students was 18 years, and as was the case in the class as a whole, some 80% were female. The written descriptions were for the most part fairly brief, with a word-count showing the mean length of each to be 36 words. A t-test showed that there was no significant difference in the length of descriptions produced by pet owners and non-pet owners.

Non-pet owners gave more factual accounts, and their greater use of qualifying words such as 'perhaps', 'I think that', 'I suspect', or 'as if' suggested that they were more hesitant in giving firm descriptions of the dogs' behaviour. Pet owners used fewer qualifying phrases and were generally more confident in reporting what was going on. They were also more prepared to attribute emotional states and cognitive abilities to the dogs. (Representative examples of accounts given by pet owners and non-pet owners are given in Table 1.)

Table 1: Representative examples of descriptions of video sequences by Pet Owners and Non-pet owners

PET OWNERS

Episode 1

The dog is eager to receive food from owner, almost begging, wagging its tail with much hope. When the owner reached to stroke it, it dodged her hand as it was food, not stroking, it wanted.

Episode 2

Dog playing football. When the ball is kicked he follows it and when he catches it he keeps it till the lady gets closer, or takes it back to her. The dog is having fun, encouraging the lady to keep on playing.

Episode 3

Dog is indulging in a bit of tummy-rubbing from its owner. When owner stops stroking, the dog demands more by pawing at him in an inquisitive manner to say 'More please.'

Episode 4

Owner is being provocative in mentioning particular words recognised, like 'cat' and 'squirrel' to her dog. Dog is stimulated and at first wonders where cats and squirrels are, then gets excited and paces round the room, finally looking for them out of the window.

Episode 5

The owner stroked the dog and the dog felt he'd get something nice so wagged his tail and leant hopefully towards the door. But its owner walked off in the other direction. Dog was disappointed and upset, and jumped on to her armchair for comfort.

NON-PET OWNERS

Episode 1

The dog was looking at the owner eating to see if it would get any food. Flinched when owner went to stroke it – perhaps thought it was going to be hit for being a nuisance.

Episode 2

In the park on a very windy day, a woman and her dog were enjoying a game of football. When she kicked the large, inflatable ball, the dog picked it up in its mouth, but it was too large, so pushed it back to her.

Episode 3

The dog was trying to sleep and wanted to be left alone, so kept pushing the man's hand away with its paw.

Episode 4

I think the dog finally picked up the fact that he was being asked to find something, though I suspect he had no idea what. The owner conveyed the idea that he should 'search'. But what for? He had no idea.

Episode 5

The dog is enjoying the attention from its owner. Can't understand why it suddenly stops and owner walks off. Waits but nothing happens, so after a while gets up on the chair and stares at the camera.

(See Appendix A for full set of transcriptions.)

Three categories (**Desires**, **Feelings** and **Understanding**) were derived from the most commonly used attributions, and a fourth included descriptions which occurred less frequently. These were analysed for the occurrences of words or phrases indicating an attribution of any form of desire, feeling or understanding to the dog.

The **Desires** category covered descriptions of the dog such as 'wanting to ...', 'attempting to ...' looking longingly at ...', 'trying to get ...' and 'pleading for ...'. The **Feelings** category covered descriptions of the dog 'enjoying', 'being delighted', 'being happy,' etc., together with negative emotions such as being upset or bored or unhappy. The **Understanding** category included statements that the dog 'realises that ...', 'ponders', 'decides', 'anticipates that ...', 'is aware that ...', or 'understands that...'. Finally a category of **Other mentalistic attributions** picked up a variety of less frequent descriptions, for example of the dog showing interest, paying attention, wondering what will happen, being curious, confused or unsure. (Table 2)

Table 2: Components in each of 5 categories

<u>Desires</u>	<u>Feelings</u>	<u>Understanding</u>	<u>Others</u>
Wanting to	Enjoying	Realises	Wondering
Attempting to	Delighted	Recognises	Showing interest
Lookingly longingly at	Happy/Unhappy	Ponders	Lacking interest
Trying to get	Content	Thinks about	Curious about
Pleading/Begging for	Sorrowful	Decides that	Inquisitive
Asking for	Relaxed	Anticipates that	Concentrating on
Demanding/Prompting	Excited	Understands	Unsure about
Encouraging/Enticing	Bored	Is aware that	Preoccupied with
Seeking	Agitated	Picks up on	Pretending that
	Anxious	Relying on	
	Reluctant		
	Confused		
	Hopeful		
	Baffled		
	Frightened		
	Feeling rejected		

All descriptions were coded, producing in total 456 categorisable words or phrases. The descriptions were then coded independently by a second adjudicator. In all there were 40 disagreements (8.8%), spread evenly across the categories, and these were resolved by discussion.

Given the low frequencies of occurrence per category per episode, it was decided to analyse the results first by category and then by episode. The results were analysed by means of an analysis of variance (ANOVA), a technique used to compare the means

of three or more groups of scores.

Table 3 shows the means and standard deviations for each of the four categories for pet owners and non-pet owners, summed across the five episodes.

Table 3: Mean Frequencies of Mentalistic Attributions for Pet Owners and Non-Pet Owners

	Desires	Feelings	Understanding	Other
Pet Owners	4.2(1.6)	2.5(1.5)	2.9(1.4)	3.3(2.3)
Non-Pet Owners	3.5(1.6)	1.8(1.1)	1.3(0.9)	2.8(1.8)

Standard deviations in parenthesis

From Table 3 it is apparent that the frequency of use of mentalistic descriptions is greater among pet owners than non-pet owners across all categories. A multivariate analysis of variance with pet ownership as the grouping variable and category as a repeated measure showed a significant main effect for pet ownership ($F=11.04$, $df 1,38$, $p<0.002$), reflecting greater use of mentalistic descriptions by those with experience of a pet in the family. There was also a significant main effect of category ($F=11.8$, $df 3,114$, $p<0.001$) which simply reflected variation between the categories in the frequencies of occurrence (overall the Desires category produced the highest frequencies of occurrence).

Table 4 shows the frequencies of mentalistic descriptions broken down by episode. In episode 3 the mean frequencies for pet owners and non-pet owners were the same, while in the four others the pet owners produced more such descriptions.

Table 4: Mean Frequences of Mentalistic Attribution for Pet Owners and Non-Pet Owners

	Episode 1	Episode 2	Episode 3	Episode 4	Episode 5
Pet Owners	2.4(0.8)	2.9(1.4)	2.0(1.2)	2.9(1.0)	1.8(0.9)
Non-Pet Owners	1.7(0.9)	2.5(1.2)	2.0(1.0)	1.8(0.7)	1.1(1.2)

Standard deviations in parenthesis

A multivariate analysis of variance with 'pet ownership' as the grouping variable and 'episode' as a repeated measure again showed a significant main effect for pet ownership ($F=10.5$, df 1,38, $p<0.003$). There was also a significant main effect of episode ($F=9.4$, df 4,152, $p<0.001$) reflecting differences in the extent to which the various video sequences evoked attributions of mental states. Given the fact that some were considerably longer and more complex than others, this is not surprising. However, there was no significant interaction between pet ownership and episode, and thus no indication that the frequencies of mentalistic description by pet owners and non pet owners varied across episodes.

The differences observed are in the relative prevalence of mentalistic descriptions. All observers used such descriptions on occasions. Indeed, over 90% of both pet owners and non-pet owners used at least one such description for every episode. There was considerable variety in the richness of psychological attribution involved.

For instance, in Episode 1, one observer wrote that 'the dog wanted some of the food' while another wrote that 'the dog was attempting to encourage her to feed him some of her food.' When the dog moved away from the owner's proffered stroke, three observers (all non-pet owners) wrote that the dog thought that he was going to be hit. Twice as many pet owners as non-pet owners construed it as an indication of what the dog was really after: 'he shies away, as it's the food not the affection he wants.'

In Episode 2, three participants (two males and one female) suggested that the dog was behaving aggressively towards the ball, and/or following its hunting instincts. One wrote that the dog 'thinks the ball is an aggressive animal for it to chase and kill.' Another referred to the dog 'jumping on it (the ball) and biting it.' The third, female, wrote that the dog 'pretends the ball is an animal to hunt down and kill.' One female, however reported that although the dog was treating the ball as an enemy 'it's playful attacking.' Another, also female, took a composite view, writing that the dog saw the ball 'as both plaything and prey'. One male and one female specifically mentioned that the dog was not being aggressive. The large majority, however, simply wrote that the dog was just having fun and enjoying the game.

In Episode 3, where the collie was being petted while waiting for its walk, 97.5% of participants agreed that it was encouraging the owner's affections. Only one, female, non-petowner interpreted the situation differently, writing that 'the dog was trying to sleep and wanted to be left alone so kept trying to push the man's hand away with his paw.'

Episode 4 raised the issue of how far the dog understood the owner's question ('where's the squirrels?'). Eighty per cent of the descriptions from the pet owners, but only 45% of those from the non-pet owners, supposed the dog to have understood the question. This may well reflect a greater reluctance on the part of people unfamiliar with dogs to attribute cognitive skills to them.

Episode 5 (the dog's response to the owner's departure), 45% of pet owners described the dog as showing negative emotional reactions ('sorrowful', 'uncomfortable', 'upset', 'bored', 'unhappy', 'sad', 'stunned', and 'feeling lost'), whereas only 15% of non-pet owners did so. (For full list of participants' descriptions see Appendix A).

DISCUSSION

The study concerned a single target species, with dogs unfamiliar to the observers. While it might have made a difference if the animals had been familiar to them, the findings fit well with other recent evidence concerning the way pet owners themselves describe their pets (Coren, 1994; Sanders, 1999.) Coren, for instance, noted over sixty words that his dogs understood, while Sanders recorded that owners he met in the veterinary hospital routinely attributed feelings to their dogs, including loneliness, pride, embarrassment, joy, sorrow and anger, as well as other emotional experiences that indicated their sentience and individuality (1999:20,27).

In consequence of the findings in this study, the effect of species could usefully be followed up in further research. It may or may not be important that the videotaped episodes used here showed companion animals in interaction with their human owners. There is evidence that some primates, for example, elicit psychological attributions more than do pets (Eddy et al, 1993).

The phrasing used in inviting participants' descriptions (asking 'what you think was going on') was deliberately vague, and may have invited interpretative rather than descriptive accounts. It would be interesting to establish how far different instructional sets would alter the quality of accounts obtained, and whether the differences between pet owners and non-pet owners established here would be attenuated or accentuated with differing instructions. Also, the study relied upon a rather crude dichotomy in terms of 'pet owners' and 'non-pet owners.' Further research should clarify the effects of experience with different species, the age of the child, or duration of exposure.

The greatest difference between pet owners and non-pet owners was in Episode 4,

which asked whether the dog had understood its owner's questions. This was in contrast to Episode 2, where participants largely agreed that the dog had understood the 'rules' of the ball game. One explanation for such a discrepancy might be that possession of language has long been a sensitive issue, an important factor in marking the boundary dividing humans and animals (Chapter 4). Those who were prepared to allow that a dog could understand the rules of a game might thus have been more reluctant to allow him an understanding of human language.

Participants were fairly homogeneous in age and educational level, and all had chosen psychology as their academic discipline. While this obviously limited their representativeness as a sample, the fact that pet ownership was associated with clear differences in descriptions even within this otherwise homogeneous group was impressive. Although replication with other populations would be worthwhile, the effect observed seems unlikely to be restricted to the particular population sampled here.

The study thus found that psychological and mentalistic interpretations of companion-animal behaviour are used by the majority of people, but that those defined as 'pet owners' do so more often, and more confidently, than those who lack such experience. Pet-owners were more ready to attribute to the dogs a greater variety of human-like emotions and cognitive skills and to perceive these animals as conscious beings. There was an implicit assumption that an anthropomorphic understanding of them is valid. While this approach is still dismissed by 'hard-liners' such as John Kennedy (1992), it is increasingly regarded as an acceptable way of relating to at least the more complex animals (Chapter 3). It can also be argued that the approach brings benefits to humans, and in particular to children. As the latter become skilled at forming and maintaining these simpler relationships, they develop a capacity for empathy, gentleness and kindness. Donald Griffin suggests that Western civilisation's long-standing and predominantly negative attitudes to animals results from ignorance and profound disregard for the role animals play in helping children to develop their own consciousness (Griffin, 1984). Ursula Le Guin sees an over-rationalistic approach as being at least partly responsible for our isolation from the natural world: 'By climbing up into his head and shutting out every voice but his own, 'Civilised Man' has gone deaf' (Le Guin, 1990: 11).

A further question thus arises from this study; whether a psychological understanding of companion animals changes people's attitudes to animals in general. This interesting issue will be investigated in the next part of the thesis.

PART 3

AN INVESTIGATION INTO ATTITUDES TOWARDS ANIMALS AND THE ENVIRONMENT ACROSS THREE RELATED GENERATIONS

CHAPTER 7:

AN INVESTIGATION INTO ATTITUDES TOWARDS ANIMALS AND THE ENVIRONMENT ACROSS THREE RELATED GENERATIONS.

INTRODUCTION

This study sets out to examine people's attitudes to animals, whether pet-ownership affects such attitudes, and the extent to which these may be influenced by culture, family values and age. In order to do this, it examines the views of 303 respondents drawn from three consecutive and related generations, 101 students, one of their parents and one of their grandparents.

The previous chapter found that pet-owners more readily attribute to their dogs human-like mental states and psychologically-motivated behaviour, and that they also extend such attributions to other dogs. This suggests that living with animals and forming relationships with them encourages a blurring of the human-animal boundary which has for so long affected the status of animals (Chapters 1 - 3). Animal status is enhanced when important similarities between them and humans are accepted.

The previous project was restricted to people and companion animals. This study investigates whether pet-owners are more likely than others to attribute a higher status to animals in general.

Investigating the effects of pet ownership

To some extent pets have become honorary members of the moral community, even without the burden of duty which this normally requires (Scruton, 1999:259), and they have been granted a measure of legal protection. Legislation to protect those reared for commercial gain, however, has been far less stringent. Their status in law is still mainly that of personal property and their treatment is geared to maximisation of profit. It is the morality of this that is now being challenged. Thus, in 1997 the European Union accepted that farm animals were to be classed as 'sentient beings', with protection from mistreatment. This reflected a dramatic change in thinking about non-pet animals.

The current study seeks to find whether cultural influences are overridden by family values in regard to animal welfare. If the attitudes of older and younger generations are markedly dissimilar, it would seem that cultural influences are

greater, whereas strong generational agreement would suggest that family values take precedence over cultural change. However, attitudes may also be modified by personal experience.

The influence of personal experience

In Western urban societies, personal experience of animals is commonly associated with keeping animals, especially dogs and cats, for companionship. These pet owners routinely describe their animals as minded beings, whose abilities are quantitatively, but not qualitatively different from those of humans (Rasmussen et al, 1993; Fidler et al, 1996). As was demonstrated in Chapter 5, close relationships and ongoing interactions with pets enable owners to develop systems of communication by 'reading' signals such as gaze, vocalisations and body language. At the same time, animals become attuned to their owners. These interactions are commonly perceived as pleasurable, and many pet owners have no hesitation in describing themselves as 'animal lovers'. Positive experience of pets would indicate that childhood pet-ownership exerts a positive and ongoing influence on attitudes to animals in general, and leads to greater concern about the welfare of laboratory, farm and wild animals, and also to heightened environmental concerns (Paul and Serpell, 1993). However, relationships with pets vary, and it seems reasonable to suggest that it is positive, rather than negative, experiences which might lead to a greater concern for the welfare of animals generally.

Effects of age and culture on attitudes to animals.

There are two possible explanations for age-related attitudinal differences, and they are impossible to disentangle. They may reflect the ageing process itself, or cohort differences (Sugarman, 1986) and it is generally accepted that age-relatedness must to some extent be arbitrary (Sugarman 1986; Kivnick 1991; McAdams et al, 1993).

The three generations of respondents who volunteered to take part in the present study were born in very different times. While today's students are experiencing an unprecedented interest in animal welfare, their grandparents grew up during the war years, when the lives of their families and fellow-humans were of paramount concern, and little was heard about the status of animals.

Animal status

It is increasingly suggested that the status of man, relative to that of animals, has

been over-exalted (Singer, 1973: Serpell, 1986: Linzey, 1998). Because of the human need to feel valued, status may have become overvalued and status-seeking over-competitive. Intellectual superiority is prized to the extent that some groups of humans and all animals have been excluded from social and moral consideration on grounds that they lacked rationality (Chapter 2). Further, in Western traditions humans have been encouraged to think of themselves as nature's absolute master, for whom everything was designed – the teleological view of Aristotle. The Genesis account of man's dominion over other creatures lends support to this view. St. Augustine had no hesitation in pronouncing that 'Christ himself shows that to refrain from the killing of animals and the destroying of plants is the height of superstition ...' (cited in Passmore, 1980).

In the post-Darwinian era this idea became seriously questioned. Darwin suggested that if we can speak of the world as having been made ready for man, this must have been in a very limited sense. Humans, like other species, had to struggle against considerable odds for survival. Furthermore, Darwin's account held that man and other creatures had much in common; animals possessed emotions and a degree of rationality of a similar kind to our own. This began a questioning of moral issues regarding non-human species, although little changed in the century which followed. It is only since the second World War that religious and secular thinkers have been prepared to tackle the thorny questions of how to address these dilemmas.

Mary Midgley (1983:14) reported 'a marked change over the last few decades in the moral view that ordinary people take about how animals should be treated', and there is much evidence that she is right. 'The Times' leader of 30 September 1999 was indicative of an ongoing change, reporting that 'Homo sapiens shares his planet with more than 30 million other species. These are not simply a resource to be squandered. They are an integral part of human life and culture.' Debates are no longer confined to philosophers and theologians, both of whom are now criticised for having taken so entrenched a stance.

Modern philosophers such as Peter Singer and Roger Scruton suggest that decline of religious belief has been influential in promoting the recent interest in animal welfare. People are now less sure of their status than when they believed themselves to be the highest order of creation, alone blessed with an immortal soul (Singer 1997:18, Scruton 1996:10). When today's grandparents were young, churchgoing was more common than it is today. Church doctrine, including the uniqueness of an eternal human soul, was seldom questioned.

Do people still believe that only we have a life beyond this one? The Society for Companion Animal Studies now runs a pet bereavement service and reports many instances where people feel confident that animals will not be excluded from a further life (Personal communication, 1999). There is also a move within theology to re-think the traditional idea that animals are excluded from an existence after death. It has now been scientifically established that many animals have a mental life (Chapter 4). In the light of this, common sense would suggest that if humans can expect an afterlife, at least some animals should do so too. The Oxford theologian Andrew Linzey writes: 'There is something theologically odd about all discussion of immortal souls – the plain absurdity, no less, of humans deciding for themselves which essential or substantial qualities qualify them for eternal life and which may or may not exclude animals' (Linzey 1998:119). In other words, the burden of proof lies with those who would deny animal soul, rather than on those who hold this to be the case. The present study investigates people's views on this issue, and whether these have changed or remained stable since World War II.

Although it is clearly convenient to give animals a status far lower than that of man, academics are increasingly arguing that this is morally unsound. The American philosopher, Bernard Rollin, has claimed that society is moving towards ideas which are associated, even if not entirely compatible, with the concept of animal rights (Rollin, 1992). Even if some of these ideas might be questionable, he suggests that more people are looking favourably on 'the idea as such', and coming to dislike the idea of killing animals. Whether this is so is investigated in the present study.

Human or animal welfare?

McAdams reports that helping behaviour in humans is influenced by family, peers and culture, and that empathy is an important ingredient of altruism (1994:215). There is often a reciprocal element when one human helps another, and this might also be so when pet owners sacrifice their own interests to those of their animals. But many acts of altruism to both humans and animals are not reciprocal. Those who seek better welfare for food animals such as pigs and hens know that this will lead to higher costs in meat production. They nevertheless argue that in wealthy western societies this would not entail a great sacrifice to consumers. It is not that human welfare is seen as unimportant, but that sacrificing animals to achieve it needs strong justification.

Most of us would agree that it is right to give preference to members of our own

species. This is not a product of culture, like racial prejudice, for all social creatures attend mostly to their own species (Midgley, 1983:104). But morality does not demand that such attention be exclusive. Both humans and animals form relationships outside their conspecifics. People and dogs, donkeys and horses, horses and goats, cats and dogs, may become close companions. They may nevertheless retain a special interest in their conspecifics. There is little evidence, for instance, that the vast majority of pet-owners prefer animals to other humans (See Paul, E., 2000:168-186).

Although support for 'animal charities' is sometimes criticised for reducing help to those which are human-orientated, this overlooks the fact that charitable support does not have to be an either/or affair. The assumption so often made is that 'animal lovers' give exclusively to animal charities, neglecting those concerned with human welfare. This study investigates whether this is the case, and whether there are generational differences in how people choose to give to both types of charity.

Although attitudes to animals often seem inconsistent, consumers are increasingly demonstrating their concern for at least some which are commercially-reared. Retailers have taken to labelling cosmetics 'not tested on animals', supermarkets sell free-range eggs, and many clothing retailers avoid animal fur. As the world of commerce is geared to profitability rather than to moral excellence, this signals an important change in thinking. However, not all animal species attract equal concern. Some are ignored while others are strongly favoured. The present study investigates the extent to which attitudes of the three generations vary.

Empathic response to animals

Historically, the emotional, affective part of human nature has been downgraded. Spinoza (1632-1677) was so strongly in favour of a purely rationalistic view of morality that he considered pity itself to be evil, in that it was a feeling. Almost a century later David Hume was one of the earliest philosophers to argue against this view, and furthermore to extend it to animals. In his 'Treatise of Human Nature' (1739) he held that we are 'bound by the laws of humanity to give gentle useage to these creatures' (cited in Midgley, 1983:48). Midgley also points out that reasoning for Hume was 'a modest activity of which animals were, in their degree, quite capable'. It is inconsistent to allow moral status only to those who are rational and articulate. If we did so, babies and other groups of disadvantaged people would be excluded. It is sometimes overlooked that biologically 'animals' include not only us, but a wide range of species, from chimps to insects. It is not difficult to interpret

the emotions of apes and dogs, because they react to pleasure and pain in much the same way as we do. It is, however, more difficult to empathise with insects or fish. Without some shared system of communication, it is not obvious whether a fish might be lonely, frustrated, or even in pain. It has been said that if a fish could shout for mercy, the sport of angling would be less popular. The better we can interpret the behaviour of animals, the more likely are we to empathise with them.

A capacity for empathy probably has its roots in evolutionary biology, but is commonly developed within the family. Parents have long taught their children to act unselfishly towards others, even at some cost to themselves – this is 'the golden rule' of Christianity. But where and how such acts are to be applied is strongly influenced by culture. In the case of animals, it also requires an interest in, and knowledge of, the species in question. It is unsurprising that education is a key factor in people's perceptions of animal needs (Kellert, 1983), nor that without any specific training we can understand primates even more easily than we can our pets (Eddy et al, 1993.) When animals so closely resemble us, most people can understand the meaning behind their behaviour, and the cause of their happiness, fear and pain. The rise of ethology, along with media interest, has led to such knowledge being more widely disseminated, so that it is now commonly accepted that different species, like us, have their individual natures – what Rollin calls 'the pigness of the pig and the cowness of the cow' and that these are as essential to their well-being as speech and sociability are to us (Appleby, 1999:34). Despite this, we continue to be highly selective in our concern. Some animals have 'good' qualities that we find pleasing or convenient, while others are 'bad' in that they do not suit our particular purposes. Fashion also has an affect on attitudes. In the early part of the twentieth century big-game hunters aroused admiration by shooting large numbers of tigers and elephants, and bringing back photos of themselves standing triumphantly behind their carcasses. Even without threats of species extinction, few today would find their actions praiseworthy.

Compassion was long seen as a predominantly womanly virtue, more suited to poets than philosophers. The century following Spinoza's denouncement of pity, William Blake wrote, 'Then cherish pity, lest you drive an angel from your door' ('Songs of Innocence', 1798.) More recently, and especially since the last World War, compassion has become much more generally admired. Writing about the ethical treatment of animals, the contemporary philosopher Roger Scruton says, 'Christian charity will pity needless suffering, shrink from causing it, and offer help and comfort when confronted by its victim' (1996:54ff). In the long-running television

series, 'Animal Hospital', the presenter, Rolf Harris, along with the veterinary surgeons and pet owners, are at times seen to be close to tears, with no-one appearing unduly embarrassed. It is likely that all generations in the present study will be familiar with such programmes, for in the past two decades they have attracted some of the highest viewing ratings. As one series has followed closely upon another, it has become clear that many people find the lives and needs of many animals fascinating. Yet there are often inconsistencies, with different species provoking differing responses.

The intrinsic physical and behavioural attributes of animals have been shown to affect how people view them (Driscoll, 1992; Serpell and Paul, 1994) and while garden birds are commonly perceived in a favourable light, mice are commonly disliked and classed as pests. The present study examines the responses of the three generations to these two familiar wild creatures, when each is in distress from a cat, and the extent to which the different generations feel called upon to intervene.

Environmental concerns

Animal welfare and environmental concerns frequently go together. Atmospheric pollution affects both people and animals. What is more, it poses a threat to future generations. Although there is frequently a clash of moral and commercial interests, growing numbers of pressure groups fight to protect the environment.

It is plausible to suggest that, as with animal welfare, there are age-related levels of concern with regard to the environment, and that this may reflect social priorities when each generation was growing up. Following the second World War, people's priorities and aspirations changed dramatically, but as is commonly the case, attitudes may be complex and at times contradictory. Along with growing awareness and concerns about the environment, there was also a post-war reaction against bureaucratic interference. Even the Government's 'Clean Air Act' met with initial resistance, although legislation subsequently proved it to be highly successful. Skies over large cities became clear, and the 'great smogs' of London were no longer the health hazards they had long been. But whereas most of the early environmental problems were local, small-scale affairs, today's technological progress has led to pollution on a massive scale. The current study investigates the levels of such concern between the three generations.

Jung's theory of ideal adult development would suggest a growing concern for

animal welfare in old age, in that the mature person comes to identify with all living things, and so adopt a cosmic perspective (Nemiroff et al, 1990). Erikson's theory of generativity also posits a change in later life, with a desire to pass on a better world to generations to come. These theories suggest that today's animal and environmental concerns are likely to be especially relevant to the present study's grandparents. On the other hand, today's students have grown up surrounded by ongoing debates as to the right treatment of animals, and our responsibilities towards the environment. The current investigation compares the attitudes of today's students, their parents and grandparents to both animal and environmental concerns.

Summary

The present study thus has three main lines of enquiry:

1. The experience of living with companion animals as an effect on attitudes to animals in general:
2. Cultural and family influences on the status accorded to animals and the environment.
3. The extent to which these attitudes are generationally related.

CHAPTER 8:

AN INVESTIGATION INTO ATTITUDES TOWARDS ANIMALS AND THE ENVIRONMENT ACROSS THREE RELATED GENERATIONS.

METHODS

Design of Questionnaire

A questionnaire was designed to investigate current attitudes to animals and the environment, to be carried out with the co-operation of respondents from three consecutive and related generations.

Questions were derived from both theoretical and empirical sources, with answers lending themselves to quantitative and qualitative analysis. As far as practicable, items dealing with similar or overlapping issues were kept apart, in order that one would not unduly influence that which followed.

Demographic details at the start of the questionnaire included age of participants (mostly grouped in periods of 5 years), and their gender. (Appendix B; questionnaire used in 3-generational study.)

In order to put respondents at ease and gain maximum co-operation, after the demographic details it was explained that there were no 'right or wrong' answers; the information was only to throw light on some of the current debates about the issues involved.

The primary aim of the project was to examine attitudes to animals in general, so particular species were only named when this was important to the nature of the question. Pets were mostly avoided, as the study set out to investigate the three generations' attitudes to animals as a whole; farm animals, those used in research, and wild species. It was planned to analyse responses with a view to investigating possible impacts that current debates might be having on each of the three generations. It has been suggested that it is the younger people who are most concerned about the welfare of animals generally (Linzey, 1998), but there is little firm evidence that this is the case. Might not parents and grandparents be equally, or even more, concerned about our treatment of animal species?

Experience of living with animals

As part of the demographic details, respondents were asked about experiences they had personally had with animals, and whether these had been bad (such as having

been bitten by a dog) or good (such as having had a close relationship with an animal.) It was hypothesised that such experiences would make a difference to their attitudes to animals generally. Many animal welfarists have been pet owners (Serpell, 1996:37).

Philosophical views on the moral status of animals

Seven quotations in **Question 1** reflected a variety of views, expressed by both ancient and modern philosophers. Some were geared towards an affective response while others were more cognitively orientated. The quotation from Jeremy Bentham 'Human obligations to animals should depend ... on whether they can suffer' is more likely to elicit an empathic response than that of Francis Bacon, 'Man is the centre of the world ...'. (Table 8.1)

Table 8.1: Affective/cognitive components of responses:

Primarily affective:	Human obligations to animals should depend not upon whether they can reason, nor on whether they can talk, but on whether they can suffer.
	How much better it is for a human being to nurture another human being, than to make a pet of a goose, a sparrow or a mischievous monkey.
	Religion and philosophy have not insisted as much as they should no the fact that our kindness should include all living creatures.
Primarily cognitive:	Man is the centre of the world, because if man were taken away, the rest would be without aim or purpose.
	Animals were created for the use of men.
	There should be more spent on children and less on animals.
Affective/cognitive:	The greatness of a nation and its moral progress can be judged by the way its animals are treated.

Attitudes, however, do not occur in a vacuum, and both tradition and situational context make a difference. Traditionally those to animals reared for food, or for purposes of research, would appear to reflect Aristotle's teleological view that 'animals are created for the use of men'. Conversely, Gandhi's aphorism, 'The greatness of a nation and its moral progress can be judged by the way its animals are treated' is independent of utilitarian considerations. It might thus be expected

that respondents scoring highly on the Gandhian aphorism would score lower on Aristotle's. But to what extent are attitudes consistent? The 5-point Likert-type scale enabled respondents to express a range of opinion, with neutrality at point 3. To discourage bias, point 5 on the scales did not represent the highest status attributed to animals in every case.

Justifiable use of animals

It would be difficult to imagine a human society which could survive without killing or using some animals, but current debates have centred not so much on whether animals should be used at all, but the extent to which such useage is justified.

There have undoubtedly been human benefits resulting from experiments on animals, but whether these, or some of them, are justified is currently hotly debated. At one extreme are those who argue that any research using animals is unacceptable, while others maintain that all such experiments are justified. In recent years there has been a move against experiments perceived as trivial, and also against the inclusion of certain species. (Smith and Boyd, 1991).

Question 13 (a – e) sought to establish participants' attitudes to five different kinds of use to which humans put animals. To allow for a range of opinions, a scale of 1 – 5 was used. (Table 8.2)

Table 8.2: Variables used to monitor attitudes to the rearing of animals for 5 human purposes:

Food (eg farm animals)
 Entertainment (eg circuses)
 Luxury clothing (eg fur trimmings)
 Medical research into disease (eg laboratory animals)
 Testing cosmetics (eg assessing sensitivity to human skin or eyes)

Question 17 again asked how participants felt about killing animals for food. Is meat eating thought acceptable because it is necessary for human health, or is it perceived as a human indulgence? When grandparents were the age of today's students, vegetarians were regarded as cranks: now the situation is different. Are there likely to be generational differences in attitudes to meat-eating?

Human or animal welfare?

The Roman Catholic Catechism of 1994 states that resources should not be used for animals where there is human need of them, implying that humans should always have priority. But the issue is seldom one of alternatives (Midgley, 1983: 31). Does the notion that we consider **either** people or animals still persist?

Question 3 asked respondents to distribute a hypothetical £100 equally between 5 charities, chosen from a list of 14 which are well-known. Seven of the charities were human-centred and seven supported animal welfare. These were dispersed within the list. Participants were asked to select the five to which they would most like to donate, and to rank them in order of priority. There was an option of choosing a charity not on the list and they were asked the reason for their first choice of charity. It was hypothesised that choices would be affected by generation. Many of the study's grandparents would have lived during the last War, and thus be expected to place a higher emphasis on human life and welfare. Students, growing up at a very different time, would thus be expected to have different attitudes. On the other hand, family values might be strong enough to negate the influence of changing norms. Cultures and ideologies are constantly changing.

Question 14 asked whether there were any animals participants felt should not be used in medical research, with the option of replying 'Yes', 'No' or 'All'. In order to examine the options chosen in greater depth, respondents were asked to give the reason for their choice, a strategy that encourages thoughtful answers.

Subjective feelings towards animals

Moral conflicts about animal use frequently centre on the suffering involved, including that of psychological stress. Ethical decisions also depend on the value placed on the life of particular species. Yet stress is particularly difficult to measure and people's perceptions of the value of lives of other species often depend on a subjective response.

Question 4 related to attitudes to three insects, a wasp, a bee and a spider. In this country there are no poisonous spiders, yet arachnophobia is by no means uncommon. While some people are content to ignore wasps, others react with a degree of hysteria. Bees would appear to have the more positive image – to be 'busy as a bee' may be thought a virtue, and bees provide honey. Yet whereas some people kill insects on sight, others go to pains to avoid doing so. The

question sought responses from the three generations as to how they would get rid of each of the three insects from their window sill.

Questions 5 and 10 were designed to highlight responses to two wild species, one traditionally less popular than the other, and to examine generational similarities and differences. When the life of each animal was in danger, would the three generations respond differently? To what extent might the experience of pet-ownership affect how participants would react to each? The two questions were similarly worded, except that the target animal in question 5 was a mouse, and in question 10, a blackbird.

Question 9 asked about a matter which has recently become especially controversial: whether hunting as a country sport should be kept for (a) foxes and (b) deer. Those who oppose the sport focus on the stress and suffering of the hunted animals, while its advocates feel that it not only provides enjoyment but, especially in the case of the fox, fulfils a useful purpose.

Question 18 again examined subjective feelings about animals, asking whether respondents felt that a goldfish can suffer from boredom. With little empirical evidence, would younger people be more prepared to give the fish the benefit of the doubt?

Question 20 asked whether participants felt that animal suffering was over- or under-estimated.

Table 8.3: Variables used to monitor subjective feelings about animals:

Saving/not saving an insect (wasp, bee, spider)
Rescuing/not rescuing a mouse from a cat
Rescuing/not rescuing a blackbird from a cat
Whether hunting for sport should be kept for (a) foxes and (b) deer
Whether a goldfish can suffer from boredom
Whether animal suffering is over- or under-estimated

Empathic response to animals

Moral concerns about animal treatment commonly rest on the belief that animals, like us, experience pain. While conception of animal suffering is often made by analogy with similar human experiences, traditional attitudes may make a difference.

Question 6 examined attitudes to a fox which has come to the respondent's garden in winter, seeking food. No longer remote, a hungry fox might elicit a more empathic response than one which is hunted (Question 9).

Question 16 examined the extent to which the study's three generations empathise with farm animals. We know that individuals draw mental analogies between themselves and their dogs (Fidler et al 1996) and that they also empathise closely with apes and primates (Eddy et al, 1993). But cows, sheep and pigs are in a different class, until recently only protected under the laws applying to personal property. This question examined attitudes to the live export trade.

Again, one might expect that tradition would make a difference. There was no such trade when the study's grandparents were young, and the large majority of farm animals were reared on family farms. They were known by name, like the farm dogs. Today farming has become impersonal and intensive. When it is time for their slaughter, many animals are shipped abroad to lucrative foreign markets. Much publicity has been given to the fact that they are sent on long and overcrowded journeys, ending in abattoirs where British welfare standards are often irrelevant. There have been well-publicised protests at the ports of export. Yet while some question the morality of the live export trade, others are content to ignore it. Are there generational differences?

Questions 7 and 12 compared empathic responses to humans and animals in adverse situations. It asked respondents to describe their reactions on seeing pictures of an ill-treated animal (Question 7) and a starving child (Question 12).

Table 8.4: Variables used to monitor empathic responses:

Whether, in winter, a hungry fox in the garden would be fed
 Whether the live export trade in food animals is ethically right
 Feelings on seeing an ill-treated animal on television
 Feelings on seeing starving children on television

Human versus animal status

Question 19 investigated belief in human/animal soul. Since the early days of Christianity, it has been held that only humans possess an immortal soul (Chapter 2). However, while some Christian fundamentalists continue to hold this view, many are now questioning it. Many pet-owners see no reason why their dogs should be excluded from Heaven (Serpell, 1996), although they might be more

reluctant to attribute an ongoing existence to a spider. But if pets are thought to reach Heaven, why not other animals, or at least some other animals? This question sought the views of the three generations on this matter. However, because of problems with definition, the word 'soul' was avoided, in favour of the possibility of an afterlife. Participants were asked whether they think there is a life beyond this for (a) humans, (b) all animals, and (c) some animals. There were three options for answers: 'Yes', 'No', and 'Possibly'.

Question 8. The nature-versus-nurture debate continues to be an important factor in the perception of animal status. It has long been a complex issue, impossible to investigate empirically with any degree of precision. When animal behaviour was thought to be entirely governed by instinct, as against man's rationality, the status attributed to animals was low (Chapter 2). It is now scientifically acknowledged that, like ours, much animal behaviour is learnt. **Question 8** asked whether the capacity of birds to build nests rests on instinct or intelligence.

Question 15. As has been mentioned, moral debates concerning our treatment of animals are often confounded by the 'either/or' syndrome. The notion that kindness to animals precludes kindness to people seems to persist, despite much evidence to the contrary. Social reformers such as William Wilberforce and Lord Shaftesbury were early members of both human and animal welfare campaigns and, conversely, cruelty to animals has been associated with low regard for humans – the Romans dealt no more kindly with Christians than with the wild beasts they tormented and slaughtered. **Question 15** asked whether respondents felt that kindness to animals and to other humans is increasing, and whether there is a connection between the two.

Question 11 was the only item focusing on pets, specifically on dogs. Many dog-owners do attribute various human-like psychological qualities to their dogs, and to other dogs also (Chapter 6). Respondents were asked whether they thought that owners who stressed the great affection and loyalty shown them by their dogs were exaggerating, being realistic, or mistaken.

Environmental concerns

Although environmental concerns focus mainly on current human welfare, they are very relevant to that of future generations. Species extinction commonly disrupts the food-chain, with a knock-on effect influencing both humans and other species, and there is always the possibility that species may hold benefits as yet unknown.

There may also be an aesthetic and spiritual loss to humans. Thus **Question 2** asked whether respondents thought we should try to keep all species of wild animals from extinction. In order to better understand their views, they were asked to give the reason for their answers.

Question 21 had 10 separate items, all of which relate to the environment, and which were measured on a 5-point scale. Question (h) and (i) investigated whether people really believed that we are abusing the environment, and whether this had an effect on our health. Questions (b), (c), (f) and (g) asked how far humans should intervene to protect the environment. Questions (a), (d) and (j) addressed human relationships with the environment and Question (e) asked whether respondents thought that extinction of other species was caused more by human ignorance than lack of concern.

Erik Erikson and Helen Kivnick (1950; 1986) see caring about posterity as a common and critical stage in later life. Assuming this to be so, the grandparents in the study would be expected to show higher levels of environmental concern than the younger members of their families. Yet many of the current environmental problems did not exist when the grandparents were young, whereas today's students have grown up with them, and debates about them. The **Question 21** items were designed to examine attitudes of the three generations to these relatively recent issues.

Views written freely by respondents

Lastly, space was left at the end of the questionnaire for respondents to give any further views they might wish to express. Completing the questionnaire called for considerable effort and commitment on their part, and unless they found the investigation to be of relevance and importance, they would be unlikely to complete it. All those taking part were thus thanked in large letters for their help and, should any feel ambivalent about revealing their attitudes to some of the issues, were given the option of anonymity.

Administration of Questionnaire

The first approach was made to undergraduate psychology students at the University of Southampton. The Head of Social Sciences at Brockenhurst College of Further Education was then contacted and agreed that her students could take part in the study. Unlike the Southampton group, these were studying for A-level



examinations, so were rather younger. A third approach was made to the Head of Social Sciences at Eastleigh College of Further Education, who gave permission for her A-level students to take part. All three of these institutions are located in Hampshire, within a radius of fifteen miles of each other.

It was explained to each of the student groups that they would be taking part in a study which set out to investigate current attitudes to animals and the environment, and that the help of one of their parents and grandparents would be needed. Questions revealed that a number of students would be unable to contact actual 'blood relatives', so it was agreed that family members such as step-parents, parents' partners, and great aunts/uncles of their grandparents' generations could be participants.

All the participants were recruited on a voluntary basis, and all were given sets of three indentially-worded questionnaires; a white one for them to complete, a green one for their parent, and a yellow one for their grandparent. Short notes of explanation were attached to the questionnaires, along with addressed, freepost envelopes. Students were asked to return the sets of three questionnaires as soon as possible, with a maximum time of six weeks. All were thanked for their help.

Pilot study

Before starting the main project, a small-scale preliminary study was undertaken with ten Southampton University students, to make sure that there was no difficulty in understanding and interpreting the questions. They were given the same instructions planned for the main study. As a result, two alterations were made to the questionnaire; a third option of 'possibly' was added to the 'yes' or 'no' question in item 19, and a slight adjustment was made to the wording of question 11. These students were not participants in the main study.

CHAPTER 9

AN INVESTIGATION INTO ATTITUDES TOWARDS ANIMALS AND THE ENVIRONMENT ACROSS THREE RELATED GENERATIONS.

RESULTS

Analysis Strategy

A histogram showed that the data on attitudes to animals were parametric. Missing data were allocated a missing data code within SPSS and not included in the analysis. No rounding of data occurred during the statistical analysis, but results are presented to 2 decimal places. For continuous data, two group differences were examined using t tests and three group differences using one-way ANOVA. For binary data, differences were examined using chi-square tests.

1. Age and gender of sample

Out of the 133 students who originally volunteered to take part, 101 (76%) produced three sets of completed questionnaires. Ages of the 303 participants (101 from each of the three generations) ranged from 16 to 94 years (Table 9.1). Half the students were between 18 and 19 years, nearly 40% of the parents were aged 45-49 years, and approximately one-third of the grandparents were in the 70-74 age range. The majority of students, 85%, were female, and this broadly reflected the gender composition of the student group as a whole. Approximately twice as many female as male parents were recruited by the students (67% as against 33%) and there was a clear majority of grandmothers over grandfathers (73% as against 27%). This may reflect a preference by females to recruit other females and, with 87 of the grandparents over the age of 65 years, the fact that women live longer than men (Table 9.1)

Table 9.1: Demographic Variables for Entire Sample (n = 303)

Age Group	Frequency	%	Male	%	Female	%
<u>Students</u>						
16-17	27	26.7	15	14.9	86	85.1
18-19	50	49.5				
20-24	18	17.8				
25-29	02	2.0				
30-34	<u>04</u>	<u>4.0</u>				
		100.0				
<u>Parents</u>						
30-34	03	3.0	33	32.7	68	67.3
35-39	09	8.9				
40-44	17	16.8				
45-49	41	40.5				
50-54	24	23.8				
55-59	05	5.0				
60-64	<u>02</u>	<u>2.0</u>				
		100.0				
<u>Grandparents</u>						
45-49	01	1.0	27	26.7	74	73.3
50-54	04	4.0				
55-59	01	1.0				
60-64	08	7.9				
65-69	17	16.8				
70-74	32	31.7				
75-79	21	20.8				
80-84	11	10.9				
85+	<u>06</u>	<u>5.9</u>				
		100.0				

2. Experience of living with animals

Participants were asked whether they had lived with animals, and if so when this was and what the animals were. They were also asked to describe the type of experiences they had previously had with them, whether good or bad.

Nearly all the respondents had lived with animals at some time, mostly with cats and dogs. Parents and grandparents had lived with dogs more than the students, and students had lived with other species more than the two older generations. Cat-ownership was spread quite evenly across the three groups (Table 9.2).

Table 9.2: Experience of Living with Specific Animals* (n = 303)

	Students	Parents	Grandparents
	%	%	%
Lived with Dog	49	75	67
Lived with Cat	52	58	55
Lived with Other Species	68	53	35

* Percentages rounded to nearest whole number

All three generations reported more than twice as many good experiences (such as having had a close relationship with animals) as bad ones (such as having been scratched or bitten (Table 9.3).

Table 9.3: Type of Animal Experience* (n = 303)

	Students	Parents	Grandparents
	%	%	%
Bad Experiences	20	27	18
Sad Experiences	13	16	3
Good Experiences	63	55	43
None mentioned	4	2	36

* Percentages rounded to nearest whole number

It became apparent that bad experiences included those which had caused sadness, rather than fear or anger. Bad experiences were therefore sub-divided, with sad experiences (such as grief at the death of a pet) being made into a separate variable.

3. Attitudes towards animals and the environment: factor analysis

Before proceeding with the analysis of similarities and differences in attitudes towards animals and the environment in relation to generation, gender and previous experience of animals, exploratory factor analysis was undertaken. This was to examine the extent to which genuine scales could be constructed from the questionnaire items that had been designed. Three analyses were carried out, the first a general analysis of all numerical or ordinal items in the questionnaire, the second an analysis of the seven items specifically designed to investigate the attribution of status to animals (Question 1) and the third a similar analysis of the ten items designed to assess concerns about the environment (Question 21). In each

case the extraction method chosen was Principal Component Analysis, and the rotation method Varimax Rotation with Kaiser normalization.

a) Factor analysis of numerical/ordinal attitude items in the questionnaire:

Twenty-four items in the questionnaire met the minimum requirements for inclusion in the factor analysis, namely possessing three or more response values, of numerical or at least ordinal relationship to one another, and a relatively even distribution pattern (with no one value containing more than 80% of the responses). The attitudes to animal status and concerns about the environment comprised seventeen of these items. On rotation, three coherent factors emerged accounting cumulatively for 35% of the total variance. The first factor contained most of the attitude to animal status items, along with preference for spending on animal charities, and disagreement with use of animals for food and for medical research. The second factor contained most of the items expressing concern about the environment. The third factor constituted the three additional items on the morality of rearing animals for use by humans – for luxury clothing, for entertainment, and for testing cosmetics. As described later (Question 13) a significantly larger proportion of the sample thought it more wrong to use animals for these purposes than for food and medical research.

The factors can be interpreted as representing in turn 'Preference for Animals', 'Environmental Concerns' and 'Restriction on Trivial Use of Animals'. All have a robust character, the Cronbach alphas for each reaching .74. The principal items in each factor are shown in Table 9.4.

Table 9.4: Principal Items on Rotated Factor Structure on Attitudes to Animal Status and Environmental Concerns (factor loadings in brackets)

Factor A. 'Preference for Animals'

- 1g. 'There should be more spent on children and less on animals' (disagree). (.74)
- 1c. 'How much better it is for a human being to nurture another human being, than to make a pet of a goose, a sparrow or a mischievous monkey' (disagree). (.71)
- 3. The number of animal charities which respondent would include in distribution of £100 to charity. (.66)
- 1a. 'Man is the centre of the world, because if man were taken away, the rest

would be without aim or purpose' (disagree). (.58)

13a. It is wrong to rear animals for food. (.52)

1e. Animals were created for the use of men' (disagree). (.49)

13d. It is wrong to rear animals for medical research into disease. (.44)

Factor B. 'Environmental Concerns'

21f. We should have stricter regulations for protecting the environment. (.76)

21j. Environmental issues should address the welfare of both humans and animals.
(.69)

21c. To maintain a healthy environment, we should set limits on industrial growth.
(.67)

21h. Humanity is severely abusing the environment. (.65)

21a. People should live in harmony with their natural environment. (.63)

Factor C. 'Restriction on Trivial Use of Animals'

13c. It is wrong to rear animals for luxury clothing. (.82)

13b. It is wrong to rear animals for entertainment. (.77)

13e. It is wrong to rear animals for testing cosmetics. (.74)

b) Factor analysis of items on animal status:

A separate analysis was then undertaken on the seven attitude items specifically formulated to investigate perception of animal status (Question 1). All items except 1b ('Human obligations to animals should depend not upon whether they can reason, nor on whether they can talk, but on whether they can suffer') loaded highly on the first unrotated factor. Item 1g ('There should be more spent on children and less on animals') was again the leading item. This justified the creation of a sum score on attitudes to animal status. The alpha for the seven items together was .63 and after the exclusion of 1b .64. Considering the small difference, it was thought justifiable to proceed with a sum score based on all seven items.

c) Factor analysis of items on environmental concerns

By contrast, analysis of the environmental concern items (Question 21) revealed a more complex structure. Although most items loaded on the first unrotated factor, one of them, 21e (It is lack of knowledge, rather than lack of concern, that leads to

species extinction) was not associated with this factor, and formed a second factor on which a number of the other items also loaded more highly than on the first factor. The two factor rotated solution which is shown in Table 9.5 seems the most appropriate way of representing the structure of these items. The first factor represents concern about the need to protect the environment and the second factor awareness of interdependence within nature. However, alphas for both factors were not high (.37, .48 respectively), and for this reason it was thought best to consider these items individually in the ensuing analysis (Table 9.5).

Table 9.5: Rotated Factor Structure on Environmental Concerns (factor loadings in brackets)

Factor 1, A: 'Need to Protect Environment'

- 21h. Humanity is severely abusing the environment. (.73)
- 21f. We should have stricter regulations for protecting the environment. (.71)
- 21j. Environmental issues should address the welfare of both humans and animals. (.67)
- 21c. To maintain a healthy environment, we should set limits on industrial growth. (.62)
- 21i. Claims that current levels of pollution are endangering health are exaggerated (disagree). (.56)

Factor 2, B: 'Interdependence with Nature'

- 21b. The balance of nature regulates itself. We should try not to interfere with wild animal species. (.63)
 - 21g. People should live in harmony with their natural environment. (.59)
 - 21e. It is lack of knowledge, rather than lack of concern, that leads to species extinction. (.50).
 - 21d. We are more dependent on animal species than they are on us. (.48)
-

Reliability Tests

Eighteen students were chosen at random and asked to repeat Question 1 (items a – g) and Question 13 (items a – e) with a view to testing for reliability against their previous answers.

In both cases a paired sample t-test showed no significant difference at the 0.05

level. The results were:-

Q1. $t = -1.12, (1,17), p = 0.28^*$

Q13. $t = -1.12, (1,16), p = 0.28^*$ (*identical figures not due to error)

4. Philosophical views on the status of animals

As discussed in section 3, factor analysis of the seven items on perception of animal status revealed that it was justifiable to form a scale from all seven of the items.

This section reports analyses on both the sum scale and the individual items.

There was a large generational difference in regard to human priority (Question 1c), with 51 grandparents, 27 parents and 10 students strongly agreeing that nurturing humans is much better than nurturing pet animals.

This same difference occurred in Question 1a, which cited Francis Bacon's aphorism that man is the centre of the world. Only 3 of the 101 students agreed strongly that this was so, as against 11 of the parents, and 21 of the grandparents.

Similarly, 31 of the students, 26 of the parents and only 12 of the grandparents strongly disagreed.

A similar pattern emerged in responses to Question 1e – Aristotle's assertion that animals were created for the use of men. The students were most likely to think that this was not the case: 55 of them strongly disagreed, as against 43 of the parents, and 41 of the grandparents.

The same generational patterns occurred in Question 1g – that more money should be spent on children and less on animals. While only 10 of the students strongly agreed that this should be the case, 42 of the grandparents did so.

In contrast, grandparents formed a majority in advocating universal kindness. Thus, when it was suggested that religion and philosophy had not insisted as much as they should that kindness should include all living creatures (Albert Schweitzer, Question 1f), 32 of the students, and 42 of the grandparents strongly agreed that this had been the case.

Similarly, with Gandhi's citation that the greatness of a nation and its moral progress could be judged by the way its animals are treated (Question 1d), 20 students agreed at the highest level, as against 37 of their grandparents.

Grandparents were also most likely to feel that an animal's capacity to suffer should determine how it should be treated, rather than its rationality or language facility (Question 1b). Forty of the students strongly agreed with this, but 55 of their grandparents did so.

The results suggest that the oldest generation most strongly advocated universal kindness, but that humans should have priority (Table 9.6)

Table 9.6: Moral status of animals: Students' vs. Grandparents' responses at the highest level of priority

	Students	Grandparents
Need for universal kindness:		
Q.1b Human obligations to animals should depend on their capacity to suffer	40	55
Q.1d The greatness of a nation can be judged by the way its animals are treated	20	37
Q.1f Religion and philosophy have not sufficiently insisted that kindness should include all living creatures	32	42
Human priority:		
Q.1a Man is the centre of the world	3	21
Q.1c It is much better to nurture humans than animals	10	51
Q1.e Animals were created for the use of men	12	17
Q1.g There should be more spent on children and less on animals	10	42

Responses to the 7 items in Question 1 were analysed to investigate the extent to which the experience of living with a dog or cat affected the status given to animals as a whole.

Effect of cat/dog ownership on status accorded to other animals

(i) Independent samples t-test demonstrated a significant difference of dog ownership on the status accorded to animals in general, ($t = 2.18$, (1,276), $p = 0.03$.) Those who had lived with dogs had higher total scores than those who had

not done so, thus attributing a higher status to animals in general than those who had not had this experience. A significant difference also existed for cat ownership, ($t = 2.51, (1,275), p = 0.01.$)

Effect of good/bad experiences with dogs/cats:

Good experiences with dogs and/or cats caused respondents to have a more positive attitudes to animals in general, ($t = 3.69, (1,258), p = 0.00.$)

Bad and sad experiences were also examined using t tests, but no significant differences were found - Bad experiences: $t = 0.26 (1,252), p = 0.70:$

Sad experiences: $t = -0.19, (1,245), p = 0.85.$

Generational effects:

A one-way Analysis of Variance (ANOVA) was used to test for generational differences between the three groups on Question 1 total scores. This showed a statistically significant generational difference, students ($m = 25.1, sd = 4.41$), parents ($m = 23.5, sd = 4.09$), grandparents ($m = 23.5, sd = 4.11$); $F = 4.69, (2,285), p = 0.01.$ Post-hoc analysis using a Scheffe test showed the significant result was derived from a difference between the students and their parents/grandparents, with students according a higher status to animals in general than did their parents or grandparents.

Gender differences:

A t-test was carried out to test for gender differences in the status accorded to animals. This showed a statistically significant difference between males and females: males ($m = 22.94, sd = 4.21$); females ($m = 24.36, sd = 4.23$); $t = -2.45, (2,284), p = 0.12.$ Females thus had a more positive attitude to animals than did males.

5. Justifiable use of animals

Question 13 Results

Items 13a - 13e sought to establish respondents' attitudes to five different kinds of use to which humans put animals: meat eating, entertainment, luxury clothing, medical research and testing of cosmetics. The analysis investigated whether bad, sad or good experiences with familiar animals (dogs and cats) made a difference to

how people felt about such animal use, and whether this varied between generations. As with question 1, a Likert-type scale of 1 - 5 was used (1 = strongly agree; 5 = strongly disagree), with point 1 on the scale reflecting highest disagreement with animal use. For consistency, scores were transformed where necessary. Point 3 on the scale allowed for neutrality. Cronbach's alpha was acceptable (0.62), with all items in Question 13 measuring the same thing. Question 13a (using animals for food) detracted slightly but not to the extent that it was worth excluding it from the analysis. Items were summed in to a new variable, with the highest values reflecting the strongest disagreement with animal use. The higher the scores, the more agreement there was that animal use was wrong.

Effects of cat-dog ownership

T-tests showed that those who had lived with dogs or cats did not differ in their attitudes to the use of animals from those who had not done so ($t = 0.67$, (2,286), $p = 0.50$.)

As with Question 1, over the entire sample, previously bad or sad experiences with dogs or cats made no statistically significant difference: Bad experiences: $t = -1.57$, (2,265), $p = 0.16$. Sad experiences: $t = -0.16$, (2,256), $p = 0.88$. Good experiences, however, did make a difference, although in this case only approaching statistical significance: $t = 1.82$ (2,269) $p = 0.07$.

Generational effects

Generational effects measured by means of a one-way ANOVA on Question 13 showed a significant difference in the overall result: students ($m = 18.8$) parents ($m = 17.5$), grandparents ($m = 17.3$): $F = 4.24$ (2,294) $p = 0.015$. Post hoc tests using Sheffe showed that there was no difference between parents and grandparents but there was between them and students. Students were most likely to see the uses of animals in the given areas as wrong. The most striking generational difference was with the first item, which asked about the wrongness of rearing animals for food. More than twice as many students (11%) as parents (5%) and grandparents (4%) strongly agreed that it was wrong.

Gender effects:

Generational differences were highly significant. There was a statistically significant difference between males and females: males ($m = 16.68$, $sd = 3.53$);

females ($m = 18.38$, $sd = 3.72$); ($t = -3.56$, $(2,295)$, $p = .001$). Overall, females showed a higher level of concern about animals being used in the five given areas.

Question 17 also related to rearing animals for food. Participants were asked to choose one of five ways of thinking about this. These results were consistent with those of Question 13. Fewer students (30.7%) found killing animals for food acceptable than did their parents (45.5%) or grandparents (66.3%). They were also most likely to say that they felt uncomfortable about it (20.8%), compared with their parents (16.8%) and grandparents (14.9%), and although vegetarians and vegans were a relatively small minority, more than ten times as many students as grandparents did not eat meat (students 22.8%, parents 8%, grandparents 2%).

In summary, students were least likely to feel that killing animals for food is acceptable, most likely to feel uncomfortable about it, and much more likely to be vegetarian or vegan. However, the wording of the question suggested that killing animals for food is acceptable in that meat is necessary for good health, and about half the total population, and two-thirds of the grandparents, found this a sufficient reason for eating meat.

6. Human or animal welfare?

Question 3 also concentrated on priorities, asking participants to choose, from a list of fourteen charities, five to which they would wish to donate a hypothetical £100. Half the list were animal charities, and the others were to do with human welfare. There was also the option of selecting a charity not on the list. They were asked to give the reason for their first choice.

Question 3 Results:

Over the entire sample, a large majority of respondents in each generation chose to support more human charities. More parents and grandparents than students selected no animal charities at all. Although the numbers who chose all animal charities were very small, there were more students than parents and grandparents. (Table 9.7)

Table 9.7: Choice of human/animal charity* (n = 303)

	ONLY human charities chosen %	ONLY animal charities chosen %
Students	25	5
Parents	43	1
Grandparents	44	2

* Percentages rounded to nearest whole number

Relief of suffering was the major reason given by all generations for their first choice being a human charity, and less than a fifth of all respondents gave as their reason that humans should have priority. Of the three generations, students were most likely to cite personal experience as the reason why their first choice was a human charity (Table 9.8).

Table 9.8: Reasons for first choice being human charity* (n = 303)

	Personal experience %	Human should have priority %	Relief of suffering %
Students	21	14	32
Parents	14	16	46
Grandparents	14	18	44

* Percentages rounded to nearest whole number

Question 14. Although relief of suffering was a major reason for choice of a charity, animals are used in other ways which may cause pain, as in medical research for human benefit. Thus **Question 14** asked whether there were any animals which participants felt should not be used for medical research, with the option of choice being 'Yes', 'No' or 'All'. Participants were also asked to give reasons for their answer.

Having owned a dog or cat made no difference to people's feelings about the use of animals in research ($t = -0.944$, (2,280), $p = 0.30$) compared with those who had not done so. About a quarter of all generations were against using any animals. The majority, however, felt that all animals should be used for research, and more students took the view that some animals should be excluded (Table 9.9).

Table 9.9: Views on using animals for medical research* (n = 303)

	<u>No</u> animals to be used %	<u>Some</u> not to be used %	<u>All</u> to be used %
Students	24	42	35
Parents	24	23	52
Grandparents	26	36	37

* Percentages to nearest whole number

More grandparents than students or parents felt that animals closely resembling humans should be excluded from medical research (students 10%, parents 7%, grandparents 16%). Examples cited of species to be excluded were most commonly apes and dogs. This is unsurprising, for dogs are commonly seen as family members, and there is evidence that primates elicit psychological attributions even more than do animals kept as pets (Eddy et al, 1993). Rather more grandparents said that some research should not be undertaken because of the cruelty involved (students 8%, parents 9%, grandparents 12%).

More students than parents or grandparents would exclude species which are endangered - 13% of the students, 4% of the parents but none of the grandparents cited endangered species as a reason for exclusion. Overall, however, reasons given for excluding animals from research were very mixed.

7. Subjective feelings towards animals

Question 4 concerned three common insects, wasps, bees and spiders. Whereas wasps and bees can sting, spiders are harmless to humans. Yet spiders would seem to evoke revulsion more than the other two insects. Is their life, then, less worthy of saving? Respondents were given the option of killing each of the insects, putting it outside or asking someone else to deal with it.

Question 4 results: Overall, the bee was by far the most popular - over three-quarters of each generation would save its life. However, about half of each generation would also save the wasp. The greatest generational difference was in the treatment of the spider (Table 9.10). The students were most squeamish about spiders, with 42% of them saying they would ask someone else to deal with it. Only 11% of the grandparents would call for help. It is worth noting that no British spiders are poisonous to humans.

Table 9.10: Generational attitudes to insects* (n = 303)

	Would save Bee %	Would save Wasp %	Would save Spider %
Students	75	51	49
Parents	85	51	70
Grandparents	83	45	73

* Percentages rounded to nearest whole number

Although larger animals may evoke a more empathic response than insects, perceptions of them may also be subjective. Whether they even survive can depend on factors such as their pleasing appearance or traditional popularity. **Questions 5** and **10** investigated how participants would respond to the plight of a mouse or a bird, when each had been brought in, seemingly unhurt, by a cat.

The questions were similarly worded, except that in **Question 5** participants were asked if they would save the mouse, and in **Question 10** the blackbird. The answers were then analysed on the basis of cat/no-cat ownership and dog/no-dog ownership.

Question 5 results: The majority of participants within each generation would try to save the mouse (students 83%, parents 76%, grandparents 58%), but there were generational differences which were highly significant. Results demonstrated a significant generational difference, with students wishing to save the mouse and grandparents most likely to let it be killed ($\chi^2 = 14.83$, df 3,299, $p = 0.000$).

Question 10 results:

The large majority of participants of all generations would try to save the blackbird (students 90%: parents 91%: grandparents 84%) but the differences were much smaller than was the case with the mouse. Results to test for generational differences showed no significant differences between the generations, with agreement by the three groups that the blackbird should be saved ($\chi^2 = 0.126$, df 3,299, $p = 0.72$).

The grandparents strongly favoured the blackbird: 84% of them would save it, as against only 58% who would save the mouse. With the students, this difference was far less: 89% would save the bird, and 83% the mouse.

Thus a comparison of Questions 5 and 10 shows that a majority of participants

from all generations would try to save the lives of both mouse and bird, with a larger number saving the bird than the mouse. While students were most willing to rescue the mouse, the grandparents were least likely to do so. In the case of the bird, the generational differences were much smaller.

Interestingly, an examination of cat ownership, using chi-square, showed that more non-cat owners than cat owners would allow the cat to kill the mouse ($\chi^2 = 3.945$, (2,288), $p = 0.047$) and more non-cat owners would also let it kill the bird ($\chi^2 = 7.122$, (2,261), $p = 0.008$.) In neither case did dog-ownership make a statistical difference, which is unsurprising, as dogs do not normally hunt mice.

The most common reasons for saving the mouse and the bird were subsequently categorised as **Preservation of life** (e.g. 'animals should be helped to survive'); **Prevention of suffering** ('I don't like to see an animal in pain'); **From a sense of justice** ('The cat is well fed and does not need to kill'); **Liking for the species** ('Always liked mice - had a pet one', and 'Birds in the garden give great joy'). There were two main categories for not saving the mouse or bird: **Dislike of the species** ('... hate mice, they're vermin') and **Non-interference** ('We should not interfere with the balance of nature'). A further group gave answers that were unclear ('Why not save it?') and this category did not form part of the study.

The greatest contrast in attitudes to mice and birds was between the grandparents and students, with parents coming between the two (Table 9.10). There were also differences as to how the three generations thought about their decisions. Students were more likely than the older generations to address philosophical issues ('The weaker should be protected from the stronger', and 'Animals have a right to life').

The grandparents most commonly expressed a dislike of mice and a fondness for birds. One grandparent wrote 'I was always taught mice were vermin' and another, 'If the cat killed it, it would save me doing it.' Blackbirds were universally popular, with none of the three generations reporting a dislike of them. However, a small number would not rescue the bird, arguing that we should not interfere with nature (Table 9.10)

Table 9.10: Reasons given for saving/not saving the mouse and bird (%)* (n = 303)

<u>Reasons given</u>	<u>Saving Mouse</u>			<u>Saving Blackbird</u>		
	Students	Parents	Grandparents	Students	Parents	Grandparents
Preservation of life	32	30	13	36	33	32
Prevention of suffering	20	20	23	12	24	22
Sense of justice	21	17	15	29	18	8
Liking for the species	4	4	2	4	8	16
	<u>Not Saving Mouse</u>			<u>Not Saving Blackbird</u>		
	Students	Parents	Grandparents	Students	Parents	Grandparents
Dislike of species	10	12	15	-	-	-
Non-interference	3	3	7	3	3	5

* percentages to nearest whole number.

Question 9 also compared attitudes to traditionally popular and unpopular animals. Participants were asked whether the country sport of hunting with hounds should be allowed to continue for (a) deer and (b) foxes.

Question 9 results: A large majority from all generations felt that hunting with hounds was unacceptable for both deer and foxes (84% of students, 81% of parents and 70% of grandparents would wish to have hunting banned altogether.) But, as with Question 5, more students would save both the popular and less popular animal.

A minority of participants would keep hunting for foxes but not for deer, and as with Questions 5 and 10, a smaller percentage of students discriminated between the species, (9% of students would keep hunting for foxes but not deer; as against 13% of the parents and 19% of the grandparents.) As there were four possible answers (save both, save neither, save fox but not deer, save deer but not fox), a 2 x 4 chi-square test was carried out to test for generational differences. This showed a significant difference between the generations, $\chi^2 = 8.20$, (3,299), $p = 0.02$. Grandparents were least likely to ban fox and deer hunting as a country sport, while students were most likely to do so. The findings were also consistent with the students' greater preference for species equality when saving the mouse and/or bird (Questions 5 and 10).

Question 18 asked whether respondents thought a goldfish could be bored. A degree of consciousness is needed for experiencing a state of boredom, and a scale

of 1 (agree) – 5 (disagree) would indicate neutrality at point 3.

Question 18 results: More parents felt that the fish was capable of boredom than did the grandparents or students. However, the generational difference did not quite reach significance (students, $m = 2.48$; parents, $m = 2.84$; grandparents, $m = 2.65$. $F = 2.59$, (3,297), $p = 0.08$.) In view of the sparsity of empirically-based 'hard evidence', the findings suggest that parents were the most willing of the three generations to give the fish the benefit of the doubt.

Question 20 investigated whether animal suffering is perceived as being over- or under-estimated. Animal sentience is an important issue in modern debates.

Question 20 results: There was strong agreement over the three generations that we tend to under-estimate the extent to which animals can suffer (82% of students, 85% of parents and 82% of the grandparents thought this was the case. There were no significant generational differences ($\chi^2 = 1.35$, (3,296) $p = 0.51$).

8. Empathic response to animals

Question 6 investigated the extent to which people's sympathy for animals is influenced by the situation. Participants were asked whether they would feed a hungry fox who came to their garden in winter time, when food was scarce.

Question 6 results: A willingness to help the fox did not go in order of generation. Students and grandparents were most willing to feed the fox, with parents least inclined to do so (students 55%, parents 43%, grandparents 53%). Despite generational differences which indicated that grandparents were somewhat more in favour of hunting, no significant differences existed in relation to their willingness or unwillingness to feed a fox which came to their garden in winter ($\chi^2 = 3.67$, (3,201), $p = 0.16$). A majority of those who would feed the fox were prompted by concern for the animal's welfare, and in particular helping it avoid the suffering of hunger. Other respondents said they just enjoyed watching foxes. There was no statistically significant difference between cat/dog owners and non-owners and their willingness to feed the fox $\chi^2 = 0.20$, (2,293), $p = 0.65$, (dog ownership) and $\chi^2 = 0.89$, (2,292), $p = 0.35$, (cat ownership). The most common reason given for not feeding the fox was a dislike of the species, or concern for the safety of pet dogs or cats. However, among the non-feeders were some who were concerned with the fox's welfare, in that feeding would encourage the fox to depend upon humans for food, and so not be in its best interest. It was thus not the case that

all non-feeders were unconcerned with the fox's welfare.

Question 16. Attitudes to farm animals are commonly different from those towards wild animals. They have been born and bred for human purposes, and reared for financial profit. Media reports would now suggest that many people are questioning whether the profit motive should override farm animal welfare. The live export trade, and the animal suffering involved, has attracted much publicity on television and in the press. Participants were asked if they agreed with those who protested against the trade and to give reasons for their answer.

Question 16 results: Over the entire sample population, there was strong agreement that the live export trade should be banned, the majority from each generation citing the cruelty involved. Although the students disapproved most strongly, there was no statistically significant generational effect, $\chi^2 = 3.37$, (3,303), $p = 0.19$.

Table 9.11 summarises the results:

Table 9.11: Perception of cruelty in live export trade* (n = 303)

	The trade should be stopped % because of the cruelty involved %
Students	91	69
Parents	83	60
Grandparents	83	56

* Percentages to nearest whole number. n = 303.

Among responses that did not refer specifically to cruelty or suffering, some cited the fact that the trade was unnecessary, or that animals bred especially for our use had a right to our consideration, or that humans were too ready to make money at any cost. Three respondents (all parents) thought the trade should be allowed to continue because it increased trade and employment.

Questions 7 and 12. The status accorded to animals compared with that to humans was examined by asking respondents to select a word which described how they felt when they saw a picture of an ill-treated animal (Question 7) or starving child (Question 12) on television.

The most common emotional response to seeing the ill-treated animal was one of anger, and there was broad agreement across the three generations (students 46%; parents 45%; grandparents 55%). The commonest response to the picture of the

starving child was feeling disturbed, and again, there was broad agreement (students 41%; parents 39%; grandparents 40%). There was a wide variety of words used by those who preferred to use their own adjective, including words such as 'shocked' or 'horrified'.

9. Perceived differences in human/animal status

Question 19 asked if respondents believed there was a life beyond this for (a) humans (b) all animals or (c) some animals. There was an option of answering 'Yes', 'No', or 'Possibly'.

Question 19 results: A significant generational difference existed on views of a human afterlife $\chi^2 = 10.19$, (3,297), $p = 0.04$), with more grandparents than parents and students answering positively. The situation was reversed with regard to an afterlife for all animals. There was again a significant generational difference, but the grandparents were least likely to think there was $\chi^2 = 9.55$, (3,294), $p = 0.05$). More students kept an open mind by answering 'possibly'. The belief in an afterlife for animals increased in order of generation, from students to grandparents. (Table 9.13)

Table 9:12. Belief in an afterlife for humans and all animals* (n = 303)

	<u>An afterlife for humans?</u>			<u>An afterlife for ALL animals?</u>		
	Yes	No	Possibly	Yes	No	Possibly
	%	%	%	%	%	%
Students	43	19	36	30	30	39
Parents	45	32	22	23	49	28
Grandparents	52	28	20	19	45	32

* Percentages rounded to nearest whole number

As shown by the above table, the total percentage-point differences regarding an afterlife for humans and for animals are: grandparents 62%, parents 45%, students 27%. This comparison indicates that each succeeding generation, from grandparents, parents to students, discriminates less in belief about an afterlife for humans and for animals.

Question 8: The belief that animals act rationally, rather than from instinct alone, has a marked effect on the status accorded to them (Chapter 2).

Question 8 results: More students said that when birds are nest-building they are acting from both intelligence and instinct (students 55; parents 37; grandparents 44) and they were least likely to think that the birds were acting from instinct alone (students 42; parents 61; grandparents 51) (Table 9.14).

Table 9.13: Attributions of instinct/intelligence to birds* (n = 303)

	<u>Instinct</u>	<u>Intelligence</u>	<u>Both</u>
Students	42	4	55
Parents	61	3	37
Grandparents	51	6	44

* Percentages rounded to nearest whole number

10. Kindness to humans and to animals

Question 15 results: The majority of all generations said that we are becoming kinder to animals. However, there was a significant difference between the generations, with students and grandparents thinking that we are becoming kinder to animals ($\chi^2 = 10.80$, (3,299), $p = 0.00$.) In contrast, only a minority from each generation felt that we are becoming kinder to each other ($\chi^2 = 3.16$, (3,299), $p = 0.21$). Grandparents were the most optimistic, taking the view that we are becoming kinder to both humans and animals (Table 9.15).

Table 9.14: Kindness towards animals and to each other*

	<u>We are becoming kinder to animals</u>	<u>We are becoming kinder to each other</u>
	%	%
Students	73	29
Parents	55	29
Grandparents	74	39

* Percentages rounded to nearest whole number

Pet ownership had no significant influence on owners' views on kindness to people ($\chi^2 = 0.18$, (3,299), $p = 0.67$) or animals ($\chi^2 = 4.30$, (3,292), $p = 0.53$).

Question 11 asked if, when people stressed the great affection/loyalty shown by their dog, respondents thought they were likely to be exaggerating, realistic or mistaken.

Question 11 results: A large majority from all generations agreed that the claims made by dog owners were realistic (students 78%; parents 86%; grandparents 85%), although the students were least likely to think that this was the case. Students were also most likely to think that owners were exaggerating (students 18%; parents 9%; grandparents 13%). Fewer of the students, however, had lived with a dog (students 49%; parents 75%; grandparents 67%), a finding which reinforces the conclusions in Chapter 6, that the experience of dog-ownership changes attitudes to dogs in general. A chi-square test gave a significant result ($\chi^2 = 9.4$ (2,293), $p = 0.000$).

10: Environmental concerns

Question 2 was clearly relevant to concerns about the environment. Respondents were asked if they thought we should try to keep all species of wild animals from extinction, and to give the reason for their answer.

Question 2 results: A large majority of all generations agreed that we should try to keep all wild animals from extinction (students 90%; parents 87%; grandparents 83%) and generational differences were not statistically significant.

However, reasons cited for protecting wild animal species were varied, and suggested fundamental differences in thinking. As in Questions 5 and 10, more students than parents and grandparents spoke in terms of justice, holding that animals have a right to life (students 24%; parents 14%; grandparents 13%) and students most often said that humans had a responsibility for other species (students 24%; parents 17%; grandparents 7%). Those who would not try to save all species said that we already interfere too much with the balance of nature (students 10%; parents 13%; grandparents 16%).

All generations felt strongly about the environmental issues raised in the questionnaire. The numbers who were neutral in their views were very low and levels of agreement very high across all generations.

However, reasons cited for protecting animal species varied and pointed to fundamental differences in thinking. As in Question 5 and 10, more students than parents and grandparents spoke in terms of justice, holding that animals had a right to life (students 24%; parents 14%; grandparents 13%) and students most often said that humans had a responsibility for other species (students 24%; parents 17%; grandparents 7%). Some of those who would not try to save all species said that

we already interfere too much with the balance of nature (students 10%; parents 13%; grandparents 16%).

Question 21 consisted of 10 items relating to the environment. As in Questions 1 and 13, a Likert-type 5-point scale was used.

Question 21 results: Factor scores were examined for generational differences, using one-way ANOVA. For Factor 1 and Factor 2 (see page 118) no significant generational differences existed.

Factor 1: students, $m = 18.39$; parents, $m = 18.6$; grandparents, $m = 18.21$.
 $F = 1.439$, (3,299), $p = 0.77$.

Factor 2: students, $m = 13.07$; parents, $m = 13.05$; grandparents, $m = 12.57$.
 $F = 4.46$, (3,296), $p = 0.17$.

There was an especially high level of agreement across the three generations in Items 21h, 21f, and 21c:-

Item 21h: Humanity is severely abusing the environment (students 85%; parents, 81%; grandparents 83%)

Item 21f: We should have stricter regulations for protecting the environment (students 93%; parents 93%; grandparents 96%)

Item 21c: To maintain a healthy environment, we should set limits on industrial growth (students 86%; parents 83%; grandparents 88%)

The older respondents were however less inclined towards active interference:-

Item 21b: The balance of nature regulates itself. We should try not to interfere with wild animal species (students 71%; parents 82%; grandparents 83%): and

Item 21g: People have the right to modify the natural environment to their own needs (students 83%; parents 72%; grandparents 66%).

However, in Item 21i, fewer of the older respondents believed that pollution is endangering our health (students 83%; parents 72%; grandparents 66%).

Item 21e: Fewer students than parents and students felt that it is lack of knowledge rather than lack of concern which leads to species extinction (students 37%; parents 51%; grandparents 64%). This may reflect students' greater awareness of information resulting from current debates.

Over half of each generation believed that we are more dependent on animal species than they are on us (Item 21d), with opinions being almost equal (students 57%; parents 58%; grandparents 58%).

Item 1j: Of particular interest to this thesis was the high level of agreement between the generations that environmental issues should address the welfare not only of humans, but also of animals. (students 90%; parents 92%; grandparents 92%).

Also, in Item 1a, participants strongly agreed with each other that we should live in harmony with the environment (students 87%; parents 95%; grandparents 93%).

Clearly, all generations felt strongly about the major environmental issues raised in the questionnaire. Over the ten items, the numbers who were neutral or expressed low levels of concern were small, and levels of strong agreement high. Table 9:15 gives representative examples.

11: Views written freely by respondents

Nineteen students, 17 parents and 17 grandparents expressed further views. These suggested a serious level of concern for animals, an interest in ethical thinking about them, and that personal experience influences attitudes. Views expressed included following:

Need for justice and education:

'People cause wildlife suffering - foxes have become urban due to building on green sites' (Grandparent)

'Humans have abused this planet too long. I hope we come to see we should live in harmony with it' (Grandparent)

'I would save the fox ... to try to even the odds - foxes are persecuted excessively (Student)

Table 9:15 Attitudes to environmental issues (n = 101 each generation)

	Students					Parents					Grandparents				
	AS	A	N	D	DS	AS	A	N	D	DS	AS	A	N	D	DS
Humanity is severely abusing the environment.	42	43	9	6	1	40	41	5	12	3	49	34	10	4	4
We should have stricter regulations for protecting the environment.	47	46	7	1	0	52	41	5	2	1	65	31	4	1	0
Environmental issues should address the welfare of both humans and animals.	51	39	9	2	0	42	50	6	2	1	51	41	5	1	2
People should live in harmony with their natural environment.	34	53	9	2	2	54	41	3	0	2	68	25	6	1	1
The balance of nature regulates itself. We should try not to interfere with wild animal species.	35	37	14	14	0	36	47	8	8	1	46	38	8	6	3

Note: AS = agree strongly; A = tend to agree; N = feel neutral; D = tend to disagree; DS = strongly disagree.

'Animals have as much right to live here as we have' (Student)

'What right do humans have to take life from animals?' (Student)

Moral thinking and ideals:

The need to make money overrides the need to treat animals according to their species' (Grandparent)

'It is greed that leads to animals being pursued relentlessly (Grandparent)

'My inclination is towards vegetarianism, but I have not yet progressed so far' (Parent)

'We have a duty to treat animals well and with respect' (Parent)

'I am concerned with all cruelty, but animals, like children, have no voice' (Parent)

'Children, especially babies, are helpless, as are animals. Both depend on human kindness' (Grandparent)

'Animals are part of God's creation and should be respected and valued as such' (Parent)

'All animals are part of God's creation' (Grandparent)

'Creation is not man's to destroy' (Grandparent)

'Commercial gain will always overcome environmental protection unless legislation is introduced more widely' (Parent)

Effects of personal experience:

'No live exports - I've seen lorries packed with cattle and chickens ... some standing on each other and with terror in their eyes' (Grandparent)

'I have come to hate to see anything hurt and cannot watch wildlife programmes' (Grandparent)

(re Question 3 – First choice of charity, Red Cross) 'Without Red Cross parcels during my time as POW, I doubt if I would have survived' (Grandfather)

'All children should be allowed to establish a relationship with animals as I did – ownership is essential' (Grandparent)

I love all my animals and get a great deal of pleasure from them. When they die I feel as if I have lost a friend.' (Parent)

Just this week on TV it said how pigs are killed now – a dreadful end for such intelligent almost human animals.' (Grandparent)

Animals do not have states of mind, therefore they suffer pain but not feelings of the mind – this is very difficult to believe though, considering owning a dog all my life.' (Student)

12: Intrafamilial similarities

The study design – i.e. choosing representatives of three generations from the same families – provided an opportunity to examine intrafamilial effects. To what extent were positive and negative attitudes to animals transmitted within families?

An analysis was carried out on the summed scale measure of perception of animal status (Question 1). Those grandparents with the most favourable attitudes (scored 26 and over, $N = 29$) and least favourable attitudes (scored 11–20, $N = 29$) were identified, and the scores for their children and grandchildren compared. As the scores on the measure were not normally distributed (See Appendix C) Mann-Whitney U-tests were employed to test for significant difference. A significant difference in the same direction as for the grandparents for the second generation ($z = 2.64$, (1,56) $p = 0.01$). For the student generation the difference, also in the same direction, did not quite reach significance ($z = 1.90$, (1,56) $p = 0.06$). There do appear therefore to be intrafamilial similarities in attitudes to animals, but as one might expect they diminish over generations. Of course, family influences are likely to be associated with exposure to animals, the influence of which on attitudes has already been demonstrated.

13: Summary of Results

Effects on living with companion animals and shared family attitudes:

- 13.1 Respondents who had lived with cats and/or dogs attributed a higher status to animals in general than did those who had not had such experience.
- 13.2 Good experiences with pets made a statistically significant difference to people's perceptions of other animals, but bad or sad experiences did not.
- 13.3 The attitudes of grandparents towards animals were reflected in their children's, and to a lesser extent, in their grandchildren's attitudes.

Generational differences in attitudes to animals:

- 13.4 Students gave animals a higher status than did their parents or grandparents. The difference between students and grandparents was statistically significant.
- 13.5 More students were not eating meat: 23% of them reported that they were vegetarian, as against 9% of their parents and 2% of their grandparents.
- 13.6 In giving (hypothetical) financial support to animal/human charities, fewer students chose only human charities than did parents and grandparents.
- 13.7 Although the majority of all generations would try to rescue both a mouse and a blackbird which was being attacked by a cat, students were most willing to give assistance to both species.
- 13.8 The majority of all generations felt that the country sport of hunting deer and foxes should be discontinued, but more students (84%) wished to see it banned than did their grandparents (70%)
- 13.9 However, when a hungry fox came to their garden in winter, these generational differences almost disappeared: 55% of the students and 53% of grandparents would give it food.
- 13.10 Of the three generations, grandparents were most optimistic in believing that we are becoming kinder to both people and animals.
- 13.11 More grandparents than students believed there was an afterlife for humans, but more students said 'possibly'. More students believed there was an afterlife for animals, and more of them said that what was the case for one was also that for the other.

Attitudes to the Environment:

13.12 Across the three generations there was no statistically significant difference in the need to protect the environment and there was considerable agreement as to how this should be done. One somewhat atypical finding, however, was that twice as many grandparents as students felt strongly that we should live in harmony with it (students 34%, parents 54%, grandparents 68%). However, the most important finding was the strength of feeling and agreement among all generations that the environment needed to be protected, with only a very small minority holding neutral or negative views about this.

CHAPTER 10

AN INVESTIGATION INTO ATTITUDES TOWARDS ANIMALS AND THE ENVIRONMENT ACROSS THREE RELATED GENERATIONS.

DISCUSSION

The response to the questionnaire testified to the interest and commitment of all three generations. Of the 133 students who initially felt they could help, 76% successfully did so, gaining the co-operation of one of their parents and one of their grandparents. This was clearly not an easy task, and suggests a general sympathy with the area under investigation and a marked change in thinking about animal issues. It is only since the 1970's that relationships between people and animals have been considered suitable for academic study (Serpell, 1996:xvii-xviii).

It has been shown that adults' feelings for pets are correlated with their experience of pet-ownership in childhood (Bowd, 1981; Serpell and Paul, 1994), but it is likely that feelings for non-pet animals are influenced more by cultural norms and social conditions in their early life. As the ages of respondents ranged from 16 to 94 years, each cohort grew up in differing social conditions and with different ideologies. It would, however, be wrong to suppose that attitudes to animals are firmly fixed in childhood, for they are always open to the effects of personal experience.

The effects of personal experience

Over twice as many respondents reported good experiences with animals as bad ones, and these were mostly with dogs and cats. It would be reasonable to suppose that those with happy experiences would have more positive attitudes to animals generally, and those with bad ones more negative views. Interestingly, this was not borne out in the study. In two key areas of enquiry, the status accorded to animals generally (Question 1, items a-g) and the ethics of animal use (Question 13), good experiences did lead to more positive attitudes, but bad or sad ones had no significant effect. This may seem surprising, as it would seem that bad behaviour by a relatively small number of human individuals leads to a general dislike of the group to which they belong. Thus, a minority of badly-behaved football fans may give supporters a poor image and misbehaviour by a small number of children can give a school a bad reputation. Why then was this not the case with animals?

A possible explanation is that pets, especially dogs, are regarded as family members, as permanent children (Serpell, 1996: 79–84; Bonas et al 2000: 212) and we tend to make excuses for poor behaviour in our children. Their misdemeanours may be dismissed as atypical affairs which are due to external causes rather than to permanent, internal ones. In contrast, children's good behaviour is recalled and remembered with pleasure. It would seem likely that owners may similarly dismiss behavioural lapses in their pets. This would accord with the findings of Rajecki et al (1999), that respondents attribute a dog's playing (good behaviour) to internal, dispositional factors, but a dog's biting (bad behaviour) to external, situational ones. The present study suggests that we respond in similar ways to good and bad behaviour in our children and in our pets, and that dogs are generally perceived as friendly and loyal companions. In Question 11, a large majority of all generations agreed that when people stressed the great affection and loyalty of their dogs, they were not exaggerating. This fondness may account for the stereotypical belief that pet-owners over-indulge their animals, make unrealistic attributions as to their goodness of character, and adopt an uncritical view of their behaviour. This was not, however, the case with those who had personal experience of living with a cat.

Although the cat's function has traditionally been to kill or at least discourage mice, those who owned and presumably liked cats were in fact less willing than non-cat owners to allow them to indulge their natural instincts if this would cause suffering to another creature. More cat owners reported that they would take both mouse and bird away from the cat. It is likely that those with personal experience of a cat's behaviour have a greater awareness of the feline habit of 'playing' with a victim before killing it. Not only would this increase empathy with the victim, but owners may identify with their cat to the extent that they feel more responsibility for its actions. Far from indulging their cat, they were less willing to support its hunting instincts. It is significant that dog-ownership had no significant effect on how either mouse or bird would be treated. Dogs do not normally hunt either mice or garden birds.

Personal experience can be a powerful force in changing attitudes. A 55-year-old male student in Sieber's 1986 study reported that when he was young 'we raised cattle and chickens for food and trade ... We were careful to inflict as little pain as possible and were skilled at shooting. But after I took up police work and saw people shot, maimed and killed, my whole outlook on killing any living creature changed dramatically. I no longer shoot animals.' On a larger scale, drawing analogies between the plight of humans and animals led to the setting up of the largest manufacturer of soya based meat-alternative foods, the Tivall company in

Israel. This was founded in the Kibbutz Lochene Hageaot (translation: 'survivors of the ghetto') by survivors of the Warsaw Ghetto, who came to believe that the animal market and abattoir were uncomfortably reminiscent of their own experience.

Sympathy based on personal experience and analogy is a potent factor in stimulating feelings of concern. A positive correlation has been shown to exist between childhood involvement with pets and adult donations to animal charities (Paul and Serpell, 1993). Responses to Question 3 suggested other ways why people choose to support charities, animal and human. Reasons for donating to animal charities included 'My animals have been my friends' and 'The RSPCA helped when my dog was run over.' But one of the most personal and poignant accounts was given by a grandfather, who explained that he donated to the Red Cross because 'Without Red Cross parcels during my time as prisoner of war, I doubt if I would have survived.' Interestingly, there were no missing answers to this question, suggesting that the issue of charitable giving was of particular interest to respondents.

Generational differences

Over ten times as many students as grandparents reported that they were vegetarian, although this on its own does not demonstrate a higher interest in animal welfare. It is currently suggested that a vegetarian diet, or at least a reduction in meat eating, is beneficial to human health. What seems of greater significance is that among the non-vegetarians, twenty-one students, seventeen parents and fifteen grandparents reported that they felt uncomfortable about eating meat ('Would rather not think about it'). Clearly, rearing and killing animals for food is generating some anxiety, feelings which probably reflect a greater awareness of the conditions under which most food animals are now reared.

'Factory-farmed' meat is undoubtedly cheaper, and large companies take pains to perpetuate the myth that cutting prices is an end that justifies all means (Appleby, 1995:155). But making the right ethical decisions is important to our peace of mind, and for the sake of our mental health we need to make our actions compatible with our judgements. The philosopher Michael Fox must surely be right when he says that 'Animal welfare concerns are flatly opposed by economic cost/benefit justifications to an extent ... that this takes precedence over ethics. Yet in the final analysis, surely the greater concern is poverty not of the pocket, but of the spirit' (Fox, 1983).

However, if with some extra cost farm animals can be given lives which are kinder and worth living, and if killing is carried out as humanely as possible, there may be a case for insisting on free-range farm products, rather than a total boycott. Ethical decisions about eating meat do not have to be all-or-nothing affairs. The moral point is that the suffering of food animals should as far as possible be eliminated. If this is done, animals may still have a good life and a gentle death. Although very few grandparents were vegetarian, they were equally, and at times more, concerned about animal suffering. Their views on meat eating were not necessarily inconsistent with their moral thinking and it would be wrong to assume that in this area the older generations are more callous than the young. As Schaie (1994, 1996) has pointed out, age differences may be less important in explaining variations in attitude than the common experiences shared by different cohorts, for individuals age within the context of changing societies, beliefs and fashions. Fifty years ago a healthy human diet was thought to consist of essential protein in the form of 'red meat'. It may be a more useful sign of moral progress that a growing number of consumers are now prepared to pay extra for food which has been more kindly produced.

As in many areas of ethical concern, the study highlighted some anomalies. A majority of all generations wished to see hunting as a country sport discontinued, but among the minority fewer grandparents than students disapproved of the practice. Yet it was the grandparents who felt most strongly both that our obligations to animals should depend on their capacity to suffer, and that we underestimate an animal's capacity to suffer.

It was unsurprising that a majority of all generations wished to see hunting as a sport discontinued, for this is very much in line with current opinion. Following Professor Bateson's 1999 report on deer hunting, The National Trust banned deer-hunting on its land, and the present Government has promised time to debate the ethics of fox-hunting. Generational differences in the minorities who wished to preserve the practice were likely to reflect social conditions and ideologies when each generation was growing up. When the grandparents were young, scarlet-coated horsemen setting off to enjoy a day's sport was part of the traditional and romantic image of the countryside and until recently hunting scenes were popular themes for Christmas cards. Now such cards have become rare. It would seem that attitudes even to 'pest animals' are becoming kinder, with more emphasis on avoiding destruction, or at least finding more humane means of controlling numbers. The historian, Keith Thomas, described traditional ways of treating wild animals classed as vermin. Deemed to be useless, and 'having made the mistake of

competing with man on his own ground ... they were aggressively exterminated at every possible opportunity' (Thomas 1983:41). While such an approach may be deemed unacceptably callous, attitudes to animals are commonly influenced by social circumstances. The majority of the study's grandparents lived through the harsh conditions of the 1939-45 war, when food was rationed and the Merchant Navy faced constant danger to ensure there was enough to go round. Both foxes and mice were a threat to food supplies and it was only with the return to peace that a more liberal way of thinking about human minorities and animals began to take hold. It is noteworthy that the generational difference as to how fox and deer ($p = 0.02$) and mouse and bird ($p = 0.000$) would be treated was only significant between the students and their grandparents. One grandmother wrote: 'I was always taught mice were vermin', reflecting the cultural and social conditions of her youth.

Ethical issues are commonly of particular interest to students, and today these often include responsibilities to animals. More of the younger people explained their views in terms of current philosophical and moral arguments, such as that 'animals have a right to life' and 'the weaker should be protected from the stronger.' They have grown up at a time when the rights of minority groups are hotly debated, and social exclusivity criticised. Issues of racism and feminism bolstered the movement for animal rights. Utilitarian philosophy, stressing equality based on sentience rather than just rationality, became a popular subject for student debates. Peter Singer was not the only philosopher in the 1970's to publish work on ethical treatment of animals. Richard Ryder also deplored the fact that they were excluded from our moral thinking and coined the word 'speciesism', as did Tom Regan, who made a passionate plea for basic human rights to be extended to animals. When the study's grandparents were young, the idea of rights for animals would have been considered eccentric.

Cultural values changed quite dramatically after the war, largely as a reaction to the years of suffering and conflict. The wartime virtues of self-discipline and loyalty gave way to those of love and compassion. 'The swinging sixties' favoured liberalism and The Beatles were singing 'All You Need is Love'. Nevertheless, these changes in society's traditional values have not been to everyone's liking. Writing in 'The Times' at the start of the new Millennium, Mick Hume lamented that new values in our society were elevating a cult of victimhood over old-fashioned notions of heroism. 'Little wonder, he wrote, 'that Diana, Princess of Wales, the patron saint of victims, has been mentioned as a prospective occupier of the empty plinth in Trafalgar Square. Our anti-heroic age has become one in which heroes and heroism are out of fashion.' He reported that a popular proposal made to John

Mortimer's advisory group was to put 'ordinary women' from the Second World War on the fourth plinth, and that this was likely to be accepted. Further, the proposal which had been received most often was that there should be a monument to animals that have suffered in man's wars. His account epitomises a new way of thinking, with powerful analogies being drawn between people and animals. There is still a feeling of regret that the innocent, human and non-human, were unwitting victims of the War.

The grandparents' greater concern for animal suffering was especially marked in one of the philosophical items on the questionnaire (Question 1, item d). Twenty students and twenty parents expressed the highest level of agreement with Gandhi's aphorism that the greatness of a nation can be judged by the way its animals are treated, but thirty-seven of the grandparents did so. There were, however, some traditional beliefs about human uniqueness which were less acceptable to the students than to the older generations. Their greater reluctance to attribute to humans the unique possession of an immortal soul is a case in point.

When the study's grandparents were young, children were commonly taught that only humans had a life beyond this. More of the study's students disagreed with such a belief, believing that what is the case for humans is also that for animals. More of them chose the option of 'possibly', thus demonstrating an open mind. It is generally accepted that people, especially young people, are now more questioning about philosophical and religious teaching, and the implication of this will be addressed later in the thesis.

Generational similarities

Despite the above findings, attitudes to animals across the three generations were often surprisingly similar. All shared markedly anti-Cartesian views in regard to animal suffering and were concerned about human cruelty to them. Between eighty and ninety per cent of each generation agreed strongly that the public were right to protest against the export of live animals. With the advent of television, we are now much better informed about such matters. It is one thing to read about the trade, but quite another to have pictures of animals, peering through the bars of packed lorries, brought into the living room, with accounts from commentators of the long journeys ahead and how they were going to countries where slaughter regulations were often minimal, or absent. It is unsurprising that a large majority of participants disliked the trade.

Although there was some evidence of fixed attitudes in regard to pest animals, this was not the case when considering the use of animals for purposes perceived to be trivial. A large majority of all generations strongly objected to their use for luxury clothing or entertainment. Yet when the grandparents were young, a fur coat was a symbol of social status, and visits to Bertram Mills and other 'animal circuses' were traditional holiday outings. So in this case, not only have cultural attitudes changed, but the older generations have moved with the times.

Seventy-three per cent of both grandparents and students agreed that we are becoming kinder to animals, yet under forty per cent of each felt that we are becoming kinder to each other. This might seem surprising, because improvements in animal welfare have clearly been part of a continuum of wider social reforms. Yet 66 students, 70 parents and 58 grandparents perceived themselves as belonging to a society which has become less caring. The 'Thatcherite years' are commonly blamed for the fact that society has become over-materialistic, one in which people are valued less for themselves than for their contributions to economic wealth. It is likely that those who now feel this way may welcome attempts to improve the treatment of animals, while at the same time regretting that concern for human wellbeing has not kept pace. They may see themselves as victims of an uncaring society, and animals as victims of an uncaring species. It is certainly the case that we are becoming more humble in our attitudes to other people, for it now seems extraordinary that only two centuries ago the Swedish biologist, Carolus Linnaeus, classified Europeans as 'gentle, acute, sensitive', while American Indians were 'obstinate' and Africans 'crafty, indolent and negligent' (Gould, 1981). The categorisation of humans as rational and ensouled, but animals as irrational and soul-less (Chapters 1-3), has led to great harm being done to animals. It is only within the lifetimes of the study's participants that Western anthropocentrism has been seriously questioned.

The American legal scholar, Steven Wise, has drawn attention to the general subjectivity of classifications, suggesting that we must be highly sceptical 'when we evaluate arguments that confirm the extremely high opinion we have of ourselves' (Wise, 2000:137). Because different animal species vary enormously, he is calling for some to be regarded as 'persons' in the eyes of the law. Philosophers with an interest in the ethics of animal treatment are now using this concept of 'person', as distinct from 'human being'. They are defining 'persons' as beings who are self-aware, and have desires about their own future (Singer 1987, Midgley 1996, Hursthouse 1999, Goodall 2000). They argue that as 'persons' rights should be extended to those animals with cognitive and emotional capacities equal to human

children and less mentally competent adults. Ethical treatment should take account of the fact that such animals are fundamentally different from, say, insects. Killing a snail humanely is less immoral than killing an ape, because a snail does not have desires for its future. Steven Wise wishes to have the concept of personhood extended firstly to chimpanzees and bonobos, both of which have been widely studied and found to have cognitive skills and mental states similar to those of some humans. If the higher apes have such capacities, how is it possible to justify their use for experimental purpose, or to capture and imprison them for human benefit? As knowledge of animals continues to increase, it is clear that many species have much in common with us. Those unsympathetic to his approach are anxiously asking the question: 'Where will it all end?' This is a difficult question to answer. Dogs are commonly regarded as 'persons' by their owners (Chapter 5, and see Sanders, 1999: 28–30), and there is evidence that pigs have intelligence comparable with that of dogs.

Over seventy per cent of the three generations believed that religion and philosophy had not insisted sufficiently that our kindness should include all living creatures, a view which may account for the current interest in more inclusive Eastern ideologies. Although adherence to the human–animal boundary is generally fading in Western society (Chapters 1–3), findings in this study suggest a growing concern that this is still too slow.

Stereotypical ideas that people like either people or animals, and that many prefer animals to each other, were not borne out in this study. Given the option of donating money to a selection of human and animal charities, a majority from each generation chose some of each. Very few gave exclusively to animal charities, only five students, one parent and two grandparents. There was thus no evidence that the number of people supporting animal welfare exceeds that for humans, or that giving to human and animal charities is an either/or affair. Mary Midgley (1983:25) has pointed out that 'pressures of competition are not usually so sharp that, though real, they automatically become seen as having total priority over those of other animals' and this study suggests that a large majority of people agree with her. When it comes to charitable giving, animal welfare should be supported, but species loyalty and commonsense dictate that there are times when humans should have priority.

Attitudes to the environment

The last section of the questionnaire examined generational differences in regard to

environmental concerns. As previously reported, over the ten items the level of agreement was such that there were no statistically significant differences between the three groups. In some items there was an especially high level of agreement between the students and their grandparents. Yet many of today's environmental problems were unknown when the grandparents were young. They were then small local affairs, confined to the areas in which particular groups lived. Today's global population increase and sophisticated technological developments have put enormous pressures on the environment as a whole.

It might be supposed that the oldest generation would be more detached from problems which have not only come about relatively recently but which will never directly affect them. This, however, was not the case. Students clearly have a concern for the world of their future, a concern shared by even school-aged children (Francis, 1997). Yet the study's grandparents were equally concerned with the world they would leave behind. Although students gave the highest status to animals, it is interesting that when asked whether environmental issues should address the welfare of both humans and animals, students and grandparents had identical scores, with 51% of each reporting the highest level of concern, and 42% of the parents doing so. Grandparents tended to take the most peaceable view, twice as many (68%) as students (34%) expressing the highest level of agreement that we should live in harmony with the environment (parents, 54%). When asked if environmental issues should address the welfare of both humans and animals, students and grandparents were again almost exactly matched, with 90% of students, 92% of their parents and 92% of their grandparents agreeing that they should (Table 10:1). Grandparents saw an ideal world as being one in which consideration was given to the needs of both humans and animals. They were concerned not only for present, but future generations. This accords with Erikson's theory of generativity (1963: 267), which holds that later life brings an especial concern for the welfare of posterity. Jung's theory of ideal development in older age also suggests increasing peacefulness in later life. One grandparent summed up what appeared to be a quite general feeling of her generation; 'It's a beautiful world – let's keep it that way'. Another reported a fear commonly expressed today, 'It is greed that leads to animals being pursued relentlessly', while a parent pointed out that 'Creation is not man's to destroy.'

The findings of this study demonstrate a growing concern for both the welfare of animals and health of the environment. Both have become serious moral issues within the lifetime of the three generations.

However, in interpreting and discussing the findings it must be borne in mind that the sample was not representative of the general population, so results can only be generalised to a limited extent. Respondents were likely to have an above-average interest in education, and education has been shown to exert a strong influence on people's perceptions of animals (Kellert, 1983). It would be surprising if it were not also influential in regard to environmental problems. Approximately three quarters of the population were female and there is evidence that women react more emotionally and empathetically to the suffering of animals (Driscoll, 1992, 1995; Eldridge and Gluck, 1996; Fogle, 1999). Results in the current study accorded with previous findings regarding this gender difference. Both at the level of abstract thinking (Question 1) and with more practical issues (Question 13) females showed a higher level of concern for animals.

Despite these limits on the sample's representativeness, there were advantages in having relatively similar generational groups. Some items in the questionnaire called for literacy and clear thinking, and may not have been as suitable for a random sample. Even allowing for slight discrepancies, the responses would seem unlikely to be restricted to the particular groups sampled here. With minor adaptations to the questionnaire, replication to other populations could be undertaken.

The results reported give only a 'snap-shot' view of people's attitudes, and do not address the extent to which generations may themselves change. A longitudinal enquiry investigating generational changes over time would be a useful addition to the findings presented in this study.

Although there was evidence that younger people's attitudes to animals tended to be less anthropocentric than among those who were older, at the practical level of how animals should be treated there was much similarity. A large majority of all generations indicated that moral consideration of animals is a serious issue, and, to quote the theologian Andrew Linzey (1998), that animals should now be 'on the agenda'. The final part of the thesis will consider the extent to which this is the case among those whose job it is to consider ethical issues, and how these issues currently relate to human treatment of animals.

PART 4

AN INVESTIGATION INTO THE EXTENT TO WHICH CHRISTIAN
MINISTERIAL COURSES AND UNIVERSITY COURSES IN MORAL
PHILOSOPHY ARE ADDRESSING THE ETHICAL TREATMENT OF
ANIMALS

CHAPTER 11

AN INVESTIGATION INTO THE EXTENT TO WHICH CHRISTIAN MINISTERIAL COURSES AND UNIVERSITY COURSES IN MORAL PHILOSOPHY ARE ADDRESSING THE ETHICAL TREATMENT OF ANIMALS

INTRODUCTION

The previous enquiry found that over the past three generations attitudes to animals have been changing. Today's students attributed a higher status to them than did their parents, and still more their grandparents. There was, however, strong agreement that the right treatment of animals is a serious issue, and one which has been too long ignored. Over seventy per cent of all generations agreed with Albert Schweitzer (1875–1965) that 'religion and philosophy have not insisted as much as they should on the fact that our kindness should include all living creatures.'

The present study sets out to investigate whether this growing concern is being addressed by those whose work it is to examine moral issues, in particular those teaching Christian ministerial students or students in university departments of philosophy.

Historically, neither philosophers nor theologians have accepted that humans owe duties to animals. Philosophers have excluded them on grounds of their lack of rationality, and theologians because of their lack of soul. More usually, both have simply ignored animals in their moral thinking (Carson, 1972:59; Serpell, 1996: 153, 166). There is, however, some evidence of variation within religious denominations. An Australian study reported that attitudes to animals varied from one church to another, with Quakers having the most positive attitudes, and Baptists the most negative (Bowd and Bowd, 1989). However, it would generally seem that those most concerned for animals are less likely to be churchgoers. An American investigation found that two-thirds of animal rights activists were not members of any mainstream religious group (Galvin and Herzog, 1992), and another reported that religious beliefs were negatively associated with ideological support for animal rights (Peek, 1997). In 1998, the Christian theologian, Andrew Linzey, wrote, 'Those who wish to justify the exploitation of animals regard the Christian tradition as the last bastion of anti-progressive sentiment' (p xii). He then went on to make a powerful argument for a change in Christian thinking.

Should animals be included in our moral thinking?

After centuries of neglect, the past forty years have seen an explosion of concern as

to how animals should be treated. Ruth Harrison started the campaign in 1964 with her book 'Animal Machines', and in 1975 Peter Singer's seminal work, 'Animal Liberation' became a best seller despite its critical account of human treatment of 'factory farmed' animals, an account which it might have been more comfortable to ignore. Focussing on the vast amount of suffering endemic in intensive farming systems, Harrison and Singer argued that in wealthy Western societies such exploitation of animals cannot be morally justified.

Today very few people take the Cartesian view that animals are incapable of suffering, and the previous study suggests that the more we get to know about animals, the more pressing ethical issues become. As a result of wider travel, universal education and knowledge which comes via the media, it is now clear that many animals have a capacity for suffering similar to our own.

It is also generally accepted that groups of people should not be excluded from moral concern on grounds of their religion, race, or gender. This in turn has raised questions of whether it is similarly wrong to exclude animals, just because they are not 'one of us'.

Reasons for including the ethical treatment of animals in the curricula of Christian theological colleges.

Although love, charity and mercy are key Christian virtues, it has commonly been assumed that biblical teaching applies to how people should treat each other. Where do we look for guidance as to whether Christians have a duty to extend these virtues beyond humanity?

The story of the 'Good Samaritan' teaches that those outside our particular group may nevertheless have a claim on our charity. His goodness lay in the fact that he chose to bestow kindness unreservedly, and because he did so he is held up as an example of right Christian behaviour.

Michael Appleby (1999) has noted that God commanded that animals of every kind should be saved from the flood, not just those which Noah liked, or would be of use to him. Although Noah was Jewish, a member of a sect holding some animals to be 'unclean', none was to be excluded. Furthermore, the covenant God had made with Noah and his family included every creature: 'I establish a covenant with you ... and with every living creature ... of the fowl, of the cattle, and of every beast of the earth ...' Rather than being couched solely in human terms, God described

his covenant as being 'between me and the earth.' (Genesis 9: 9-13). There are various references in the Old Testament as to how people should treat animals: 'A righteous man regardeth the life of his beast ...' (Proverbs 12:10), and the Isaiah injunction which is even more strict, and seldom quoted: 'He that killeth an ox is as if he slew a man ...' (Isaiah 66:3).

The form of teaching in the New Testament differs from that of the old, in that it focusses less on specific rules and more on what is required for human goodness. In the beatitudes, the Christian virtues are left unqualified. Thus 'blessed are the merciful' is not restricted in any way. It is not limited to our family, nor to our friends, to members of our own race or of our own religion. The teaching is that being loving and merciful is simply the right way for a Christian to be. Similarly, after the injunction 'love thy neighbour', there is no restriction put on the concept of neighbourliness. Yet the Christian church is commonly perceived as lacking in mercy and neighbourliness in regard to some groups of humans, and to all animals. As recently as 1995, the editorial of the 'Daily Telegraph' specifically referred to the 'post-Christian ethic', making secular thinking the reason for more enlightened attitudes to animals:

'It seems increasingly part of a post-Christian ethic ... to nourish the belief that animals possess dignity, personality and spirit that entitle their interests to be considered in the same fashion as the rest of us.' (10 January, 1995)

It is worth noting that in the year following this Daily Telegraph editorial the Reverend Andrew Linzey was appointed to Mansfield College, Oxford, as holder of the world's first post combining theology and animal welfare. Peter Singer may be right in claiming that for its first 1,800 years Christianity put non-human animals outside its sphere of moral concern (1985:3), but it should not be overlooked that it was members of the Christian churches who played a prominent part in the rise of the nineteenth century humanitarian reforms, including those concerned with animal welfare. Early-Victorian campaigns against cock fighting owed much to information provided by country clergymen, even though they had to ask for anonymity - 'it could be dangerous to provide such information' (Harrison, 1982:98). In 1824, an Anglican clergyman, Arthur Broome, called the first meeting which led to the establishment of the Royal Society for the Prevention of Cruelty to Animals. He became its secretary and ended up in prison trying to pay for the Society's debts, 'from which discouraging situation he was rescued by the generosity of ... (the) humanitarian, Richard Martin' (Hume 1957:2). Early members of the RSPCA included William Wilberforce and Lord Shaftesbury, both of whom saw compassion for animals as a religious duty. Church people were also

responsible for establishing the 'Bands of Mercy', whose purpose was to educate children in compassion, including that towards animals (Harrison, 1982:98-99). Yet, in general, churches have not done very much to further the work of their earlier reformers.

A number of theologians are now trying to rectify this position by publishing works stressing the need for a more inclusive view of creation. The titles of their books suggest a dynamic approach: 'Good News for Animals? Christian Approaches to Animal Well-Being' (Charles Pinches and Jay B. McDaniel, 1993), and 'Animals on the Agenda' (Andrew Linzey and Dorothy Yamamoto, 1998), implying that 'animal issues' are being taken seriously in church teaching. There would seem to be little criticism of their views, but Linzey takes issue with the fact that so many still ignore the whole area, '... it cannot be right for theological practitioners to carry on their business as though the world of animals was invisible' (1998:xx).

Clearly there are influential churchmen who are not ignoring the issues. In 1977 Archbishop Donald Coggan accepted the Presidency of the RSPCA, stating that animals have rights which must be respected, and a more recent Archbishop of Canterbury, Dr. Robert Runcie, argued against both non-medical experiments using animals and the cruelties endemic in intensive methods of farming (Linzey, 1999:288). The Right Reverend John Baker, currently patron of Animal Christian Concern, writes extensively on the matter and holds services where people bring their animals with them. The present Archbishop of Canterbury is Assistant Director of the RSPCA.

Yet despite their encouragement, Sunday sermons seldom promote their views, or those of saints who cared about animals. How many sermons tell of St. Thomas More (1478-1545) and his 'Utopia', where there was no violence towards animals? How many take as their subject the story of St. Francis of Assisi, who referred to animals as 'brethren' - a notion of kinship which might well appeal to present-day church congregations, and especially to the young? How many congregations hear the words of Dostoevsky, cited by the current Eastern Orthodox Ecumenical Patriarchate: 'Love the animals: God has given them the rudiments of thought and untroubled joy. Do not therefore trouble it, do not torture them, do not deprive them of their joy, do not go against God's intent' (Orthodoxy and the Ecological Crisis', 1990.) The Anglican Society for the Welfare of Animals reports 'Surely we must stand up loud and clear and declare the intrinsic worth of every creature, our responsibility towards each animal ...' (Bulletin 34, Autumn 1989). But this is surely the crux of the problem. Few churches are 'standing up loud and clear.'

If future generations of clergy are to address these new ways of thinking, and their relevance to Christian teaching, it is necessary that animal ethics is included in their courses, for most of them will be breaking new ground. The findings in Chapter 9 would suggest that without such guidance they may be missing a great opportunity to bring more people, and especially the young, to church services. Today's students see the treatment of animals as an important issue, and it is generally held to be the younger people who are drifting away from the churches. A failure to address these issues has encouraged a feeling that churches are generally uncaring, to the extent that some are seeking solace in religions taking a more inclusive view of creation. Bishop John Baker writes 'The sad truth is that the Churches as institutions have just not been interested in animals and their welfare - which is why most animal welfarists today have deserted the Church' (Animal Christian Concern, Autumn 1999).

People do look to their churches for guidance and clarification of moral dilemmas, and it is not uncommon to meet churchgoers who give as their main reason for attending church that it makes them think about things they would otherwise not have considered. If they leave church feeling that a moral problem has been addressed, that they have been shown how to feel good about their decisions, they are likely to return.

In the Catholic Herald, 20 February 1998, a reader expressed concern about her religion's lack of compassion for animals and questioned why there was no concern for their place in the order of creation and redemption. She asked, 'Has (sic) clerical training and theological thinking been so narrow that such questions have never been raised?' The paper's editor added a note to the effect that the letter was typical of others received '... people despairing of their Church ever accepting that the animal and human world are closely interlinked, both deserving of our love, care and compassion.' If Christian teaching is to be relevant to contemporary moral thinking, these concerns need to be addressed, and the younger generation of clergy will need to know how best to do so.

Those who live closely with animals are particularly likely to question some traditional Christian teaching. It has for instance long been held that humans are unique in the possession of a soul, so that they alone have the possibility of an existence after death. Today many people are less sure about this. In the previous study around 70% of respondents thought that what was the case for humans would also be that for animals - either there was an ongoing existence for both, or there was none for either. Do those training ministerial students know about this

important change in thinking, and if so, what advice are they giving to those who will be in at the 'sharp end' of dealing with such questions? And when much loved animals die and their owners mourn for them, how much help can they expect from their churches? Will they be embarrassed to ask, fearful that their grief may be dismissed as trivial? Will the new generation of clergy be able to handle their concerns with confidence? What will they have to say to those who confess to a troubled conscience about some of our treatment of animals?

Reasons for including the ethical treatment of animals in the curricula of university departments of philosophy

As was demonstrated in Chapter 9, most people do care about animals, and recognise that we have no God-given right to ignore any suffering we cause them (Scruton 1996). In consequence, many feel uneasy about the ways in which some are treated. Such individuals were described by Festinger (1957) as being in a state of cognitive dissonance, a state of psychological discomfort. Good mental health is associated with right philosophical thinking, and it is worth noting that the first psychologists were also philosophers (Leahey, 1980:26).

Now it has been shown that many animals suffer pain much as we do, moral thinking about them has to take account of the fact. The Cartesians denied animal pain in order to feel more comfortable about using them to further their knowledge of anatomy, but today we are unable to deny commonsense experience in this way. Neither can we escape from the fact that we are social and empathic beings who both think and feel about moral issues. Most of us do like to envisage ourselves as kindly, and if it becomes clear that in one area of our lives we are lacking in compassion, a discrepancy arises between what we see as this kindly self and our less acceptable actual one. It is this discrepancy which commonly causes discomfort (McAdams, 1994). Thus, our philosophical views and psychological makeup are inextricably linked.

Because humans are social beings, they cannot be totally selfish. At a simple level ethical concerns may be based on reciprocity, but morality frequently extends beyond this and there are sound reasons why animals should be included in these personal concerns (Midgley, 1983). Companion animals are accepted as part of a human family (Chapter 5) and it is quite reasonable that we should give them some of our affection, time and money. It is also wrong to think of animal and human welfare as mutually exclusive, and the large majority of respondents in the previous study would include both humans and animals in their charitable giving. The

assumption that the needs of humans should always take priority over those of animals is now being challenged.

Historically, Western philosophy has taken a competitive and over-abstract view of man's relationship with animals (Chapters 1-3) but modern philosophers are seeking a more appropriate way of thinking about them and continue to debate how this can best be done. While Peter Singer puts emphasis on one common feature, a shared capacity for suffering, and Tom Regan on animal rights, others argue that the ethical treatment of animals should be grounded in human virtue. No one theory can settle all ethical issues and different theorists may adopt an eclectic approach. Roger Scruton, for instance, holds that humans have duties to animals, yet argues that in the right circumstances it is morally permissible to eat them, hunt them or wear their skins. His defense of fox-hunting is especially controversial, for he believes that the practice is morally right as long as people do not derive a sadistic pleasure from it, and, as a fox-hunter himself, claims that 'sadism towards the fox' is rarely one of the vices displayed on the hunting field (1996: 95). His observation is almost impossible to test empirically, and it certainly goes against public opinion.

Seventy-eight per cent of all respondents in the previous study thought that hunting as a country sport should be stopped, and seventy-eight per cent also agreed that animals should not be used for entertainment. Roy Hattersley seems to have encapsulated the views of many people when he wrote, 'I have long supported whoever it was who said that the real objection to fox-hunting is the pleasure that the hunters get out of it ... If killing foxes is necessary for the safety and survival of other species, I - and several million others - will vote for it to continue. But the slaughter ought not to be fun' ('The Guardian', 21 April 1990).

Scruton, however, suggests that it is the loss of piety that leads to cruelty, defining piety as 'an attitude in which the species were regarded as sacred, and humanity had not yet asserted absolute sovereignty, rather than humble trusteeship, over the works of nature'. Such piety requires that we abandon any title to deal with animals purely as instruments or things (1996: 560). He believes that using animals as means to ends (an idea put forward by Kant) is wrong, because it is against piety. Yet piety is a virtue, and only by adopting a Utilitarian stance can he argue that the pleasures afforded to the huntsmen and their horses, and the contribution to the landscape made by farmers who preserve parts of the countryside for the sake of the hunt, exceed any cruelty involved. This still ignores the fact that a Utilitarian calculation would need to take into account the discomfort of the majority

who see hunting as wrong (Chapter 9) and that the destruction of parts of the countryside would be a loss to present and future generations. As well as this, there are other forms of wildlife which inhabit the copses and woods which Scruton claims are only preserved in the interests of fox-hunting. A virtue theorist would not attempt to calculate costs and benefits in this way, but would simply ask 'Is the practice not callous?' and on this question Scruton is silent (Hursthouse, 1999: 187). Virtue theorists would argue in terms of compassionate and unselfish action, which would be in line with Christian principles.

Ethical treatment of animals is an area of great complexity, and inevitably there are 'tragic conflicts'. It is, however, important that religious and secular teaching should not ignore the issues. Although different theories may not by themselves settle complex arguments, debating the issues from different standpoints commonly leads to a degree of consensus. It is the work of philosophers and theologians to address people's concerns as to what is right conduct, and to examine the issues in the light of new knowledge and new ways of thinking. It is especially important that this should be done when assumptions and ideas have become entrenched through habit.

Psychology was founded as an attempt to provide scientific answers to philosophical questions (Leahey, 1980) and in this way, theology, philosophy and psychology should come together. It is today's students who will play a large part in influencing the ideologies and policies of tomorrow. The present study thus sets out to investigate the extent to which those in ministerial training, or following courses in moral philosophy, are being encouraged to think about the different issues involved in the ethical treatment of animals.

CHAPTER 12

AN INVESTIGATION INTO THE EXTENT TO WHICH CHRISTIAN MINISTERIAL COURSES AND UNIVERSITY COURSES IN MORAL PHILOSOPHY ARE ADDRESSING THE ETHICAL TREATMENT OF ANIMALS

METHODS

As was demonstrated in the previous study, people are increasingly concerned about some of the ways in which animals are treated. Over the past few decades much of the 'animal kingdom' that used to be so clouded in mystery has become knowable, and a matter of considerable interest. Reporting how the social lives of other species are frequently very similar to ours, how their emotional and cognitive capacities are in many ways comparable to our own, ethologists have presented us with both fascinating insights and new dilemmas, and questions as to how animals should be treated have become matters of much wider concern. In particular, what should be done when their interests conflict with ours?

For centuries moral dilemmas were only concerned with how we should treat each other, and animals were given little attention. It was far more convenient simply to regard them as personal property, but in the light of new knowledge and better means of communication, theories concerning the ethical treatment of animals have escalated in a quite spectacular way. Animal welfare itself has emerged as a large and respectable field of inquiry (Serpell, 1996: xviii), and within both philosophical and theological circles it is argued that there is need for a re-consideration of the moral status of animals. Once having emerged as serious moral issues, they can no longer be ignored, for as Mary Warnock (1990) points out, we neglect moral issues at our peril.

From a Christian point of view, Andrew Linzey sees it essential 'to articulate a theological understanding in which 'the animal question' can be fairly put and assessed' (Linzey, 1998: xx), and there is evidence that, at least to some extent, this is now being done. In fact, Jay B. McDaniel has written that creation-inclusive theologies, although still too often ignoring animals, are now emerging in abundance (1993: 75). But outside academic circles, how many people know about these newer theologies? Are they being included in sermons addressed to ordinary church congregations and, if so, are animals included alongside environmental issues? To what extent is the ethical treatment of animals being included in courses for ministerial training, or in universities teaching moral philosophy? In order to investigate this, questionnaires were sent to both types of institutions.

Administration of Questionnaires

Institutions approached:

1. Theological colleges/courses

A total of forty-one questionnaires were sent to theological colleges and regional courses for ministerial students. The list was taken from the Church of England year Book 1998, which listed thirteen Anglican colleges and eleven Regional Courses, all of whom were sent questionnaires. Questionnaires were also sent to the three colleges listed in the United Reformed Church Year Book, UK, and to the five listed in The Baptist Union Directory, 1998-9. Three went to the colleges listed in the Methodist Church Annual Directory 1999, four to Roman Catholic Colleges in the Catholic Directory of England and Wales, 1999, and one to the Salvation Army (Salvation Army Year Book 1999). A questionnaire was also sent to the Religious Society of Friends in Great Britain, at their London Headquarters. Some colleges indicated that they were interdenominational and were on two lists, but where there was an overlap, only one was approached. (Appendix D. Names and addresses of ministerial colleges/regional courses sent questionnaires.)

The questionnaires included a brief explanation of their purpose: that I was undertaking postgraduate research at the University of Southampton investigating attitudes to animals. Those involved in ministerial training were asked if the subject 'was touched upon' in their courses, a phrase intended to be more encouraging than a direct question as to whether the subject was included. Five short letters of introduction were written for me by the retired Bishop of Salisbury, The Right Reverend John Baker, who is patron of Animal Christian Concern and particularly interested in this area. These were to people he knew personally. He wrote: 'Speaking as a theologian, I believe her findings will prove of theological and pastoral interest.' Six further letters of introduction were also written by a theologian family friend, to principals/course directors known personally to him. These letters were also informal and referred to the value of the research. (Appendix E. Questionnaire sent to ministerial colleges/regional courses).

2. University Departments of Philosophy

Twenty-three questionnaires were sent to all the university departments of philosophy which offered courses in moral philosophy or applied ethics, as listed in The World of Learning, 1999. (Appendix F. Names and addresses of university

departments of philosophy sent questionnaires.)

Design of Questionnaires

Including both theological colleges and ministerial training courses in the enquiry enabled the population size to be increased, and also brought in students with both academic and more work-related backgrounds.

The first items on both questionnaires enquired whether 'animal issues' were included within the curriculum. However, because there are differences in language commonly used by the two types of institution, theological courses were asked if human relations with animals were included, and departments of philosophy whether the issue of human-animal status was addressed. Each was then asked if there had been changes in regard to this over the past thirty years or so, whether there were planned changes for the future and, if so, what these changes were likely to be. New courses, or extension of present ones, would suggest an increasing demand on the part of students, and/or a recognition that ethical treatment of animals is a subject of moral concern which needs to be taken on board.

Although it might be expected that those teaching theology and philosophy would approach the subject rather differently, it was planned to keep the two questionnaires as similar as possible. Both asked whether there was a section of the syllabus allocated separately to animal welfare, animal rights, and human-animal relationships. The concept of rights and duties is more philosophically based, and to some extent less specific to religious teaching. Animal rights are often set against rights for people, especially human minority groups. They are, however, more robust than a welfare approach, which depends to a large extent on human goodwill. Often there are no very clear-cut differences between the two systems of ethics. Andrew Linzey speaks of 'theos-rights', based on respect for what God has created, with the concept of rights being God- rather than animal-centred. Ethical actions founded on the right relationships with animals may be less precise, but are especially relevant for people with personal experience of animals. With the increase in urban living, pet ownership is the means by which most people form relationships with animals. Some people base the right treatment of animals on feelings of love and compassion, some argue in terms of rights and duties, some stress the need for respect for all God's creation, and others that equality with animals should be based on a shared capacity for sentience. Many people, however, take a hybrid view, which may be perfectly reasonable. No one moral theory can decide what is right in all circumstances, and what is more important to this investigation is whether

human responsibilities to animals are included within courses as a serious moral issue.

Both questionnaires asked if moral issues about animals were included in examinations. Such inclusion would clearly indicate a higher degree of commitment to the whole area, and a rider was added to the effect that a specimen exam question would be appreciated.

Another item asked if students were given an option of studying the topic in greater depth. This again would suggest a greater interest in the whole area, and a recognition of its depth. Respondents were asked if their courses allowed for this, and, if so, for an indication as to how it was done.

The final item common to both questionnaires asked whether students were given a reading list specific to the area, and if so which authors were included. Such a list would indicate that the subject was considered worthy of serious academic study. Moral issues poorly thought out are especially prone to prejudice and sentimentality, and this has certainly been the case with attitudes to animals. (Appendix G. Questionnaire sent to university departments of philosophy.)

Enquiries specific to Christian teaching

Questionnaires sent to teachers of ministerial courses were somewhat longer, in that they also included items specific to Christian teaching. Respondents were asked whether any training was given on counselling those who are grieving for an animal. This takes into account changing attitudes as to the nature and value of animals, and the importance of relationships with them. Often there has been a complex and well-developed system of communication between owners and their companion animals (Chapter 4) and the loss of such shared communication is likely to be felt very keenly. It is a common experience for those who have lost a much-loved dog to be given the well-meant advice that he or she should 'get another dog', thus dismissing the grief as somewhat trivial. Such lack of sensitivity may add to the distress. And unlike human bereavement, the subject is seldom addressed in church. It is noteworthy that when the question of animal bereavement was investigated by Gerwolls and Labott (1994: 182), they reported that 'of the most significance in the current study was the finding that the experience of the loss of a companion animal is remarkably similar to the loss of a significant human relation.'

It may be that there is a legacy from the past, when human-animal bonds were

discouraged, and even seen as a threat to religious belief (Serpell, 1996: 150). Whatever the reason, people mourning the death of an animal do need sympathetic support, for the loss is very real to them. Typical of comments made by respondents in the previous study was that of a student who wrote 'When my dog died, I felt I had lost a friend.' Among older people, particularly the widowed, or those living alone, the loss is even harder to bear. The animal may have been part of their later life history, a link with a spouse, or a close friend. It would be very helpful if ministers, with or without personal experience of animals, were taught how to understand and respond sympathetically to such grief.

The following question also specifically related to Christian teaching about animals, in that it asked about the teaching as to whether animals had the possibility of a continued existence after death. At one time most churches would have given a firm 'No', an answer based on the fact that possession of an immortal soul was unique to humans. In the previous three-generational study, however, a majority of respondents believed that what was the case for one was also that for the other (Questionnaire, Chapter 9, item 19) and recently some theologians are reconsidering the issue (Linzey, 1987, Echlin, 1997). The questionnaire avoided use of the word 'soul', in that the possibility of an afterlife leaves less room for interpretation.

In the 1950's, Charles Hume argued that animals are down-graded in moral status by being denied a soul, and are then more easily exploited. He pointed out that the assertion 'animals have no souls' is meant to imply that they are inferior beings, and as such not entitled to consideration (Hume, 1957/1980). Despite recent changes in attitudes, it is still the case that things are done to even highly-evolved animals that would be considered immoral if they were done to humans. Animals continue to be experimented upon (Jamieson 1985; Rollin 1990; Wise 2000), hunted for sport, and forced to suffer for our amusement. Would these things be done if they had the status of ensouled beings, who eventually, like us, would be re-united with their Creator?

Sufficient space was left for an explanation of teaching about animal soul; whether, for instance, respondents might wish to relate their answers to particular species, or types of species. Some might wish to include only animals higher up on the phylogenetic scale. The majority of respondents in the previous study took an inclusive view, but this could well be debatable. Although the issue is commonly avoided in church teaching, it is a question which the new generation of clergy may well be called upon to address.

A final question asked if moral responsibilities to each other should be extended to sentient animals (those capable of experiencing pleasure and pain.) There was a high level of agreement in the previous study that we do have a responsibility to avoid unnecessary animal suffering.

At the end of the questionnaire, respondents were invited to add any further observations and comments they might wish to make and, as some recipients might find it more appropriate to pass the questionnaire over to a colleague, were asked for their names and positions within the institution.

Freepost addressed envelopes were included with all the enquiries, and as both questionnaires sought the help and co-operation of very busy people, thanks were sincerely expressed to those who were willing to support the project.

CHAPTER 13

AN INVESTIGATION INTO THE EXTENT TO WHICH CHRISTIAN MINISTERIAL COURSES AND UNIVERSITY COURSES IN MORAL PHILOSOPHY ARE ADDRESSING THE ETHICAL TREATMENT OF ANIMALS

RESULTS

Teachers of ministerial students

Forty-one questionnaires were sent to teachers of ministerial courses in Britain. These included principals or directors of studies of theological colleges, regional courses, seminaries, and the headquarters of the Religious Society of Friends in Britain.

After three weeks, 18 (44%) of questionnaires had been returned, and follow-up letters were then sent to those who had not replied. After a further three weeks, another 5 questionnaires were received, bringing the total response figure to 23 (56%) of the 41 sent, (percentages given to the nearest whole number). Two respondents substituted letters for the questionnaires. The Society of Friends wrote that they did not have ministers, but referred me to their publication 'Quaker Faith and Practice' and, in particular, to the section 'Advice and Queries', part of which relates to the treatment of animals. The Principal of the East Midlands Ministry Training Course felt it would be more helpful to write a letter about some of the queries raised.

Results of questionnaires returned by those training ministerial students

It is recognised that some teachers of ministerial students will be both theologians and philosophers. However, the enquiry concerns what is taught in theological courses, and in departments of philosophy.

1. Inclusion of the subject within the curriculum:

Eleven of the 22 respondents (i.e. excluding the general letter sent by the Society of Friends) reported that considerations of human-animal relationships were addressed in their courses, while a further nine said that they were, but only in a minor way. Perhaps they were reluctant to overstate the position but they qualified their answers by comments such as 'very little'; 'here and there', 'only touched upon slightly', 'indirectly', or 'only optional'. The letter sent in lieu of a questionnaire also said that 'it would not be true to say that the place of animals plays a very major role'. However, although such comments may appear half-hearted, they may

indicate potential interest – there was not much at present, but there was something more than a glimmer.

2. Changes over the past thirty years:

The second item asked if there had been any relevant changes over the past 30 years or so, and if so what these might have been. This question was not applicable to the Society of Friends, and the other letter suggested that attention to the topic was in its very early stages. Nevertheless, 11 (50%) reported that there had definitely been changes, and 5 did not know. One of the latter 'suspected' that 'the area is now dealt with more explicitly.' Those who were more positive reported a greater emphasis on the place of animals in the community of creation, that the purposes of God were now seen to be for all that God had made, and that there was a recognition of human stewardship for the earth. Three respondents pointed out that the matter was hardly considered 30 years ago. Another suggested progress in that developments in the curriculum were 'following theological studies of eco/animal issues.' Reports, or implications, of a growing interest were in line with the developments found in the previous, three-generational study, although less precise.

3. Changes planned, or envisaged, for the future:

The anticipation of further change caused some difficulty and was commonly reported less specifically. The situation 'was being monitored', or the curriculum was 'under review'. One respondent said that the matter of ethics teaching was due to be raised over the next two years, and one mentioned uncertainty about staffing. Time was limited; 'We have too many modules already.' However, two respondents were clear about future changes, one reporting that there would be a growing awareness of God's purposes for the whole of creation, and the other that it would have brief inclusion within the Pastoral Theology syllabus. Interestingly, the latter attributed this addition to a sermon which had been given on human-animal relationships.

4. The theological syllabus and animal welfare:

In three courses a section of the syllabus was allocated separately to animal welfare, animal rights and human-animal relationships. Fourteen per cent of respondents reported that animal welfare was specifically addressed, 33% that this was so with animal rights (in one case, covered in one particular ethics seminar) and 29%

considered human–animal relationships. In three other courses, while not considered separately, the issues might be addressed elsewhere – some students might be able to choose it for an extended essay, a possibility 'although largely self-directed'. While 62% of the questionnaire respondents (excluding the two who substituted letters) did not address any of the three issues specifically, 74% reported that one or more came up within other topics, in Christian ethics generally, or within teaching on spirituality, in pastoral theology or ecological responsibility, or by consideration of holistic approaches to Christian ethical teaching. Two answers were qualified however with information that the topics were only addressed 'in a very limited way', or 'touched upon very slightly.' Animal welfare was addressed as a specific issue within three courses, animal rights in seven, and human–animal relationships in six.

Overall, it would seem that a majority of the 22 respondents (including the letter sent in lieu of the questionnaire) were aware of the different approaches to understanding the ethical treatment of animals but at present addressed them in only a general way. In view of limited time and other moral issues, this is understandable, although indicating that ethics of animal treatment does not receive a very high priority. The fact that 44% of the questionnaires were not returned suggests some reluctance to get involved with the area.

5. Examination questions set:

Setting relevant examination questions must indicate a higher level of commitment. Seven respondents reported that relevant questions were given on their examination papers, along with other choices. Three courses had no examinations of any kind, so the question was inappropriate to them. Three others reported that they set assessed essays or assignments instead of exams, and 'animal issues' would be an acceptable option. One respondent reported that they were currently thinking about putting such questions on examination papers later on.

Four respondents enclosed copies of examination papers. The first, an Anglican college, included the questions 'Is cloning wrong?', 'Why should Christians care about animals? (with the implication that they should)', 'What rights should be granted to animals?' and 'Discuss the moral issues raised by the transplantation of animal organs into human bodies.' The paper set by the second Anglican college included the question 'In what senses, if any, should we speak of the rights of animals?' The title of the module taught by a United Reformed College was 'Issues in Bioethics', so its questions were scientifically orientated. One asked 'How should

Christians regard the natural world and what are the implications of your answer for medicine and biotechnology?' and 'What limits, if any, should be placed on our use of animals in medicine, biotechnology and scientific research?' A Methodist College gave a case study: (A medical research laboratory is using animals from mice to chimpanzees for cancer research. The Director is a member of your church, and the youth group leader an animal rights activist. Both have asked for your support. Prepare a detailed outline of a talk noting relevant background information, the main ethical points to be considered, relevant material from Christian scriptures and tradition, your answer to the question and your reasons why.) Two respondents (both Roman Catholics) gave examples of the sort of questions they asked. Both asked 'Do animals have rights?' and one 'Should Christians be vegetarian?'

6. Option of studying the topic in greater depth:

Fifteen courses (68%) either offered or were thinking of allowing an option for individual students to pursue animal issues in greater depth. In one case this was within the choice of a B.Th thesis, and in another as part of an M.Th thesis in Ethics. Generally, however, there was an implication that such a choice would be unusual, and outside the range of normal tuition. Thus it 'might be a possibility', or would be 'largely self-directed' or done 'by independent study'. One respondent wrote that it could be possible, if students were particularly interested, and another that it could be linked to environmental ethics. If interested students wished to address this area, the issues might be chosen for dissertations, extended essays or as assignment topics.

7. Reading lists:

Seven respondents said they did have a relevant reading list and gave names of suggested authors, but three of these mentioned only one name (Andrew Linzey twice and Peter Singer once) and five others gave no names. Two others were vague, just writing 'might suggest animal rights', and 'books on animal rights'. Andrew Linzey's work was most frequently recommended (5 times), then Peter Singer's (3 times) then Stephen Clark's (twice). The average number of names, where these were given, was 2, excluding those on an optional list for students who might choose to write a dissertation or extended essay.

8. Questions specific to ministerial courses:

Three questions were added to the questionnaires for teachers of ministerial students, as being specific to them. The first asked if any training was given to students on counselling those grieving for an animal. The second enquired what the teaching was as to whether animals had the possibility of a continued existence after death. The third asked whether moral responsibilities to humans should be extended to include sentient animals.

Counselling those grieving for an animal:

In response to the item on bereavement counselling following the death of an animal, 14 of the 21 respondents (67% excluding the two letters) answered with a straight 'No', with one explaining that they did not include counselling for any needs. Four others ticked 'No' but suggested that it might be addressed as a peripheral matter, 'not specifically, but bereavement generally'; or 'It is recognised as a significant loss'. One said 'it may be touched on in courses on pastoral theology/counselling.' Three answers were positive, one from a Roman Catholic college which reported unequivocally that it was addressed 'within general discussion of grief counselling', and another, from a college of the United Reformed Church, that it would be 'within the context of general training in the bereavement process.' The third, from the Scottish Episcopal church, said that it 'was part of the project on Death, Dying and Bereavement'.

This is a question especially relevant to today's Christian attitudes to animals and raises some very pertinent issues. Are the deaths of animals never as significant as those of humans? Are they of a lower order? And is there a genuine need for offering counselling to grieving pet owners (and if there is, should it be encouraged?). Animal bereavement counselling is now given by an increasing number of veterinary practices, although some offer information as to where such support can be found. The Society for Companion Animal Studies and the Blue Cross offer this service.

The possibility of animal immortality:

Denial of animal soul has long promoted a particularly negative picture of animals in relation to that of humans and these answers raise questions which are especially relevant to current Christian thinking.

The second question asked what was taught about the possibility of animals having an existence after death. Christian teaching has traditionally been that only humans can have such a possibility, but, as shown in the previous study, beliefs about this are generally changing.

Only 3 (14%) of the 21 questionnaires (ie excluding the two letters) answered positively, 15 others (71%) reporting either that the issue was not raised at all, or that there was no line taken. Responses included that the question was 'left open', was 'an unresolved theological question', was 'open to debate' or an 'impossible question to answer'. One respondent wrote that '(The) weight of Christian orthodoxy has not encouraged such a possibility'. One course presented different views and encouraged students to think through their own conclusions while another reported that the issue was 'theologically unclear'. Others reported that there was no 'line' or policy statement, or that the matter was not addressed. Three respondents wrote 'Nil' or 'None' and one did not answer the question.

Among the three positive responses, one pointed out that animals are pictured in the New Creation biblical matter, another said that 'a holistic view is taken on the redemption of the whole of creation - re-creation to include all creatures' and the third said 'Current teaching is that it is unChristian to assume that animals will not live on after death' - an interesting approach expressing a degree of humility (Table 13:1)

Table 13:1: Animal Immortality: Summary of responses from ministerial courses

Positive:

A holistic view is taken on the redemption of the whole of creation
 Animals are pictured in the New Creation biblical matter
 It is un-Christian to assume that animals will not live on after death

Negative:

Theologically dubious
 Weight of Christian orthodoxy has not encouraged such a possibility

Neutral:

Different views are presented and students are encouraged to think through their own conclusions
 Open to debate/Matter left open
 Issue not specifically addressed
 No official teaching line/No policy statement
 Theologically unclear
 Don't know/Impossible question to answer

Human responsibilities to sentient animals:

The penultimate question asked about our responsibilities to sentient animals, and the views expressed were mainly positive. Thirteen respondents reported that moral responsibilities to each other should be extended to include them. However, the follow-up question 'to what extent?' was answered less positively. Two positive answers were that 'animals are part of God's created world', and that 'human care should include treatment and protection of habitat and non-incarceration', but the majority were non-committal: 'Different positions are presented', 'No specific line', 'The question is raised ..' Seven respondents left the question unanswered. In contrast, one particularly welcomed the question, reporting that 'This is precisely the kind of issue students may be invited to address in seminars and assignments. One student is currently undertaking doctoral work in this field.'

Two respondents said that moral responsibilities should not be extended to animals, but suggested no reason why this should be so. One of these was from the Salvation Army, who wrote 'no' or 'nil' throughout the questionnaire – there was a clear implication that attitudes to animals was not part of their remit. Another very negative response was from a Baptist college, where again 'No' or 'Nil' was written throughout the questionnaire, apart from this question, where it reported that 'One assumes responsibility for the care and preservation of God's created order includes all things ...'. The word 'assumes' might be seen as grudging, especially in the light of the uniformly negative response generally. The Quaker guide to which I was referred speaks of 'reverence for life' and a 'loving consideration for all creatures'. This is unsurprising, as Quakers have long held a commitment to non-violence of all kinds.

In the space left at the end for personal comment, one respondent wrote 'This questionnaire reinforces my frustration at the very limited time available on a part-time course', and, similarly, another mentioned 'lack of time available, rather than lack of interest.' One wrote that 'Most people working in theological education are very much aware of Andrew Linzey's work' and another reported that 'In a relatively short ... ministerial training course we cannot and do not offer teaching on every major ethical issue ... I think the best we can do is continue to offer it as a case study/exam option and keep the library up to date in a modest way.'

University departments of philosophy

Twenty-three questionnaires were sent to teachers in university departments of

philosophy which include ethics or moral philosophy in their courses.

After three weeks sixteen (70%) of the questionnaires had been completed and returned, and no follow-up letters were sent.

1. Inclusion of the subject within the curriculum:

Two departments (12.5%) did not address animal issues within their ethics courses. Fourteen (86%) of the sixteen respondents who did so reported that their courses did include considerations of human-animal status, and there was one qualification by a respondent who added 'sometimes' and later explained that course contents varied enormously from year to year.

2. Changes over the past thirty years:

Only one respondent reported that the topic was included but made no reference to any change over the past 30 years. Seven (44%) commented on the subject's relatively recent inclusion, pointing out that thirty years ago the matter was not given systematic treatment, or even mentioned. Two respondents mentioned its growth within applied or environmental ethics, one referred to a new lectureship in 1990, and one that it was a new course started that year. One reported that the topic now 'featured quite substantially' and one referred to lively debates on the matter. Another spoke of 'a growing and substantial interest' in animal issues within departments of moral philosophy generally.

3. Changes planned, or envisaged, for the future:

Eight respondents reported either that no changes were planned or that they were unable to say what these might be. As was the case with theological courses, there were clearly practical limitations which made planning difficult. Thus, one report said that 'depending on new staff changes, there may be more examination assessment ...' Two respondents believed that the courses were 'likely to evolve', and in two others new courses were being established. However, one Head of Department wrote, 'The College is closing Philosophy from Summer 2000 and I'm being made redundant.' At a time when moral philosophy is recognised as especially important, this did seem very unfortunate.

4. The philosophical syllabus and animal welfare.

As had been anticipated, more courses in moral philosophy than theology discussed animal welfare, animal rights and human–animal relations as separate issues, although only 50% addressed all three. Fifty per cent discussed animal welfare separately, 63% did so with animal rights, and 56% treated human–animal relationships as a separate topic. Animal rights was thus the most popular approach to understanding relationships between people and animals.

There were two departments where ethical treatment of animals was not addressed at all, and one respondent did not answer the question. Another, while not addressing the issues separately, wrote 'All come up', perhaps suggesting a less rigorous approach. However, another replied that although the area was not currently included, this could soon be changing.

5. Examination questions set:

As might be expected from university departments of philosophy, the majority (81%) of those who included ethical consideration of animals did set relevant examinations questions. Only two were not doing so, and one of these wrote 'though this may change soon'. Two others indicated that questions were set at post–graduate level. All but one who set such questions gave examples of the sort of topics addressed. Among these, three were about rights, two about duties, two related to medical experimentation, one to farming practices, and one to vegetarianism. Two questions referred specifically to the great apes – perhaps because of the popularity of Cavalieri's and Singer's book 'The Great Ape Project'.

6. Option of studying the topic in greater depth:

As seemed likely, a large majority (87%) of departments which included 'animal issues' gave an option of studying the topics in greater depth, either by projects, dissertations, or theses. Two courses included further study as a final–year undergraduate option. One respondent reported that it was currently the choice of one Ph.D candidate and one M.Phil. student. Two tutors said that while their courses addressed the status of animals, there was no option of studying this in greater depth, and neither of these had specific reading lists.

7. Reading lists:

Eleven respondents cited authors currently on their reading lists, and without exception these included the utilitarian philosopher Peter Singer, who was the first–

mentioned name in eight of them. The animal rights philosopher, Tom Regan, was the next most popular author, included on all but one of the lists, while Stephen Clark was on five. Mary Midgley was cited four times – surprisingly little in view of the popularity of her 1983 book 'Animals and Why They Matter', and her subsequent work. The theologian Andrew Linzey was included once. The number of authors on individual lists ranged from 2 to 12, the average number being five. The main results of the entire study are summarised overleaf (Table 13.2):

Table 13.2: Summary of responses from Ministerial Training Courses, and University Departments of Philosophy*

	Ministerial Training (n = 22)	Depts of Philosophy (n = 16)
	%	%
Animal issues seriously addressed	50	88
Relevant changes made	50	88
Examination questions set, or assessed assignments	50	81
Option of studying area in greater depth	68	87
Average no. of authors on reading lists	2	5

* Percentages given to nearest whole number.

CHAPTER 14

AN INVESTIGATION INTO THE EXTENT TO WHICH CHRISTIAN MINISTERIAL COURSES AND UNIVERSITY COURSES IN MORAL PHILOSOPHY ARE ADDRESSING THE ETHICAL TREATMENT OF ANIMALS

DISCUSSION

The study found that the ethical treatment of animals was generally included in moral philosophy courses, with only two of the departments who returned questionnaires not currently doing so. Fewer courses for ministerial students were seriously addressing the ethical consideration of animals, a finding which is very much in line with the situation in the United States (Balcombe, 1999, Midgley, 1999).

The 1999 American study by Balcombe monitored the situation in a number of different disciplines and found that between 1983 and 1999 courses on animal ethics had increased to 19 in departments of philosophy, but that only one department of religious studies was including such a course, and that was part-time and had only been started the previous year. Yet by the 1980's, interest in this area was escalating, to the extent that the US Congress was receiving more letters about animal welfare than any other issue (Fox, 1990). At the end of the twentieth century, Mary Midgley pointed out that in the United States the number of students taking courses on the ethical treatment of animals had risen in the previous decade from none at all to about 100,000 each year (1999: 280).

Ethical treatment of animals: Ministerial courses

Despite the above findings, in the current study the majority of those training theological students are now sympathetic to the area, even though they are addressing it less rigorously. Rather than being treated as a subject in its own right, the topic might be included within other areas, such as the meaning of creation or environmental ethics. It was sometimes included as an option. One respondent wrote that 'students may do a module of independent study on this, or any other appropriate topic.' Although human relationships with animals would generally seem to be an acceptable area of study in ministerial training, those wishing to pursue the subject would commonly have to demonstrate a particular interest. There were, in fact, several references to students specifically wishing to become involved in the area, and being allowed to do so on an individual basis. Some 'had chosen to write assignments on it for ethics' or might 'wish to pursue it in dissertation work, largely self-directed.' There was evidence that ministerial

students are becoming interested in the whole area and wish to address the issue within their course. One respondent wrote '... many students have chosen to write assignments on it' (my emphasis). Such a developing interest among ministerial students would be very much in line with the results of the previous enquiry, where considerable interest in the ethical treatment of animals was demonstrated by the student population as a whole.

In the space left for observations at the end of the questionnaire, one lecturer in theology and ethics referred to their not being able to offer teaching on every major ethical issue (my emphasis), implying that it was considered to be an important area.

It is interesting to consider why teaching about the ethical treatment of animals is more limited in theological courses than in secular ones. It may be that theologians are generally cautious about taking on new courses which could turn out to be transient and merely fashionable, but this fear would surely be unfounded. No respondents reported that the inclusion of animal ethics in ministerial training had been tried and discontinued.

Many Christians now take the view that love for the whole of God's creation is an integral part of their faith, an essential way for them to think of God (Tripp, 1997) for love and compassion have always been key Christian virtues. To say someone is 'compassionate but cruel' is a contradiction in terms and stories about individuals who have bestowed love unreservedly capture public imagination and make headlines. A British newspaper reported that at the World Congress for Animals held in Washington a sufferer from Aids had spoken movingly against the exploitation of apes in the search for a cure. 'We know what suffering is' he said, 'We don't want to inflict it on others' (Daily Mail, 6th February 1997.) Accounts such as this bring ethical considerations to the attention of thousands of ordinary people, yet are seldom subjects of church sermons.

If church teaching has been negatively associated with support for animals (Carson 1972, Bowd and Bowd 1989, Peek 1997) the results of the three-generational study would strongly suggest that it is time for a reappraisal. Not only was there general agreement that the treatment of animals is a serious ethical issue, but each of the three generations showed a higher level of interest than did the previous one. This does not of course mean that church teaching must blindly follow changes in public opinion, but it does suggest that where problems arise, and questions are asked, they should be addressed. Andrew Linzey has observed that 'for many centuries,

questions about animals have effectively been answered by not addressing them (1998: xix) and the present study suggests that in theological circles this may still be so. The question of animal immortality is a case in point, and one which has long been a thorny issue. None of the respondents reported that animals did not have an existence beyond this, but the question was largely parried: it was 'not addressed', 'left open', 'given no official line' or 'theologically unclear.' Yet because for hundreds of years church teaching has been that animals have no soul, it is time for a restatement. If it is now considered to be theologically unclear, then that is what needs to be said. Over seventy per cent of the respondents in the previous study believed that what was the case for humans would also be that for animals, with the youngest generation most likely to take this view. Whether their thinking is right or wrong, they are clearly interested in the issue. In fact, it would appear to be a question of some general interest.

An hour-long programme on attitudes to animal immortality was shown on Channel 4 Television on 2 July 2000. As this channel is a commercial one, relying for its financial success on a sufficient number of viewers, the question must hold at least a fair degree of interest. The programme, entitled 'Animal Soul', began with the statement 'The traditional view of both Protestant and Catholic churches is that animals have no souls.' An Anglican priest who conducts burial services for animals argued against this view, pointing out that there had been ample room in the Ark for all kinds of animals, but 'the tragedy is that the churches have kept them out altogether ... although God's love embraces the whole of creation.' Both he and the owner of the animal cemetery where he officiated offered their services to people from all denominations, or none. Near the end of the programme the owner made an interesting ecumenical point, that it was strange that after death people often wished to be divided according to their beliefs, but that they joined together when it came to burying their animals. Two months later, the programme producer was contacted and reported that subsequent feed-back had been positive, and that, somewhat surprisingly, what seemed likely to be a controversial subject had attracted no complaints (Personal communication, 4th September 2000).

Interestingly, a secular Internet website is now including animal loss within a spiritual context. The Virtual Pet Cemetery encourages pet owners to post obituaries for their pets on their Web page, thus creating obituaries in cyberspace (Dresser, 2000:100 and 106n.5). There are also religious services to which people bring their animals. One held in the New Forest has horses and people standing together, and thanks are offered for the very fact that horses exist. Starting in 1996, attendance at these services has grown steadily and people come from miles

away to be there (personal communication). The services are especially popular with children – the churchgoers of the future.

Many philosophers have argued that the question of animal soul has been an important issue in affecting the status which humans give to animals (Hume 1980, Midgley 1983, Rollin 1992), yet only two courses for ministerial students were currently addressing the matter head-on. The previous study found that this is a question of especial interest to the young, many of whom have drifted away from their churches. A recent investigation into some of the reasons why the under-twenties were leaving reported that forty-nine per cent found the teaching and sermons irrelevant to their everyday lives, and forty per cent of those who were older said it failed to connect with the rest of their lives (Richter and Francis, 1988). As was demonstrated in the previous study, there is a growing interest in the ethical treatment of animals, so it would certainly seem that sermons addressing the issues would be very relevant. Ministerial students who are not encouraged to address such issues may be missing out on an important opportunity to increase church attendance. About a quarter of those who had left the church cited a lack of pastoral care, with the church not perceived as being caring and supportive (*ibid*: 117). Yet ministerial students are given little advice on how to support those grieving for an animal. One college did consider it as part of a project on Death, Dying and Bereavement, and another did so within the context of general training in the bereavement process, but sixteen were not addressing the matter.

There is an accumulation of scientific evidence testifying to the social, physiological and psychological benefits experienced by those who form close relationships with animals (Levinson, 1969, Rynearson, 1978, Enders-Slegers, 2000), and it follows that there will be a loss of support by their death. Often there has been a complex and well-developed system of communication between people and their animals (Chapter 5) and the loss of the relationship will inevitably be keenly felt. It has been demonstrated that many owners experience animal bereavement in similar ways to those arising from the loss of a human companion (Keddie, 1977; Rynearson, 1978; Katcher and Rosenberg, 1979; Katcher and Beck 1983; Stewart 1993, Gerwolls and Labott 1994). Although the grief process may vary in intensity, it is likely to be particularly severe when owners live alone, are elderly, or where the animal has been a link with someone close who has died. Caring for individual animals also provides opportunities for nurturing, often lacking in Western society.

In 1993, over 60 people involved in some aspect of animal loss attended a Pet Loss seminar given by the Society for Companion Animal Studies (SCAS). Two

researchers, Martyn and Laura Lee, reported that following an article they had written in the Daily Telegraph on this subject, they had received over 800 letters, and a veterinary surgeon pointed out that although the grief experienced may be so severe that counselling is required, this is often difficult to come by (Report of SCAS conference 1993: updated and reprinted 1998). In 1990 two vets, Fogle and Abrahamson, had reported that seminars and meetings were being held to further veterinarians' understanding of the grief that is often felt when an animal dies. The Gerwoll and Labott study, 1994, concluded that 'therapists, veterinary personnel, and lay persons alike need to be sensitive to this issue in order to help bereaved pet owners endure this difficult period' (p 185). A study by Stallones also suggested that vets who deal with people losing a pet need to be aware of the significant role the pet may have played in the overall mental health of the individual and consider forming links with local mental health professions for referral purposes (1994: 52).

This is an area currently addressed by a growing number of secular groups, yet the churches remain uninvolved. McDaniel has suggested that the church's refusal to recognise the kinship existing between people and animals has encouraged some Christians to turn to Eastern religions, which they perceive as more inclusive (McDaniel, 1993). The co-ordinator of Animal Christian Concern has written that '... the majority of Christians I have met do not doubt that animals will be in Heaven' (May Tripp, personal communication, July 1999).

Christianity has a tradition of providing a framework in which to think about moral issues (Hursthouse, 1987) and ethical treatment of animals is increasingly accepted as important. Theologians, like philosophers, use arguments that compare the rights of humans with non-rights of animals, pointing out that it is the mark of a civilised community, not to say a Christian one, that it grants rights to those humans who can have no responsibilities, such as the insane or infants, and also acknowledges rights to criminals who are public enemies, because they would otherwise be at everyone's mercy. Bishop Baker concluded a talk on the subject by asking 'Would it not be wonderful if our dear Church of England could not only hammer it (the message) home but also include our fellow-creatures of the animal world within its scope?' (Baker, 1999). The best place to start would surely be with ministers of the future.

Ethical treatment of animals: courses in moral philosophy

Students seeking an understanding of ethical arguments will need to relate them to various philosophical theories. Concepts like nature, duty, freedom, motive and

creativity need analysing, criticising and generally cleaning up (Midgley, 1980: 174.) As well as this, topics to be addressed will have been chosen because of their relevance to moral thinking, so the areas to be covered are often those concerned with contemporary problems. Eighty-six per cent of the departments returning questionnaires were including the ethical treatment of animals in their courses, indicating that this is now considered a matter of importance. Gandhi's aphorism that a nation's moral progress can be judged by the way its animals are treated recognises that humans have a great deal of power, which they may use rightly or wrongly. With the most complex brains of any species, they have the most highly developed intellect and a well developed capacity for empathy. They are thus uniquely placed to reflect on moral issues. But thinking about such issues is not enough to lift them morally above other species; it is in making their actions match their moral thinking that they can approach goodness. The idea of human goodness being focused on the weak and powerless is now central to ethical thinking. Thus, the writer Milan Kundera wrote 'True human goodness, in all its purity and freedom, can come to the fore only when its recipient has no power. Mankind's true moral test, its fundamental test ... consists of its attitude towards those who are at its mercy: animals' (Kundera, 1984:289).

From the days of the early Greek philosophers, thinkers have been pondering the best ways for humans to live their lives. Aristotle asked the question 'How am I to live well?' and argued that the best way was by practising the virtues. Although concepts of virtue at that time would not be appropriate today, his ideas have been carried on in Neo-Aristotelian, or Virtue Theory, which considers morality in terms of virtue and what it means to 'live well' (Hursthouse, 1987). This links especially well with psychological theories which suggest that the distress of others (including animals) distresses us, and how we use defence mechanisms to dissociate ourselves from such discomfort.

The rationalism of early European philosophers saw animals as irrelevant to moral thinking. Spinoza (1632-1677) held that right action and thinking depended on control of emotion by reason, with the wise person following the dictates of reason rather than emotions. Yet we relate to the suffering of animals in empathic ways, and cannot shut our feelings off from intelligent argument in this way. Our tradition has been obsessed with contrasting thought and feeling rather than seeing them as inseparable. The French philosopher Blaise Pascal (1623-1662) was among those who hated and distrusted the excessive stress on reason in reaching moral decisions, writing that 'The heart has its reasons which reason does not understand'. In the following century David Hume also expressed a dislike of the rationalism of

Descartes, Spinoza and Kant, viewing the emotions as essential to moral thought and even predominant over reason. In his *Treatise of Human Nature*, he wrote 'Reason is and only ought to be the slave of the passions and can never pretend to any other office than to serve and obey them' (*Treatise*, 11, iii, 3, cited in Honderich, 1995). This allowed empathy to take its rightful place in moral thinking, and encouraged a far more sympathetic ethical approach. Mary Midgley, however, challenges the separation of reason and emotion, arguing that these aspects of mind are not only complex but intertwined (1996: 143). Certainly communication with animals, as with human babies, involves both emotional and intellectual skills (Chapter 5).

Modern philosophers address ethical considerations of animals in a variety of ways. The Utilitarians, such as Peter Singer and Jonathan Glover, speak in terms of maximising happiness and minimising pain as the right guide to moral action. This does not, however, give practical guidance in every situation, and the concept of shared rights is often introduced. Tom Regan argues that an animal has rights because of its intrinsic value and because it is a 'subject-of-a-life', Roger Scruton says that, although animals have no rights, we nevertheless have duties towards them, and Stephen Clark draws a distinction between positive and negative rights (a duty to do something, or not to do something.) Each of these theories contributes something, but not everything, to understanding the right treatment of animals.

Many philosophical arguments draw on a variety of theories, but Virtue Theory is especially compatible with Christian thinking. The theologian Charles Pinches adopts this approach: 'If I were the right sort of person, the sight of an animal suffering would bother me. I should strive to be ... the sort of person whose happiness ... depends upon the well-being of our fellow creatures' (1992: 23). Being the 'right sort of person' is a key feature in both Virtue Theory and Christian thinking. Mary Midgley speaks of wrong treatment of animals as both causing and resulting from poor character, and it has been pointed out that what is called 'benevolence' includes sympathy, generosity and charity, virtues irrelevant to Aristotle but which were added to ancient Greek thought with the coming of Christianity (Warnock, 1998).

Ministerial Training and Moral Philosophy courses: A coming together.

Largely because of philosophical rejection of the metaphysical, there has been a degree of antagonism between secular and religious disciplines. Yet they often reach a high level of agreement. Virtue Theory, by offering a less controversial and more

practical approach to moral behaviour, is compatible with both secular and religious thinking. Unlike Utilitarianism, its approach takes account of motives and feelings. Unlike deontological approaches, it is flexible, allowing that particular contexts can determine virtuous action. Thus, although a stranger to religion, Bernard Shaw held that the test of character was not to ask 'What will happen if I do this particular thing?' but 'What sort of man shall I be if I do it?', an argument very relevant to New Testament teaching.

Philosophers are concerned with discussing the strengths and weaknesses of various moral theories, and they do not always agree. New concepts and new approaches present new challenges, both at a secular and religious level. There is, however, a common interest in how people can live better, and thus more fulfilling, lives.

The findings in the present study are far from comprehensive and without further investigation could only be generalised to a limited extent. They do, however, suggest some interesting changes that are likely to come, and others that would merit deeper investigation. Perhaps there is an ultra-cautious approach with regard to including 'animal issues' in church sermons. Older people especially may have traditional ideas and be conservative about such changes. A useful study would be to investigate what older and younger churchgoers think about including the ethical treatment of animals in sermons and in ministerial courses.

While the results of the enquiry show that university teachers of moral philosophy are more committed to including ethical relationships with animals in their curricula, the difference is largely one of degree. Although fewer ministerial courses are currently addressing the issues, there are signs of change.

The position was summed up by the Principal of a Ministry Training Course who wrote, 'It would not be true to say that the place of animals plays a very major role inside either our own teaching of Doctrine or our own explorations in Christian Ethics' but added 'In some ways the questionnaire has given me cause for thought about possible ways of moving forward.' Only in two cases was such a change presently ruled out. This strongly suggests that in both types of institution there are likely to be some interesting developments in regard to the teaching about animal status and human responsibilities towards them. In view of the fact that until the latter part of the twentieth century the subject was largely ignored in both religious and secular thinking, the findings in the present study could well be described as dramatic.

CHAPTER 15

Human-Animal Relationships: Perception, Attitudes and Ethics

GENERAL CONCLUSIONS

Historically, the perception of human-animal status has been one of ongoing change, and the findings in this thesis would accord with those who have suggested that this has been especially marked in recent years (Midgley, 1979, Serpell, 1996, Linzey 1998, Appleby 1999). Even so, attitudes to animals are likely to differ, in that they reflect personal experiences, habits of thinking and cultural ideologies.

Traditional arguments were long directed towards maintaining man's superior position in the natural world, and thus focused largely on the possession of human rationality as the key issue in moral status. Today however this is less likely to be the case.

Ethologists have shown that we are not as unique as was once thought. It is now known that many other species have degrees of reasoning power, for rationality is not a unitary, either/or affair. With the advent of modern technology, and especially universal television, this change in thinking has not been confined to academics. Committed pet owners have discovered that what they have long held to be the case in regard to their own animals has now become scientifically acceptable. Whereas their accounts of relationships with them were long dismissed on grounds of anthropomorphism or anecdotalism, they have now become quite respectable. Pet owners are thus more confident about describing 'conversations' with their animals as social affairs, with both members playing an active part. The video investigation in this study (Chapter 5) suggests that they may well have been right, and there is evidence that their communications in many ways resemble those between mothers and preverbal children (Hirsh-Pasek and Treiman, 1982; Katcher, Beck and Levine, 1989; Rogers, Hart and Boltz, 1993). Viewed in this light, close relationships with some animals seem perfectly natural, which in turn would suggest that it is not unreasonable to include them within our area of moral thinking.

As has been demonstrated, the experience of living closely with animals changes people. At the same time, these animals are changed by the experience of living with people. Such two-way effects are insufficiently recognised and a longitudinal study examining the impact that people and pets have on each other's lives would make a useful study. Photographs of dogs, sometimes alone but often within family groups, may remain on display years after the dog has died, and the children have left home.

Pets sometimes influence people's lives to a quite remarkable extent. Those with dogs may choose homes close to parks, those with cats avoid houses on main roads. It is not unusual for frail old people to refuse to go into a home which will not accommodate their dog or cat. This is not mere sentimentality. During the bombing raids of the Second World War large numbers of Londoners refused the night-time shelter of the London Underground stations because they could not take their pets with them (Fidler, 1996). Such choices testify to the depth of relationships and strength of commitment which quite commonly develop between people and their animals. Lives are often made richer, and sometimes sadder, because of the animals with whom humans have chosen to share their lives. Biographies which do not take account of this are incomplete.

In the three-generational study, attitudes to non-pet animals showed variation and sometimes inconsistencies. At an abstract level of thinking, the experience of pet-ownership resulted in a higher status being attributed to animals in general, but when related to practical decisions, attitudes might be overridden by present or past ideologies, changing social conditions and particular situations. The most consistent finding was a general concern for the welfare of animals: respondents frequently stressed the need for kindness and compassion. In this study there may, however, have been a gender effect: approximately three-quarters of the participants were female. When considering the status that should be accorded to animals, female respondents attributed a higher status to them, and at a practical level, they expressed more concern for their welfare. This finding accords with those of other investigations, which have shown that women have a greater concern for animals and a higher level of empathy with them (Plous, 1991; Hills, 1993; Pifer, 1996).

Overall, there was a considerable level of agreement about animal status, with a sizeable majority of each generation rejecting the line that has traditionally divided humans from other species. Over seventy-five per cent of students, their parents and their grandparents disagreed with Aristotle's view that animals were created for the use of man. There was also evidence that the rationalist ideas of Aristotle, Descartes, Spinoza and Kant are now less acceptable than those of David Hume, who took feeling, rather than rationality, to be the important component of ethical thinking. Compassion for animals was a consistent feature throughout the study and, far from being perceived as here for our use, other species might be seen as victims of human selfishness. Thus, one respondent reported, 'It is greed that causes people to pursue animals in cruel ways' and another, 'We have unnecessarily driven them from their natural environment.' Analogies were sometimes made between animals and those humans who lacked power, 'I am concerned with all cruelty, but animals,

like children, have no voice.' It would seem that people are now very much in tune with the thinking of the modern philosopher Mary Midgley, who suggests that what entitles animals to basic consideration 'is not intellectual capacity but emotional fellowship' (1994:60).

The question of meat-eating was also a matter of some concern, with over a sixth of those who were not vegetarians expressing anxiety about eating animals. This is an area that would merit further investigation to find out on what basis such anxiety rests, whether it is the cruelty endemic in intensive farming systems, or a general feeling that more justification is needed for taking the lives of other species.

Views on the extent to which animals should be used for human purposes may be affected more by generation than by the experience of pet-ownership. In the present study, the traditional popularity or unpopularity of the animal in question at the time when each group was young continued to have an effect. Effects of age are complex, but Driscoll (1992) and Kellert and Berry (1981) reported that education and age are related to knowledge of, and attitudes to, animals. Although this was generally borne out in this study, the findings varied. In some contexts respondents focused more on the issue of animal suffering, in others on the perceived value of the life of the particular creature.

The experience of living with a particular animal may influence people's attitudes to other species. Thus, cat-ownership, but not dog-ownership, affected whether respondents would try to save a mouse brought in by a cat. Attitudes vary not only according to particular circumstances, but whether the focus is on the individual animal or on the species as a whole. More grandparents than students considered fox hunting to be an acceptable sport but were as concerned as their grandchildren for the welfare of a hungry fox that came to their garden in winter, and the majority of them would feed it (Chapter 8). Fox control by hunting with hounds is generally considered to be less humane than some other methods of destruction, and an ineffective way of keeping down the fox population. Because of widespread opposition, it is currently a matter of considerable public and political debate.

Bernard Rollin (1995) draws attention to the fact that most people consider ethical issues to be dilemmas with only two possible solutions, but that there are often a range of alternatives. In the case of pests, a single animal may not present a great threat, and it may be possible to tackle the problem at source. Hens may be protected from foxes by wire fences, grain stored more securely. If the problem remains intractable, there are commonly different choices available as to the method

of killing, some of which are more humane than others. Research into humane ways of killing pests in the United Kingdom is almost entirely supported by charitable donation, and cost may still be the deciding factor.

Part of the difficulty when investigating attitudes to animals is that the area is so wide. Species vary enormously, and some are clearly better liked than others. When people describe themselves as animal lovers, they may well be thinking of cats and dogs, and although the present study reported a high level of agreement with Gandhi's aphorism that the greatness of a nation and its moral progress can be judged by the way its animals are treated, it is unclear which animals respondents had in mind. They may have been thinking of mammals (especially those which are attractive and friendly) or of both mammals and birds, or even mammals, birds and fish, but were they including snakes or tarantulas? To some extent, ethical priorities may be species specific. If a highly evolved social animal, such as an elephant or chimpanzee, is killed, other members of its group may pine for it (Masson, 1996; Goodall, 2001). If an ant is killed, this is unlikely to be the case. Neither are ants likely to be consciously concerned with plans for the future, as more socially aware animals may be. Where the line of concern should be drawn is a complex issue and one which is subject to change in the light of new knowledge and new ways of thinking. A particularly significant change in attitude is that philosophers are now occupied largely with details of how to fit animals into our existing moral notions, rather than with trying to keep them out (Midgley, 1983). While recognising that animals are not humans, we are nevertheless clear that they are more than things, and that some are further away from 'things' than are others.

Before Darwin it was generally thought that the differences between humans and animals were so great that it was always justified to treat them differently. It was the picture of humankind as uniquely rational beings that Darwin destroyed (Rachels, 1993). Darwin also said that the virtue of sympathy for the lower animals is 'one of the noblest with which man is endowed' (ibid: 154.) Yet this still fails to address the fact that some species are more socially developed and neurologically complex than others and are likely to have a greater capacity for suffering.

Some of the higher apes have a capacity for human-type language (Chapter 3) and ethologists, anthropologists and philosophers are now arguing that in their case there is no reason to exclude them from the same ethical category as humans. We regard all humans as having a certain status within the sphere of moral equality. Not only do these apes have a degree of rationality greater than that of some humans, but, like us, they possess a richly varied social and emotional life, along with a capacity

for good or evil (de Waal, 1996: Goodall, 1998). Goodall found that some chimps show differential behaviour towards group and non-group members, so that those outside their own may be 'dechimpanized' in much the same way that people may be 'dehumanised' and treated as creatures outside humanity (ibid:175-6). Like us, chimps can do nasty things to each other, and it is important that they, and other animals, should be neither idealised, nor unfavourably compared with the most virtuous of humans. Goodall also reports that chimps sometimes demonstrate a capacity for kindness and even altruism. She tells how one stopped to remove a speck of grit from his companion's eye, that even non-related adults frequently share food with each other – and that some individuals are more generous than others! When an old mother chimp was weakened by age, her daughter climbed the tree for food, brought it down and placed it beside her mother (ibid: 177-179). Molly Badham, who has long looked after chimpanzees at Twycross Zoo, says that many chimps bring up their children better than do some humans, and that they relate to human emotions much as we do, 'If you cry, they come over and put their arms around you' (Radio 4 News of the Week, 20 June 1999, 9 am.) Similar sorts of claims have been made for gorillas (Patterson and Gordon, 1999) and orangutans (Miles, 1999).

In order to accommodate animals with such human-like capacities within our sphere of moral concern, philosophers, ethologists and anthropologists are looking again at the original definition of 'person', as against that of a human being. Over the centuries the meaning of 'person' has changed. The classical and ancient world had our notion of an individual, but quite a different concept of a person. The original Latin meaning was that of a theatrical mask which actors could put on or take off, and the word came to refer to the role which the individual played in society, and especially to those who had rights and duties. Slaves, not being allowed to possess property, were not considered to be persons in the legal sense. It was in the first centuries of early Christianity that 'person' took on a different meaning, being used in the concept of the three persons of the Trinity. Over the following centuries the idea of 'person' was again re-interpreted, but even in the last century the question of whether women were persons was a matter of debate. In a Massachusetts case in 1931, women were denied eligibility for jury service, although the statute stated that 'every person qualified to vote' was eligible. The Massachusetts Supreme Court asserted: 'No intention to include women can be deduced from the omission of the word male.' Today corporate bodies can sue or be sued as persons (Midgley, 1996:107-109) and within recent years the concept of 'person' has been given an ethical connotation: to be a person is to have a certain status, to be worthy of respect (Kitwood and Bredin 1992:275). Generally the philosophical definition of

personhood as it relates to non-human species includes self-awareness, the possession of emotional and cognitive abilities, and an interest in continuing to exist (Hursthouse, 1999: 67). When considering whether animals should be allowed the status of personhood, it may well be better to focus on what capacities they do not possess that all humans do, and that would be relevant to moral status.

Those who support this person view are enthusiastic about including the higher apes in our moral category before it is too late. The Times newspaper recently published an article anticipating the extinction of the great apes within twenty years, partly because of the booming trade in 'bushmeat' for human consumption, and which has become a sought-after food in fashionable restaurants. Scotland Yard describes the import of bushmeat to Britain as a growing problem, with most of it destined for backstreet markets (The Times, 17 September 2000:14). In his book 'Rattling the Cage: Towards Legal Rights for Animals' Steven Wise, professor of law at Harvard University, makes a powerful case for the entitlement to legal protection for chimpanzees and bonobos, because 'as ethical standards evolve, what once appeared reasonable may no longer seem that way' (Wise, 2000:85). Commenting on this book, Edward O. Wilson, professor of biology at Harvard, describes it as deeply troubling, both intellectually and ethically, because it 'puts on trial a part of our human self-image that has made us less noble than we wish to be.' Those who argue against the concept of personhood for the apes ask 'Where will it end? What about other animals?'

Moral thinking about animals is a highly complex area, complicated by commercial interests, human preferences, and cultural traditions. Nevertheless, having reached its present stage, it is likely to be ongoing. Some see the issues as having a spiritual quality. John Baker, retired bishop of Salisbury, writes that 'Progress in this field would effect a truly valuable spiritual change in our society. If we can outlaw cruelty in all its forms ... our lives will be happier and safer. The Churches will be truer to the compassionate teachings of their Master' (Baker, 1999, Animal Christian Concern, Summer/Autumn edn: 12).

The majority of respondents in the present study, and particularly the younger people, were anxious that due weight should be given to the status of animals. Their attitudes are mirroring the changes evident in those academic disciplines which now address moral issues. Were the poet John Keats alive today he would most certainly be surprised at developments which have come about in philosophical thinking, for his view of philosophy in his day was strongly negative:

'.....Do not all charms fly
At the mere touch of cold philosophy? ...
Philosophy will clip an Angel's wings,
Conquer all mysteries by rule and line
..... Unweave a rainbow.'

John Keats (1795-1821), 'Lamia' pt. ii, lines 229-237.

Far from being cold, a great deal of philosophical work is now focusing on the moral rightness of protecting nature, and animals who, like us, are part of it. Theologians are also addressing these issues, talking in terms of generosity and respect for creation, rather than man's superior place in it. If St. Augustine and St. Thomas Aquinas were right in holding that cruelty to animals should be avoided because it encouraged violence to humans, could it be that the reverse might be true - that kindness to animals should be encouraged because it leads to kinder treatment of humans?

The study found strong evidence of increasing concern about animals, although it only touched upon some important issues, and could not address others of equal relevance. It is, however, hoped that the degree of interest manifest in the whole area will encourage others to investigate further some of the issues raised here.

Reports of 20 students who had not lived with a cat or dog for at least two years (Non-pet owners) and 20 who had done so (Pet owners).

Non-pet owners: Reports on 5 episodes

A: Male

1. Dog was attentive and eager (tail!). He was possibly focussed on the tray rather than the person, as he resisted petting. Perhaps he was after some food? He was waiting for something. It seemed like it was a posture he had been trained for.
2. Dog chased the ball (with much delight!) and then concentrated on subduing it, moving it, controlling it. Dog wasn't really retrieving the ball, it was more a forget to be chased and caught. When the ball was prised from the dog and kicked again, all of a sudden it was a 'new' target.
3. Owner wanted to express affection, and tickled the dog's tummy - then the dog rolled over slightly and allowed his tummy to be rubbed. The owner finished, and although the dog prompted for more, the owner tickled his chin instead, to try and stop the dog asking for more.
4. I think the dog finally picked up on the fact that he was being asked to find something, though I suspect that he had no idea what. The owner conveyed the idea that he should 'search', so he looked attentive; but what for? He had no idea.
5. Dog was interested, wagging his tail, delighted in being petted. Owner went out of shot - dog's attention was on her. The dog wanted her to return - looking behind video, then at the chair. Dog 'waited' for owner by sitting on the chair.

B: Female

- 1 The dog was looking at the owner eating to see if it would get any food. Flinched when the owner went to stroke it - perhaps thought it was going to be hit for being a nuisance.
2. Dog playing fetch; first time noses the ball back to the owner, but then wants to put the ball in its mouth to take back to owner. Owner carries on the game by getting dog's attention - dog seems quite happy to carry on playing.
3. Dog getting stroked on its belly. When owner stops stroking, dog moves its paw and turns its stomach towards the owner. Owner strokes it again, then stops; again dog moves its paw and owner, despite saying 'no more', strokes the dog again.
4. Dog paying attention to what owner is saying. Goes round in a circle to look for the squirrels - can't see them, listens to the owner again, then goes to see if they are outside the window.
5. Dog being petted. Dog seems slightly reluctant to the petting. When the owner leaves, dog watches for a while, then slowly edges towards the chair, looking at the camera, then the chair, then the camera, then jumps up in the chair that the owner was previously sitting in, again looks at the camera ... either marking its territory ...

C: Female

- 1 While the woman was eating, the dog was attempting to encourage her to feed him some of her food, using eye contact, whining and proximity.
- 2 In the park, on a very windy day, a woman and her dog were enjoying a game of football. When she kicked the large, inflatable ball, the dog picked it up in its mouth, but

it was too large, so pushed it back to her.

3 In a living room, the owner, sitting in a chair, leant down and stroked his dog, who was lying alongside the chair. When the owner stopped stroking, the dog raised its paw to encourage further stroking, which the owner did. Once the owner stopped again, the dog again raised its paw and lifted its head, looking directly at the owner to encourage more stroking, which it was obviously enjoying.

4 The dog appeared to strain to understand what its owner was saying to him, moving his head from side to side, pricking up his ears and studying her face intently. The dog seemed to understand the word 'squirrels', ran in a small circle as if to look for them and then went towards the window and raised itself against a chair to look out of the window.

5 The owner got down on the floor and stroked the dog and then got up. At this stage the dog seemed to want to go somewhere, wagged its tail and leant towards a door. The owner, however, walked off in the opposite direction. The dog stopped wagging its tail, waiting, looking in the direction of her exit, moved closer towards her exit and then jumped into her armchair, as if for comfort.

D: Female

1 The dog was having to control itself - not go for the lady's food. It was watching her eat.

2 The dog and the lady were playing with a ball. The lady would kick the ball and the dog would jump on it and bite it.

3. The man was rubbing the dog's belly and the dog was waving its left paw in the air. When the man had finished, the dog waved its paw again as if it wanted the man to continue.

4 The dog listened to the woman asking it where the cats and squirrels were. It walked round in circles and then put its front legs up on a chair and looked out of the window.

5 The lady stroked and patted the dog and then, when the lady walked away, the dog watched, then followed.

E: Female

1 Dog wants to have the food and is trying to be noticed so as to get some. It is moving around to get some attention, to get some food.

2 Dog is treating ball as if it's the enemy and to be attacked. Wanting the woman to give the ball life, to make it move, so the dog can attack it again. It's playful attacking.

3 Dog is relaxed and dopey and enjoying having its stomach tickled. It just wants to lie there and shows little response to owner's 'speech'.

4 Dog is confused by owner's tone of voice. It can sense something is being asked of it and it is supposed to respond, and tries to move around to see if it gets any more orders/directions.

5 Dog has lots of attention from owner and expects more, and as owner walks away it is confused and when it finally realises the owner is not coming back, climbs into chair by itself.

F: Female

1 The dog is watching the woman eating soup for lunch. It appears that the dog would like some of the food for itself. The dog moves away when the woman tries to pet it.

2 The dog appears to enjoy chasing the ball. It doesn't pick it up because the woman kicks it away so the dog can chase it again.

3 The dog is enjoying being tickled. It tries to shake 'paws' with the man and does not want the playing to end.

4 The dog is looking for the squirrels but doesn't appear to be interested in the cats, or the boy in the room.

5 Firstly the dog is patted and cuddled by the owner. Then the owner leaves the room and the dog appears to be looking for her or at the camera. It then sits on the chair waiting for her to return.

G: Female

1 Watches, walks over, wagging tail. Sits down, watches her as she eats, whimpers. She goes to stroke him, he moves away slightly - rearranged his position, sitting down to watch her again.

2 Running at ball - moves away and bounces as she rolls it - he chases it - runs with it again - bounces around - whimpers. She kicks it, he runs again and stumbles over the ball. (?) ball - bouncing at same time - moves away and barks.

3 Asleep, being stroked. Stops stroking, moves paw and moves slightly so he will carry on stroking - lies still. The man calls him - he moves his paw and turns his head to look at the man.

4 Standing alert. On 'squirrels', moves forward, turns around, turns again when 'squirrels' said again. Moves over to the chair, puts his front paws on the chair arm and looks alertly out of the window.

5 Standing. When tickled sits down - sticks neck out - walks away - being petted. ... stays still - walks (moves) forward - jumps up, sits on the chair - stares at camera.

H: Female

1 Woman eats, while the dog anticipates any food offers, avoiding any form of contact unless it is with the food.

2 Playing with the ball. The dog tries to gain control over the moving object, nudging it and over-pawing it. The woman gets involved by kicking it, which the dog allows, but seems to enjoy the ball himself. Form of exercising for both.

3 Submission of the dog. Forming a loving relationship between handler and dog.

4 Making the dog alert with her commands. Dog seems to understand - form of communication between the two. Dog seems to become protective, curious.

5 Woman encourages the dog, plays, interaction between the two. The exit of the woman seems to bring about a rejection. So he occupies owner's space.

I: Female

- 1 The dog is hungry and wants some of his/her owner's food but when she goes to 'pet' him he moves away as if he's startled or frightened. He wags his tail as if he's happy.
- 2 The dog is playing quite happily with the ball in the rough way that they play with things. He is biting it and trying to pick it up.
3. The dog is enjoying his owner stroking him and when his owner stops he moves his paw to show he wants his owner to continue. He also moves his body to make his stomach more easily accessible and responds to his owner's voice by looking at him.
4. At first the dog looks a bit baffled as he tilts his head. But soon he seems to understand what his owner is saying and looks around for something. He is seeking something.
5. The dog looks a bit frightened and when his owner starts to pet him pulls back a little. He seems to notice the camera and at first stays back but then when he feels it's safe, jumps on the chair still looking at the camera.

J: Male

- 1 The woman is eating and the dog is begging for the food. The dog is uninterested in her affection, removes when she pats him and continues to stay focused on the food.
- 2 The dog is chasing the ball when the woman kicks it and then endeavours to bring it back, where he leaves it for her to kick again. The dog is not aggressive to the ball.
- 3 The dog is enjoying being stroked and actions for the man to continue. The dog becomes alert when the man begins to speak, though does not remove from present position.
- 4 Immediately the dog recognises the words Cats and Squirrels, but is a little confused as to where they are i.e. looks questioningly at speaker. One more prompting, proceeds to look for the squirrels. Raises position.
- 5 The dog enjoys the affection that the woman is giving towards it, i.e. begins to wag tail. When she leaves the dog's tail stops wagging and it is a little unsure of the camera/operator. Proceeds to jump onto the chair and settle into a comfortable position.

K: Female.

1. The dog had been fed previously by the woman who was eating from a tray. The dog was watching her intently - wanting some of the food, and it was moving its ears, fidgeting, but did not want to be stroked - it went away.
- 2 The dog was very excited by the ball - it was trying to bite it and chase it. It was encouraged by the cries of the woman. It gave jumps and barks and ran fast.
- 3 The dog lay still when first stroked. When the man stopped the dog moved his leg as seeming encouragement to continue. It responded to his voice by moving his head and moved the leg for stroking to continue.
- 4 The dog was alert with ears forward and was listening to the voice of the woman - at the mention of words Squirrel and Cats he became agitated, as if the animals were close by and stood up on a chair as if to look out of the window.
- 5 The dog is petted by the woman and when she leaves the room he is motionless as if waiting for her. He then walks around as if to see if she is coming back and then he jumps on her chair.

L: Female

1 The dog's hungering for food and thought that the owner was going to give him some. The dog was in a playful mood but got a bit restless.

2 The dog was in a playful mood whilst playing with the ball, the tail was wagging. The dog was terribly excited at the prospect of chasing the ball. Having fun with the owner.

3 The dog is in a lazy mood, lying down, and is begging to be stroked on the tummy which he obviously likes. When owner asks him to get up, he doesn't want to, just wants to lie there.

4 The dog is trying to understand what the owner is saying, at first he doesn't understand. He then recognises what she is saying and looks for the squirrels that he was trying to find.

5 The dog is in a playful mood at first and then, when the owner goes to the other side of the room, the dog studies her to make sure that she is not coming back. When he sees that she isn't coming back, he slyly sneaks into her chair.

M: Female

1 The dog anxiously waiting to taste some of the food. May be feeling as though it was going to be punished when she put her hand out - moved, and waited again for food.

2 Dog playing fetch, trying to pick the ball up in its mouth using front paws. Maybe trying to pick it up so that the dog could throw it for the woman to catch!

3 Dog enjoying love and attention, when stopped requested more by the movement of its paw.

4 Questioning and trying to understand what the human is saying, and looking around. Maybe recognises the main word or the tone of voice and that it is a question to look for something.

5 The dog is enjoying the attention from owner. Can't understand why it suddenly stops, and owner walks off. Waits but nothing happens, so after a while gets up on the chair and stares at the camera.

N: Female

1 The dog is 'begging', waiting for food and sits down - probably because it has been trained to sit when it was a puppy through means of food. The dog is concentrated and focused on the owner's movements.

2 The dog leaves the ball by the owner because it wants her to kick the ball but it also bites the ball as it would have liked to pick it up and run away with it to be chased, but the ball is too big so it settles for leaving the ball for the owner to kick it.

3 The dog is very relaxed, enjoying to be patted and moves when it is not patted because it enjoys it. The dog waves its paw to catch the owner's attention 'do some more please.'

4 The dog hears something he has heard before - the word 'squirrel' obviously refers to something he knows - may be he likes chasing them or something like that. He looks around for it and finally out through the window.

5 The dog might think something like this: 'she patted me but went away, ah well, I'll stay here for a while - hm, she's not back yet. Ah well, I'll lie down in the armchair where

she was before – she'll be back.'

O: Female

1 The dog is wanting some food and is sat in the hope of receiving some. When the owner goes to stroke it, it moves as it has not been given what it wanted, even though it was sat nicely waiting for it.

2 The dog is playing chase with the ball. He is having fun and running around. He is barking as he wants to play more and for the owner to kick the ball. He keeps on trying to bite the ball which is quite rough.

3 The dog is lying down and relaxing. When the owner gives him some attention by stroking him, he lifts up his paws to indicate he wants to be stroked again and wants some more attention.

4 He keeps cocking his head to the side and is inquisitive and there is confusion because of the noise. He runs round in circles because he is frightened of the noise, then looks around and out the window to see where the sound is and what it is.

5 The owner gives him some affection and when she goes away the dog looks for her and waits for her to return. When she doesn't, he moves around a bit, then decides to get comfortable and jumps into her chair.

P: Female

1 Dog wanted some of the food but the lady thought it just wanted attention so it didn't seem to respond when she patted it.

2 The dog wanted to play with the ball but couldn't pick it up, so it had to roll it back to the lady to continue playing the game.

3 The dog was trying to sleep and wanted to be left alone so he kept trying to push the man's hand away with his paw.

4 The dog heard the word 'cat' but didn't seem to respond but began to run around when it heard the word 'squirrel', looking for a squirrel.

5 When the lady had gone out of the room the dog seemed to wait for her return and then seemed anxious about the camera, but after a while decided the chair was more important than being scared about the camera.

Q: Female

1 Dog is begging for food from owner. Dog sits and looks at food all of the time. The dog is excited about the possibility of being fed.

2 Dog chases and plays with the ball the owner kicks. Dog pretends ball is an animal to hunt down and kill.

3 Dog lays on the floor and asked to be stroked by laying on his/her back and moving front legs.

4 Dog listens to owner's voice, recognises sounds of words, and tries to find the squirrels. Dog moves round the room anticipating something is going to happen.

5 Dog enjoys being stroked – wags tail. When owner leaves room the dog watches her for a while, then turns his/her attention to the camera. Dog then jumps on to the

armchair and sits looking at camera.

R: Female

1 The dog wanted some food because the lady had some, and as he didn't get any, wasn't very friendly to his owner.

2 The dog was really enjoying playing with its owner and with the ball. The dog was getting the owner's complete attention.

3 The dog was being stroked by the owner and he really liked this and didn't want him to stop. The owner was giving attention to the dog and stroking him to please him.

4 The owner was winding the dog up and the dog was becoming excited and was looking for the cats and squirrels that he thought may be around.

5 The dog really wanted the owner's attention as she liked being played with. When the owner left, she waited for her to return and realised she wasn't around, so decided to get comfortable on a chair.

S: Male

1 The dog is begging, which is only a natural part of its behaviour. It wouldn't settle just with a pat on the head, it wanted to share the food.

2 A game they've both played before (and an easy way to exercise the dog, I'm sure.) The dog knows exactly how the game is but I still think it might be a stressful one.

3 Lovely! The dog keeps asking for attention and receives it. It also responds easily to the voice of its owner.

4 This has also happened before. Still, the dog seems confused, surely. Its owner is giving a message – but about what? (The message is not appropriate for the situation.)

5 When the owner leaves the room, the dog waits to see if she's coming back (or if the camera-man is the type to tell on it ...?) before it jumps into the chair (I guess this is forbidden ...)

T: Male

1 Dog stands, watching owner. When owner eats, dog moves in front and sits looking at her – moves closer wagging tail. When owner pats dog, dog moves away.

2 Dog pushes ball along with front paws continually biting at it. Owner kicks ball – dog waits for this and then chases it barking.

3 Dog is lying on its side being stroked. When owner stops dog moves its front paw until stroking starts again. This sequence is repeated. Second time dog looks up.

4 Dog looks alert – walks round to find cause of excitement then looks out of window.

5 Dog wags tail while owner pats it. When owner moves away dog waits, then moves in front of chair – looking at it. After short pause, dog jumps onto chair.

.....

Pet Owners: Reports on 5 Episodes

A: Male

- 1 Trying to attract woman's attention, so as to receive some of the soup. (Or possibly concerned that its mistress was all right) and a little tenuous perhaps?
- 2 Dog was attempting to please its owner and 'have fun' (a bit anthropomorphic, I know) by chasing and fetching the ball.
- 3 Trying to get stroked more after the owner's initial contact.
- 4 Trying to ascertain what the disembodied voice is asking it to do. Confusion is evident or perhaps it just can't find the 'squirrels'.
- 5 Attempting to lead the owner somewhere - 'Walkies' perhaps, then gives up and takes a rest?

B. Female

- 1 The dog is eager to receive food, almost begging, wagging its tail with much hope. When the owner reached to stroke it, it dodged her hand as it was food not stroking it wanted.
- 2 Dog is playing with its owner, passing the football to each other. Dog sometimes dodging its owner, and dribbling or biting the ball. Relationship between owner and dog - kicking and passing ball to and fro. Dog barks.
- 3 Dog indulging in a bit of tummy-rubbing from its owner. When she stops stroking, the dog demands more.
- 4 Owner is being provocative in mentioning particular words like 'cat' and 'squirrel' to her dog. Dog is stimulated by and at first wonders where the cats and squirrels are, then gets excited and paces round the room, finally looking out of the window.
- 5 Owner gives her dog large amounts of attention, stroking, talking and patting. Dog thoroughly enjoys the attention, walking about and wagging its tail. Then suddenly, as the owner leaves, dog is left alone and looks at its owner for a long while until she is (presumably) gone in a sorrowful manner. Then the dog goes towards the seat, checks that the owner isn't there any more, and jumps up on the seat, looking bored.

C Female

- 1 Dog was curious about what his/her owner was herself focussing on. Dog was intent on what was in the bowl, as he could not see this.
- 2 Dog was intent on the ball. He was aware he was playing a game. He/she wanted to be in control of the ball, had to be in contact with it in order to bring it back to his owner. He enjoys the chasing of the ball.
- 3 Dog was sleeping near to owner (sense of contact). Seeked (sic) contact with owner, shown by his paw movement, indicating that he did not want owner to stop petting him.
- 4 Dog reacting to tone of voice and probably facial expression of owner. Picking up a teasing, challenging tone and reacting to it - appears to get excited, curious. He turns around as if looking for what owner is talking about. When not in room, looks out the window to seek it there.

5 When owner is there, the dog is wagging his tail furiously, obviously enjoying the attention. On owner's exit, becomes very still, seems at first uncomfortable on its own (maybe due to awareness of camera.) The tail has stopped wagging. It appears once he feels owner is not coming back, gets on the chair.

D: Male

1 The dog was paying particular attention to the movement of the spoon and sat attentively expecting some of the soup for himself/herself.

2 The dog is chasing the ball and seems to try to attract it by jumping on it and biting it. The lady plays a role to move the ball to give the dog a moving target.

3 The dog is resting and moves his paw up to gain attention and stroking from the gentleman in the chair. The man strokes the dog.

4 The dog seems to understand or recognise the voice commands. He then acts confused and tries to look around the room, finally looking out of the window.

5 The lady pays attention to the dog at first by stroking him. She then leaves the room whereupon the dog looks lost and waits for her to return. Eventually gives up and sits on the chair, although still looking to see where the lady is.

E: Male

1 The dog watches her eating. The dog wants some food. She goes to stroke the dog. The dog does not want to be stroked, it wants to be fed.

2 The dog thinks the ball is an animal for it to chase and kill. The woman kicks the ball to make it seem more alive. The dog thinks the ball is fighting him.

3 The man scratches the dog. The dog signals that it wants him to continue. He does.

4 Someone talks to the dog with a certain amount of excitement in their voice. The dog senses this and becomes much more alert, trying to understand the excitement.

5 The woman gets off the chair, plays with the dog, leaves. The dog wants to be sure she is gone, looks at the chair, knows that it should not climb on to the chair, ponders, then does.

F: Female

1 Dog watching adult eat food, tries to specifically watch the owner's mouth. When owner goes to stroke dog, possibly blocks dog's view. Dog possibly begging for food.

2 Dog entices adult to kick ball, anticipates ball being kicked when adult's foot moves back of adult, and runs back. Tries to capture ball, seeing it as both plaything and prey. It shows adult it can still catch things, showing dominance over the ball.

3 Dog entices adult to continue rubbing its chest by begging with his paw, opening his chest to the adult. Does this because it enjoyed it when it first occurred.

4 Dog shows awareness with ears, and is aroused by the sounds that the voice makes, since it associates it with a voice which corresponds to a particular animal that it is driven to chase. Tries to look for it, all around itself, then looks outside window.

5 Dog anticipates going for a walk with owner, sees that the owner doesn't return and decides to take the owner's seat instead!

G: Female

1 The dog was watching its owner eating and was trying to tell the owner that it wanted some too, but sitting and waiting expectantly and watching. The owner was not obliging.

2 They were both playing and generally having fun. The dog waited expectantly for its owner to throw or kick the ball. The dog always brought it back and laid the ball at its owner's feet so that the game could carry on.

3 The dog was lying on its side and when the owner stopped stroking its tummy, it raised its paw up and looked at its owner, signalling that he wanted the owner to carry on stroking its tummy. The owner obliged.

4 The dog was staring into the camera and reacting to it as if he had never seen one before. The dog was curious but also wary. He then turned his attention to what was going on outside.

5 When the owner went, the dog looked at where she had gone and waited expectantly for her to come back. When she didn't, he stopped wagging his tail and he sidled up to the chair, checked to see if she was coming back and then got up on to the chair with an air of triumph.

H: Male

1 (Dog wants some food.) The dog watched the person eating and moved to a position to get eye contact and sat. Tried without break to get the person's attention. When the person tried to pat the dog, it moved away (due to no food offered from that hand) and again tried to get and maintain eye contact.

2 Dog playing with ball - owner moved toward dog - dog moved away to allow person to kick ball (waiting in anticipation). Owner kicked ball twice and dog retrieved the ball in each case, drawing back from the ball and waiting its turn in the play sequence. At one point the dog barked to encourage the person to speed up.

3 Dog lying down on side, having tummy tickled. When person stopped the dog lifted its left front leg a couple of times to encourage the person to continue. Person returned to the tickling and again stopped (after speaking). The dog then repeated the behaviour and looked up.

4 Person speaking in a tone that the dog expects to see something (another animal). Dog responds by looking around to find the cause of the person's tone.

5 Dog responds to person's petting by wagging its tail. When person leaves the room the dog stops wagging its tail and watches her leave. After waiting for her return for a short period, moves across the room and takes the person's previous position in the chair.

I: Female

1 Dog is begging for food being eaten. The woman is teasing by slightly hesitating at times before really eating the food. Dog is trying to look sweet and appealing.

2 Dog chases after the ball, biting it and scratching when he catches it. Whilst doing this, the ball is pushed back towards the woman. He leaves it at her feet, backs off and then runs towards it again, until the woman kicks the ball again and the process is repeated.

3 Dog is relaxed, being stroked/tickled. The touching stops, the dog wants more and indicates this by raising his paw. The touching moves up to his neck and when it stops

again and a raised paw gains no reaction, the dog lifts its head as well to see what's happening.

4 Dog seems to associate names to the animals he chases. On hearing them he tries to find them, looking round the room, at the woman in particular, as though looking for a clue and then finally out of the window to outside, where he would usually find them.

5 Dog enjoys being rewarded and patted (tail wags). Looks curiously at the video, doesn't seem to know what it is, then jumps on to the chair where the woman had previously been sitting and continues to look at the video and the woman.

J: Female

1 Dog is watching woman eating. Approaches her from left hand side. Sits in front of her, wags tail, moves closer and jumps up a little bit. Woman goes to pat him and he flinches a bit, then he is stroked; jumps up and wags tail. Seems to be begging.

2 Dog playing football. When the ball is kicked he follows it and when he catches it he keeps it till the lady gets closer, or takes it back to her. The dog is having fun, encouraging the lady to keep on playing.

3 Dog is lying down, has tummy tickled. When contact removed, dog waves paw and turns stomach towards owner. Gets more tickles! Then owner says stop. Dog turns to voice. Opens eyes and looks at owner - tilts head back for stroke, waves paw again - gets petted.

4 Dog is listening attentively to 'cats'. Becomes alert, ears prick, tail erect, runs towards owner then looks to and fro from window to owner. Getting excited as runs around a bit. Listens more, then looks away and runs to window. Jumps up to settee to look out of window.

5 Dog is getting attention from owner. Seeking more by wagging tail, wiggling bottom and tilting head back. Eye contact with owner. When owner leaves, dog looks to where she has gone. Stops wagging tail. Is very still. Then wanders forward, looks at camera, then jumps and settles in armchair, still looking after where woman has gone.

K: Female

1 Dog is 'asking' for food, trying to look appealing and hungry! Owner is trying to ignore dog and eat her lunch, tries to 'appease' dog with pat.

2 Dog and owner playing turn-taking game of fetch. Dog tries (unsuccessfully) to pick up ball.

3 Owner tickling dog's tummy; dog asks for more by raising its paw. When owner says 'No', dog waves its paw and looks up at owner. Owner gives in and strokes dog's head again, i.e. dog 'wins'!

4 Owner asks dog where various animals are, dog responds by looking around room, then finally looks out of window for squirrels. Dog seems to understand it's supposed to be looking for something, doesn't appear to know what, then something 'clicks'.

5 Dog enjoys petting from owner. Owner leaves room, and dog waits for her to come back, then gets up on her chair and lies down.

L: Female

1 The dog is sitting waiting to be given some food. He was not interested in being stroked, but only wanted food.

2 The owner kicked the ball for the dog to chase - he ran after it and brought it back, attacking the ball. This was repeated several times. The dog was playful, wagging its tail - not aggressive.

3 The dog was lying on its side, beside its owner, having his chest stroked. The dog raised its paw to be stroked more and looked up at the owner for more, after he said 'that's enough, no more.'

4 The dog did not show much interest when asked about a cat, but responded to the word 'squirrels'. He became excited and interested and then went to look out the window, as if in an attempt to see some squirrels.

5 The owner is sitting in her chair. The dog sits to be stroked by her owner. Then stands wagging her tail while receiving further strokes and pats on the back. Her owner then gets up to leave. She, the dog, looks longingly after her. When she realises the owner is not coming back, the dog walks towards her mistress's chair and promptly jumps up on to it and lies down on it.

M: Female

1 The dog was eagerly anticipating some food either being dropped or the owner giving it some. The owner carried on eating but realised what the dog was doing.

2 Owner and dog playing ball. Owner kicking ball for dog. Dog was highly excited and appeared to be enjoying himself, and would run after the ball.

3 Owner and dog very relaxed. Dog lying on its side and when the owner stops stroking it, the dog paws the air as in protest and rolls on his back. The owner then repeats this.

4 Owner is talking to the dog. The dog listens attentively and cocks its head. When she says 'squirrels', the dog runs in a circle and puts its front legs on the chair and looks out the window. The dog seems very excited.

5 Owner kneels off chair to stroke dog. Dog seems to enjoy it and wags its tail a lot. Then the owner leaves and the dog's tail stops wagging and it stands still, almost confused. It then wanders over to the chair, looks at it and then looks about and then jumps on the chair.

N: Male

1 The dog wouldn't mind some attention, maybe to be on the woman's lap instead of the tray. It probably wants to eat as well. The woman doesn't pay much attention.

2 The dog is chasing and playing with the ball with lots of attention but sees the owner as part of the game as it lets her take the ball to kick it.

3 The dog was asleep. The owner woke him up and he lifted a paw as if he wanted to be rubbed. When the owner stopped he lifted his leg again and looked up as if he wanted more.

4 The dog is listening and attending to his owner. At the word 'squirrel' he pays particular attention, gets excited and looks out of the window.

5 The dog watches its owner and when she plays with it, it wags its tail. It watches as she leaves and stops wagging his tail as if unhappy. He moves forward and looks at the

empty chair and then occupies the chair himself.

O: Female

1 The dog is sitting patiently, but obviously is begging for some of the food the lady is eating. Closely watching the lady for some food. The dog isn't really interested in the patting by the owner.

2 The dog is playing with the owner and the ball, obviously wanting to play, run around and try to capture the ball, even though it can't fit it in its mouth. S/he is exercising and playing with the ball.

3 The dog is enjoying being stroked by the owner and being soppy. When the owner stops, the dog twitches his ear with his paw to indicate he wants the owner to continue to pat and stroke him.

4 Owner is being provocative in mentioning particular words recognised, like 'cat' and 'squirrel' to her dog. Dog is stimulated and at first wonders where cats and squirrels are, then gets excited and paces round the room, finally looking for them out the window.

5 The dog enjoys being patted by the owner and all the attention. When the owner leaves s/he anticipates her coming back. But realising she's not, the dog climbs on to the chair to sit on it.

P: Female

1 The dog is watching its owner eating and is trying to get its owner to give it some food by hovering and gaining their (sic) attention.

2 The dog is in an open field with its owner and is energetically playing with a football which is being kicked around by its owner.

3 The dog is lying down beside its owner, is being stroked, and is showing pleasure by holding up its paw and staring into its owner's eyes.

4 The dog is being asked to find certain items and is looking for them. It also stands up on the chair, looking away from its owner.

5 The owner strokes and talks to the dog, pats its back and then leaves it. The dog stays still for a few seconds, looks for its owner then jumps up on to the chair and lies down.

Q: Female

1 The dog was trying to get the attention of the woman so she would give him some of her soup. However, when she does pay him some affectionate attention, he shies away, as it is the food not affection he wants.

2 Dog playing football. When the ball is kicked he follows it and when he catches it he keeps it till the lady gets closer, or takes it back to her. The dog is having fun, encouraging the lady to keep on playing.

3 The dog is indulging in a bit of tummy-rubbing from its owner. When owner stops stroking, the dog demands more by pawing at him in an inquisitive manner to say 'More please.

4 The dog realises/acknowledges the tone of the owner and the messages about the cats and squirrels. The dog wants to look for them outside the window in order to play and catch them presumably.

5 The owner stroked the dog and the dog felt he'd get something nice so wagged his tail and leant hopefully towards the door. But its owner walked off in the other direction. Dog was disappointed and upset, and jumped on to her armchair for comfort.

R: Female

1 The dog was trying to get the attention of the woman so that she would give him some of her soup. However, when she does pay him some affectionate attention, he shies away, as it is the food not affection he wants.

2 The dog, whilst playing with the ball, also seemed to be attacking it, and barking as if it was something threatening. He seemed a little unsure of what the ball actually was, as he kept backing away from it.

3 The dog was resting peacefully, enjoying the affection showed by the man. He seemed very content to be stroked and actually made it easier for the man by lifting up his leg.

4 The dog seemed very alert but a little confused as to what he was being asked to do. Eventually he seemed to understand the question, as he went to the window to look for the squirrels.

5 The dog was very happy to be petted (wagging tail etc.) but once the woman left the room he seemed really lost and didn't know what to do. He almost seemed upset that the woman had gone away.

S: Female

1 Dog is sitting very patiently, watching woman eating. Moves when she strokes him/her but then settles down again. Shows great interest in the food/watching her.

2 Dog playing very energetically with the ball – also relying on the owner to initiate play by kicking the ball so that the dog can chase it.

3 Big change in mood/pace of dog/owner interaction. Dog very lazy – lying, but in such a way as to encourage being stroked. Playfully paws at hand. Very relaxed, lazy.

4 Dog seeming very attentive, responsive. Seems to understand tone of voice – able to associate sound it hears ('squirrels') with the outside. Uses chair to look out through the window.

5 Accepts pats from owner (tail wags) but once she is gone, the dog remains quite still for a few moments and then jumps on to the chair which his/her owner had, until recently, been occupying.

T: Female

1 Woman drinking soup, dog looking hopefully for some (ie expectant). When shown affection, not really interested, remaining concentrated on the mel. Sitting still, looking up at it as woman continues with her soup.

2 Woman kicks large ball for dog, who chases it and pushes it around, grabbing it with its teeth. Obedience is somewhat delayed, as dog seems preoccupied with the toy and barks almost in demand when waiting for her to kick it again.

3 Dog lying by armchair at man's feet, half asleep, enjoying a rub on his upper chest. When rubbing stops, dog waves leg as though hinting for more. Waving ceases when rubbing resumes, but when man speaks, saying 'no more', dog looks up hopefully at him.

4 Dog looks at speaker, listening to voice, as seen by cocking his head to one side. Occasionally he looks round in a circle before returning his attention expectantly to the speaker. He then goes to the couch by the window and puts his front paws on it to look out of window.

5 Dog holds head high, enjoying neck being stroked, tail wagging furiously. Once woman leaves, remains motionless for a time. Wagging ceases. Moves towards chair, then climbs in to it and lies down.

3. If you were given £100 to distribute equally between 5 charities, please write 1 against your first choice, 2 against your second choice and so on up to 5 (no more than 5 please)

Oxfam
 World Wildlife Fund.....
 Red Cross.....
 Royal Society for the Prevention of Cruelty to Animals.....
 Shelter (homes for homeless people).....
 The National Society for the Prevention of Cruelty to Children.....
 Compassion in World Farming (against live exports and intensive farming methods).....
 MENCAP (help for mentally handicapped people).....
 Royal Society for the Protection of Birds.....
 Canine Defence League.....
 Cats' Protection League.....
 Cancer Research.....
 The Dogs' Home, Battersea (or similar rescue centre).....
 Help the Aged
 Other (please specify, as well as giving a number)

What is the reason for your first choice?

.....

.....

4. Please put a tick in 3 boxes of the diagram to show what course of action you would take to get rid of each of the following from your window sill:- a live wasp: a live bee: a live spider.

	kill it	put it outside	ask someone else to deal with it
wasp			
bee			
spider			

5. If a cat brought in a mouse that seemed to be unhurt, would you try to (Please tick one):

(a) rescue the mouse and release it?

(b) put the cat, still with the mouse, outside?

Please give the reason for your choice

.....

6. If a fox came to your garden regularly in winter (and you did not keep chickens or rabbits!) would you leave out scraps of food for it? (Yes, or No)

If Yes, why?

If No, why not?

7. Please tick the word which best describes your feelings:-

When I see an ill-treated animal on a television programme, it makes me feel:

disturbed

compassionate

angry

sympathetic

other word you would prefer (please add)

8. Please answer both: When birds are nest-building, they are acting by (Yes or No):

instinct

intelligence

9. It is usually agreed that both fox and deer populations sometimes have to be controlled. Please write Yes or No, to indicate whether you feel that hunting as a country sport should be kept -

(a) for foxes

(b) for deer

10. If a cat brought in a blackbird that appeared unhurt, would you try to (Please tick one)

(a) rescue the bird and release it outside?

(b) put the cat, still with the bird, outside?

Please give the reason for your choice

.....

.....

11. When people stress the great affection/loyalty shown them by their dog, do you think they are likely to be (please tick one):

(a) exaggerating?

(b) realistic?

(c) mistaken?

12. Please tick the word that best describes your feelings:

When I see pictures of starving children on television, it makes me feel:-

disturbed

compassionate

angry

sympathetic

other word you would prefer (please add)

13. Please show how far you agree/disagree by putting a tick in each of the set of boxes below:

It is wrong to rear animals

(a) for food: (eg farm animals)

AGREE

--	--	--	--	--

 DISAGREE

(b) for entertainment (eg circuses)

AGREE

--	--	--	--	--

 DISAGREE

(c) for luxury clothing (eg fur trimmings)

AGREE

--	--	--	--	--

 DISAGREE

(d) for medical research into disease (eg laboratory animals):

AGREE

--	--	--	--	--

 DISAGREE

(e) for testing cosmetics (eg assessing sensitivity to human skin or eyes)

AGREE

--	--	--	--	--

 DISAGREE

14. Are there any animals you think should not be used in medical research?

Yes

No

All

If 'Yes' or 'All', please say why you would exclude them:

.....

15. Do you agree or disagree with the following? (Yes or No):-

(a) On the whole we are becoming kinder towards animals

(b) On the whole we are becoming kinder towards each other

Do you think there is a connection between (a) and (b)?

16. Recently the UK trade in export of live farm animals has aroused much media attention. Would you agree with those who protested against the trade? (please tick)

Yes

No

Please give the reason for your choice of answer:

.....

17. How do you feel about killing animals for food? (Please tick one):

(a) Acceptable, in that it is necessary for our health

(b) I enjoy eating meat, and that is the only way to get it

(c) Would rather not think about it

(d) I am vegetarian and do not eat fish or meat

(e) I am vegan and eat no animals or animal products

18. In the 'Weekend Telegraph' (6.8.1994), a vet who specialised in the care of fish noted that 'If a goldfish is sitting there doing nothing, it's probably suffering from boredom.'

Please put a tick in the box to show how far you agree or disagree with him:

AGREE

--	--	--	--	--

 DISAGREE

19. Do you think there is a life beyond this one (against each one, please write either Yes, No, or Possibly)

(a) for humans?

(b) for all animals?

(c) for some animals?

20. Please tick the statement which you think is more likely to be right:

There is a tendency to overestimate the extent to which animals can suffer

There is a tendency to underestimate the extent to which animals can suffer

21. To what extent do you agree or disagree with the following? Please draw a circle round the figure in each group which best indicates whether you:

1 (strongly agree); 2 (tend to agree); 3 (feel neutral); 4 (tend to disagree); 5 (strongly disagree)-

a) People should live in harmony with their natural environment. 1, 2, 3, 4, 5

b) The balance of nature regulates itself. We should try not to interfere with wild animal species 1, 2, 3, 4, 5

(Question 21 continued) Please circle a number in each group as before:

1 (strongly agree); 2 (tend to agree); 3 (feel neutral); 4 (tend to disagree); 5 (strongly disagree)

- c) To maintain a healthy environment, we should set limits on industrial growth. 1, 2, 3, 4, 5
- d) We are more dependent on animal species than they are on us. 1, 2, 3, 4, 5
- e) It is lack of knowledge, rather than lack of concern, that leads to species extinction. 1, 2, 3, 4, 5
- f) We should have stricter regulations for protecting the environment. 1, 2, 3, 4, 5
- g) People have the right to modify the natural environment to their own needs. 1, 2, 3, 4, 5
- h) Humanity is severely abusing the environment. 1, 2, 3, 4, 5
- i) Claims that current levels of pollution are endangering health are exaggerated. 1, 2, 3, 4, 5
- j) Environmental issues should address the welfare of both humans and animals. 1, 2, 3, 4, 5

If there are any further views you would like to express, or for which there was insufficient space on the questionnaire, please do so below:-

.....

.....

.....

THANK YOU FOR YOUR HELP

If you would rather be anonymous, please feel free to do so. If however you would be willing to be contacted in the event that we might wish to clarify an issue, or perhaps add to it, we would greatly appreciate having your name, address and phone number. (BLOCK LETTERS MIGHT BE CLEARER)

Please tick (Mr, Mrs, Miss, Ms): Name

Address

.....

Telephone number

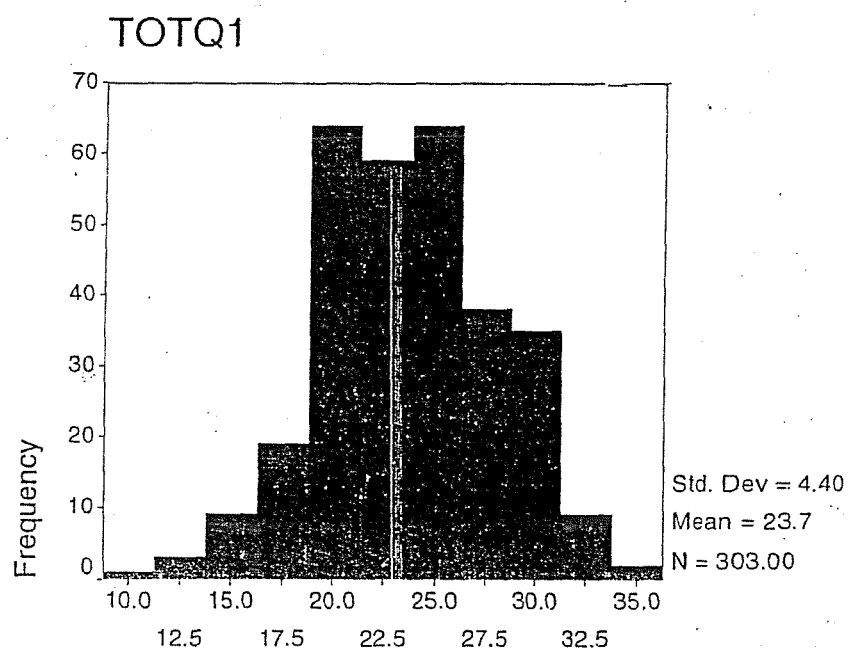
Appendix C

Distribution of Scores on Measure of Perception of Animal Status(1) Total Sample in Three Generation Study

Statistics

TOTQ1

N	Valid	303
	Missing	0
Mean		23.7327
Std. Deviation		4.4010



(2) Student Group

Statistics

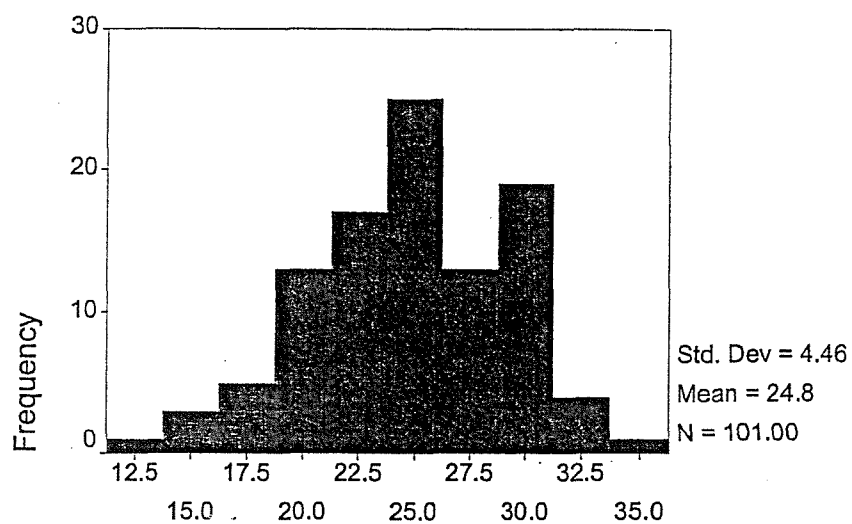
TOTQ1

N	Valid	101
	Missing	0
Mean		24.8317
Std. Deviation		4.4589

a. GENERA = student

TOTQ1

GENERA: 1.00 student



TOTQ1

(3) Parent Group

Statistics

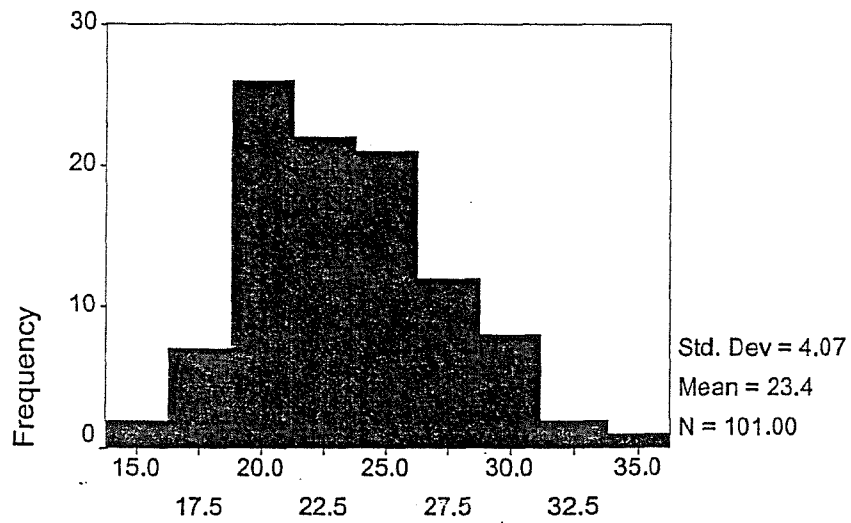
TOTQ1

N	Valid	101
	Missing	0
Mean		23.4257
Std. Deviation		4.0653

a. GENERA = parent

TOTQ1

GENERA: 2.00 parent



TOTQ1

(4) Grandparent Group

Statistics

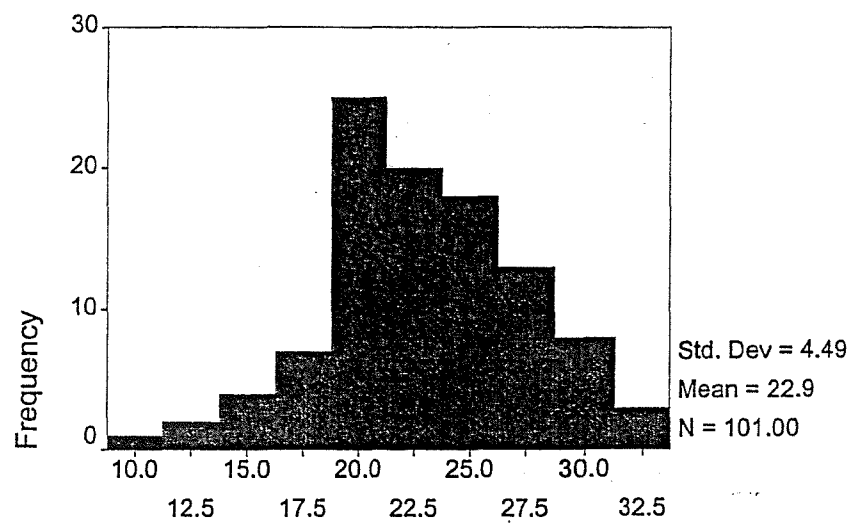
TOTQ1

N	Valid	101
	Missing	0
Mean		22.9406
Std. Deviation		4.4874

a. GENERA = grandparent

TOTQ1

GENERA: 3.00 grandparent



TOTQ1

QUESTIONNAIRES sent to THEOLOGICAL COLLEGES/COURSES

1. CHURCH OF ENGLAND
2. UNITED REFORMED CHURCH
3. BAPTIST
4. METHODIST
5. ROMAN CATHOLIC
6. SALVATION ARMY
7. SOCIETY OF FRIENDS (QUAKERS)

1. Anglican Theological Colleges: from the Church of England Year Book, 1998-99

Cranmer Hall, St. John's College	DURHAM, DH1 3RJ
College of the Resurrection,	MIRFIELD, WF14 OBW
Oak Hill Theological College,	LONDON N14 4PS
The Queen's College,	BIRMINGHAM, B15 2QH
Ridley Hall,	CAMBRIDGE, CB3 9HG
Ripon College,	OXFORD, OX44 9EX
St. John's College,	NOTTINGHAM, NG9 3DS
St. Stephen's House,	OXFORD, OX4 1JX
Trinity College,	BRISTOL, BS9 1JP
Westcott House,	CAMBRIDGE, CB5 8BP
Wycliffe Hall,	OXFORD, OX2 6PW
Theological Institute of the Scottish Episcopal Church,	EDINBURGH, EH3 7LB
St Michael's College,	CARDIFF, CF5 2YJ
Regional Courses: (including Interdenominational)	
Carlisle and Blackburn Diocesan Training Institute,	CARLISLE, CA3 8UF
East Anglian Ministerial Training Course,	CAMBRIDGE, CB3 OAE
East Midlands Ministry Training Course,	NOTTINGHAM NG7 2RD
North East Oecumenical Course,	DURHAM, DH7 9RH
Northern Ordination Course,	MANCHESTER, M14 5JP
St Albans and Oxford Ministry Course,	OXFORD, OX2 ONB
South East Institute for Theological Education,	CHATHAM, ME4 4HP

Southern Theological Education and Training Scheme,	SALISBURY, SP1 2EE
South West Ministerial Training Course,	LAUNCESTON, PL15 8LW
West Midlands Ministerial Training Course, Queen's College	EDGBASTON, B15 2QH
West of England Ministerial Training Course,	GLOUCESTER, GL1 2LX

2. United Reformed Church UK: 1998 Year Book

Mansfield College,	OXFORD, OX1 3TF
Northern College,	MANCHESTER, M14 5JP
Westminster College,	CAMBRIDGE, CB3 0AA

3. Baptist Union Directory: 1998-1999

Baptist Theological College	Y Coleg Gwyn, Efford Ffriddoedd, BANGOR, Wales
The South West Baptist College	BRISTOL, BS8 3NF
Regents Park College,	OXFORD, OX1 2LB
Spurgeon's College,	LONDON, SE25 6DJ
The South Wales Baptist College,	CARDIFF, CF2 3UR

4. Methodist Church and Annual Directory, 1999

Hartley Victoria College,	MANCHESTER, M14 5JP
Wesley College,	BRISTOL, BS10 7QD
Wesley House,	CAMBRIDGE, CB5 8BJ

5. Catholic Directory of England and Wales, 1999

St John's Roman Catholic Seminary,	GUILDFORD, GU5 0QX
St Mary's Seminary, Oscott College,	SUTTON COLDFIELD, B73 5AA
St Mary's University College,	TWICKENHAM, TW1 4SX
Ushaw College,	DURHAM, DH7 9RH

6. Salvation Army Year Book, 1999

William Booth Memorial Training College,	LONDON, SE5 8BQ
---	-----------------

7. Religious Society of Friends in Great Britain, 1999 LONDON, NW1 2BJ

Appendix EPOSTAL QUESTIONNAIRE - CHRISTIAN TEACHING ABOUT ANIMALSTo: Principals/Directors of Training, Theological CollegesSection 1

1. In your college, does the curriculum include consideration of human-animal relationships? Yes/No

2. If so, has it changed over the past 30 years or so? Yes/No
 What has been the nature of any changes?

3. Are there planned changes for the future? Yes/No
 If so, what sort of changes are envisaged?.....

4. Is there currently a section of the syllabus allocated separately to Christian attitudes to:
 (a) animal welfare?
 (b) animal rights?
 (c) human-animal relationships? (please tick as appropriate)

5. Is the area covered within other general topics (eg ethical/moral/social issues/creational spirituality?) Yes/No
 If so, please outline how this is done

6. Are questions about animal status included in examination papers? Yes/No
 (If so, a specimen examination question would be appreciated)

7. Are students given an option of studying this topic in greater depth? Yes/No
 If so, in what way is this done?

8. Do students have a reading list specific to this area? Yes/No/Some

9. If so, what titles and authors are on the reading list? (or copy of list would be appreciated)

10. Is any training given on counselling those who are grieving for an animal? Yes/No

Section 2 - Questions relating to more specific teaching about animals.

11. What is the teaching as to whether animals have the possibility of a continued existence after death?

.....
.....
.....

12. Should moral responsibilities to each other be extended to include sentient animals (ie animals capable of feeling pleasure and pain)? Yes/No

If so, to what extent?

.....
.....
.....

13. Are there any other observations or comments you would wish to make?

.....
.....
.....
.....
.....
.....

THANK YOU FOR YOUR HELP WITH THIS STUDY - IT IS GREATLY APPRECIATED.

Name and Position in College

Address of College

.....

Date

Margaret Fidler,
Department of Psychology,
University of Southampton,
SO17 1BJ

QUESTIONNAIRES sent to DEPTS. OF PHILOSOPHY with courses in Ethics/Moral
Philosophy: U.K. June 1999

Names/addresses: from The World of Learning, 1999, 49th edn.

Birkbeck College London,	LONDON, W1P 1TA
Open University,	MILTON KEYNES, MK7 6AA
Queens University,	BELFAST, BT7 1NN
University of Aberdeen,	ABERDEEN, AB24 3FX
University of Birmingham,	BIRMINGHAM, B15 2TT
University of Bristol,	BRISTOL, BS8 1TH
University of Cambridge, (Darwin College)	CAMBRIDGE, CB2 1TN
University of Durham,	DURHAM, DH1 3HP
University of Edinburgh,	EDINBURGH, EH8 9YL
University of Fife, (St Andrew's College)	FIFE, KY16 9AJ
University of Glasgow,	GLASGOW, G12 8QQ
University of Hull,	HULL, HU6 7RX
University of Wales,	LAMPETER, SA48 7ED
University of Leeds,	LEEDS, LS2 9JT
University of Liverpool,	LIVERPOOL, L69 3BX
University of London, (University College)	LONDON, WC1E 6BT
University of London, (King's College)	LONDON, WC2R 2LS
University of Nottingham,	NOTTINGHAM, NG7 2RD
University of Reading,	READING, RG6 6AH
University of Southampton, (King Alfred's College)	WINCHESTER, SO22 4NR
University of Southampton,	SOUTHAMPTON, SO17 1BJ
University of Stirling,	STIRLING, FK9 4LA
University of York,	YORK, YO10 5DD



**University
of Southampton**

**Department of
Psychology**

*University of Southampton
Highfield
Southampton
SO17 1BJ
United Kingdom*

*Telephone (+44) 01703 595000
Fax (+44) 01703 594597
E-Mail*

June 1999

Dear

I am doing post-graduate work at the University of Southampton, examining the ways in which the status of animals is changing in our society. It would be most helpful, and greatly appreciated, if you would answer these questions and return this letter in the addressed, freepost envelope. Please circle correct answers.

- 1. In your department, does the syllabus include moral philosophy/ethics? Yes/No
- 2. Are considerations of human-animal status included? Yes/No
- 3. Has this come about, or changed, over the past 30 years or so? Yes/No

If so, in what way?

.....
.....

- 4. Are there planned changes for the future? Yes/No

If so, what sort of changes are envisaged?

.....

- 5. Is there currently a section of the syllabus allocated separately to: (please tick which apply)

- (a) animal welfare?
- (b) animal rights?
- (c) human-animal relationships?

- 6. Are theories to do with animal status included in examination questions? Yes/No
(If so, a specimen examination question would be appreciated)

.....

- 7. Are students given an option of studying the topic in greater depth? Yes/No

If so, in what way is this done?

If students have a reading list specific to this area, which authors are on it?

.....

Thank you very much for your help.

Yours sincerely,

REFERENCES

- Adamson, J. 1990. Born Free, A Lioness of Two Worlds. London: William Collins Sons and Co Ltd.
- Appleby, M. 1999. What Should We Do About Animal Welfare? Oxford: Blackwell Science Ltd.
- Archer, J. and Parker, S. 1995. Human Attachment to Pet Dogs. Paper submitted for the symposium on Human Relationships with Companion Animals, British Psychology Annual Conference.
- Argyll, Duke of. 1884. The Unity of Nature, (Chapter 3). London: Alexander Strahan.
- Arluke, A. and Sanders, C.R. 1996. Regarding Animals. Philadelphia: Temple University Press.
- Ascione, F.R. 1992. Enhancing children's attitudes about the humane treatment of animals: generalizations to human-directed empathy. Anthrozoös 5(3): 176-191.
- Baker, J.A. 1999. Killing the Hydra. Animal Christian Concern, Winter/Spring edn: 2-4.
- Balcombe, J. 1999. Animals and Society Courses: A Growing Trend in Post-Secondary Education. Society and Animals, 7(3): 229-240.
- Bateson, P.P.G. 1997. The Behavioural and Physiological Effects of Culling Red Deer. Report to the Council of the National Trust.
- Beech, F.A. 1955. The Descent of Instinct. Psychological Review, 62: 53-55, 225-230.
- Beck, A. and Katcher, A. 1983. Between Pets and People. NY: G.P. Putman.
- Bengtson, V.L., Shaie, K.W. and Burton, L.M. (Eds). 1995. Adult Intergenerational Relations: Effects of Societal Change. NY: Springer.
- Bergler, R. 1983. Man and Dog. Oxford: Blackwell Scientific Publications.
- Berryman, J.C., Howells, K. and Lloyd-Evans, M. 1985. Pet Owner Attitudes to Pets and People. Veterinary Record, 177: 659-661.
- Blake, W. 1800. 'The Fly'. In J. Wynne-Tyson (Ed). 1990. The Extended Circle: An Anthology of Humane Thought. London: Sphere Books Ltd: 33-34.
- Boakes, R. 1984. From Darwin to Behaviourism. Cambridge University Press.
- Bodson, L. 2000. Motivations for pet-keeping in Ancient Greece and Rome: A preliminary survey. In A. Podberscek, E. Paul, and J. Serpell (Eds) Companion Animals and Us. Cambridge University Press: 27-41.
- Bonus, S., McNicholas, J. and Collis, G.M. 2000. Pets in the network of family relationships: an empirical study. In A. Podberscek, E.S. Paul and J.A. Serpell (Eds). Companion Animals and Us. Cambridge University Press: 209-236.

- Boom, L. and Lahey, M. 1978. Language Development and Language Disorders. NY: Wiley.
- Bowd, A.D. 1984. Fears and Understanding of Animals in Middle Childhood: Journal of Genetic Psychology, 145: 143-144.
- Bowd, A.D. and Bowd, A.C. 1989. Attitudes Towards the Treatment of Animals: A Study of Christian Groups in Australia. Anthrozoös 3(1): 20-24.
- Brown, R. 1980. The First Sentences of Child and Chimpanzee. In T. Sebeok and J. Umiker-Sebeok (Eds) Speaking of Apes. NY: Plenum Press: 85-101.
- Cain, A. 1983. A Study of Pets in the Family System. In A. Katcher and A. Beck (Eds) New Perspectives on our Lives with Companion Animals. University of Pennsylvania Press: 72-81.
- Carruthers, P. 1992. The Animal Issue. Cambridge University Press.
- Carson, G. 1972. Men, Beasts and Gods: A History of Cruelty and Kindness to Animals. NY: Charles Scribner's Sons.
- Chomsky, N. 1968. Language and Mind. NY: Harcourt Brace and World.
- Clark, S. 1977. The Moral Status of Animals. Oxford: The Clarendon Press.
- Cohen, J.M. and Cohen, M.J. (Eds). 1963. Penguin Dictionary of Quotations. London: Penguin Books Ltd.
- Coren, S. 1994. The Intelligence of Dogs. NY: The Free Press.
- Corson, S.A. and Corson, E.O'L. 1981. Companion Animals as Bonding Catalysts in Geriatric Institutions. In B.E. Fogle (Ed) Interactions between People and Pets. Charles C. Thomas: 146-147.
- Costall, A. 1996. Psychology and the Pet Owners. Newsletter of the International Society for Anthrozoology 12: 2-4.
- Crocker, D.R. 1984. Anthropomorphism: Bad Practice or Honest Prejudice? In G. Ferry (Ed) The Understanding of Animals: A New Scientist Guide. Oxford: Blackwell and New Scientist: 304-313. (First published in the New Scientist, 16 July, 1981).
- Darwin, C. 1898. The Formation of Vegetable Mould Through the Action of Worms: With Observations on their Habits. (Authorised Edn.) NY: D. Appleton and Company.
- Dawkins, M.S. 1986. Unravelling Animal Behaviour. Longman Group Ltd.
- Dawkins, M.S. 1990. From an Animal's Point of View: Motivation, Fitness and Animal Welfare. Behavioral and Brain Sciences, 13: 1-61.
- Dawkins, M.S. 1993. Through Our Eyes Only? W.H. Freeman and Company Ltd.
- Desmond, A. 1979. The Ape's Reflexion. London: Blond and Briggs Ltd.
- Diamond, S. 1971. The Gestation of the Instinct Concept. Journal of the History of the Behavioral Sciences:7(4): 328.

- Diamond, S. 1974. Four Hundred Years of Instinct Controversy. Behavior Genetics:4(3). NY: Plenum Publishing Corporation: 242.
- Dresser, N. 2000. The horse Bar Mitzvah: a celebratory exploration of the human-animal bond. In A. Podberscek, E. Paul and J. Serpell (Eds) Companion Animals and Us. Cambridge University Press: 90-107.
- Driscoll, J.W. 1992. Attitudes toward Animal Use. Anthrozoös, 5(1): 32-39.
- Driscoll, J.W. 1995. Attitudes toward Animals: Species Ratings. Society and Animals 3(2): 139-150.
- Duck, S. 1994. Human Relationships. London: Sage Publications Ltd.
- Durant, J.R. 1986. The Making of Ethology: The Association for the Study of Animal Behaviour, 1936-1986. Animal Behaviour 34: 1601-1616.
- Echlin, E. 1997. Pray for Pukes and Plants. Catholic Herald: 21-3.
- Eddy, T., Gallup, G. and Povinelli, D. 1993. Attribution of Cognitive States to Animals: Anthropomorphism in Comparative Perspective. Journal of Social Issues, 1: 87-101.
- Eldridge, J.J. and Gluck, J.P. 1996. Gender-Differences in Attitudes Toward Animal Research. Ethics and Behavior 6(3): 239-256.
- Enders-Slegers, M.J. 2000. The Meaning of Companion Animals: Qualitative Analysis of the life Histories of Elderly Cat and Dog Owners. In A. Podberscek, E. Paul, and J. Serpell (Eds) Companion Animals and Us. Cambridge University Press: 237-256.
- Endler, N.S. 1981. Persons, Situations and their Interactions. In A.I. Rabin, J. Aronoff, A.M. Barclay and R.S. Zucker (Eds) Further Explorations in Personality. NY: John Wiley and Sons: 114-151.
- Erikson, E.H. 1950. Childhood and Society. NY: Norton.
- Erikson, E.H., Erikson, J.M. and Kivnick, H.Q. 1986. Vital Involvement in Old Age. NY: Norton.
- Ferry, G. (Ed). 1984. The Understanding of Animals. Oxford: Basil Blackwell Ltd.
- Festinger, L. 1962. A Theory of Cognitive Dissonance. London: Tavistock Publications.
- Fidler, M. 1996. Caring for Companion Animals: Changing Attitudes. Society for Companion Animal Studies 8(4): 4.
- Fidler, M., Coleman, P. and Roberts, A. 2000. Empathic Response to Animal Suffering: Anthrozoös, 13(1): 48-51.
- Fidler, M., Light, P. and Costall, A. 1996. Describing Dog Behavior Psychologically: Pet-owners versus Non-owners. Anthrozoös, 9(4): 196-200.
- Fisher, J.A. 1990. In M. Beckoff and D. Jamieson (Eds) Interpretation and Explanation in the Study of Animal Behavior, Vol. 1. Boulder Co., Westview Press.
- Fogle, B. 1986. Games Pets Play. Michael Joseph Ltd.

- Fogle, B. 1999. The Changing Roles of Animals in Western Society: Influences upon and from the Veterinary Profession. Anthrozoös, 12(4): 234-239.
- Fouts, R.S. 1977. Ameslan in Pan. In G.H. Bourne (Ed) Progress in Ape Research NY: Academic Press: 121.
- Fouts R.S. and Fouts, D.H. 1993. Chimpanzees' Use of Sign Language. In P. Cavalieri and P. Singer (Eds) The Great Ape Project. Fourth Estate Ltd: 28-42.
- Fox, M.W. 1983. Philosophy, Ecology, Animal Welfare and the 'Rights' Question. In H.B. Miller and W.H. Williams (Eds) Ethics and Animals. Humana Press Inc: 307-315.
- Fox, M.W. 1990. Inhumane Society. NY: St.Martin's.
- Francis, L.J. 1997. Christianity, personality and concern about environmental pollution among 13- to 15-year olds. Journal of Beliefs and Values 18(17): 7-17.
- von Frish, K. 1950. Bees, Their Vision, Chemical Senses and Language. Oxford University Press.
- Galvin, S.L. and Herzog, H.A.Jr. 1992. Ethical Ideology, Animal Rights, Activism, and Attitudes toward the Treatment of Animals. Ethics and Behaviour Vol.2: 141-149.
- Gardner, R.A. and Gardner, B.T. 1969. Teaching Sign Language to a Chimpanzee. Science: 664-672.
- Gardner, R.A. and Gardner, B.T. 1975. Evidence for Sentence Constituents in the Early Utterances of Child and Chimpanzee. Journal of Experimental Psychology Science 104: 244-267.
- Gerwolls, M.K. and Labott, S.M. 1994. Adjustment to the Death of a Companion Animal. Anthrozoös, 7(3): 172-187.
- Gillman, H. 1988. In Quaker Faith and Practice. Quaker publication.
- Glover, J. 1977. Causing Death and Saving Lives. Penguin Books.
- Goodall, J. 1971. In the Shadow of Man. London: Collins
- Goodall, J. 1986. The Chimpanzees of Gombe. Cambridge MA: Harvard University Press.
- Goodall, J. 1990. Through a Window, 30 Years with the Chimpanzees of Gombe. London: Weidenfeld and Nicolson.
- Goodall, J. 2000. In Wise, S.M. Rattling the Cage: Towards Legal Rights for Animals. London: Profile Books Ltd: xii.
- Goodall, J. 2001. World Report of the Jane Goodall Institute. UK: Lymington.
- Gould, J. and Gould, C. 1983 (14 April). Can a Bee Behave Intelligently? New Scientist.
- Griffin, D.R. 1981. The Question of Animal Awareness. Cambridge MA: Harvard University Press.

- Griffin, D.R. 1983. Animal Thinking. Cambridge, MA: Harvard University Press.
- Groce, N.E. 1985. Everyone Here Spoke Sign Language. Cambridge, MA: Harvard University Press.
- Harris, R. 1981. The Language Myth. London: Gerald Duckworth and Co. Ltd.
- Harrison, B. 1982. Peaceable Kingdom: Stability and Change in Modern Britain. Oxford: Clarendon Press.
- Harrison, R. 1964. Animal Machines: The New Factory Farming Industry. London: Vincent Stuart.
- Hayes, J.T. 12 June 1977. The Pursuit of Reason. New York Times Magazine: 22.
- Hebb, D.O. 1958. Heredity Maturation, Early Learning. In W.B. Saunders (Ed) Textbook of Psychology, Ch 6. Philadelphia.
- Hebb, D.O. 1989. Yerkes Laboratories of Primate Biology. A History of Psychology in Autobiography, Ch 7. San Fransisco: W.H. Treen and Co.
- Hills, J.A. 1993. The motivational bases of attitudes toward animals. Society and Animals, 1: 111-128.
- Hindley, M.P. 1999. 'Minding animals': the role of animals in children's mental development. In F.L. Dolins (Ed). Attitudes to Animals: Views in Animal Welfare Cambridge University Press: 186-199.
- Hirsh-Pasek, K. and Treiman, R. 1982. Doggerel: Motherese in a New Context. Journal of Child Language, 9: 229-237.
- Honderich, T. (Ed) 1995. The Oxford Companion to Philosophy. Oxford University Press.
- Hume, C.W. 1957, 1980. The Status of Animals in the Christian Religion. Potter's Bar: Universities Federation for Animal Welfare.
- Hursthouse, R. 1987. Beginning Lives. Open University Press.
- Hursthouse, R. 1999. Humans and Other Animals. Open University Press.
- Ingold, T. 1988. What is an Animal? London: Unwin Hyman Ltd.
- Jamieson, D. 1985. Experimenting on Animals. Between the Species Vol 1: 4-11.
- Jung, S. 1993. Strangers, Friends or Kin? In C. Pinches and J.B. McDaniel (Eds) Good News for Animals? NY: Orbis Books: 47-60.
- Katcher, A. 1983. Man and the Living Environment. In A. Katcher and A. Beck (Eds) New Perspectives on our Lives with Companion Animals. Philadelphia: University of Pennsylvania Press: 519-535.
- Katcher, A. and Beck, A.M. 1988. Health and Caring for Living Things. In A.N. Rowan (Ed) Animals and People Sharing the World. Hanover, NH: University Press of New England: 54-73.
- Katcher, A., Beck, A.M. and Levine. 1989. Evaluation of a pet programme in prison - the PAL project at Lorton. Anthrozoös 2: 175-180.

- Keats, J. In Kermode, F. 1990. John Keats: A Critical Edition of the Major Works. Oxford University Press: 320–321.
- Kellert, S.R. and Wilson, E.O. (Eds). 1993. The Biophilia Hypothesis. Washington, DC: Island Press.
- Kellert, S.R. 1994. Attitudes, Knowledge and Behaviour toward Wildlife Among the Industrial Superpowers. In E. Paul and J. Serpell (Eds) Animals and Human Society. London: Routledge: 116–137.
- Kennedy, J.S. 1992. The New Anthropomorphism. Cambridge University Press.
- Kitwood, T. and Bredin, K. 1992. Towards a Theory of Dementia Care: Personhood and Well-Being. Aging and Society, 12: 269–287.
- Kivnick, H.Q. 1991. Living with Care, Caring for Life. US: Minneapolis: University of Minnesota.
- Kundera, M. 1984. The Unbearable Lightness of Being (Trs. Michael Henry Heim). London: Faber and Faber.
- La Mettrie, J.O. de. 1748 (1912). Man a Machine. La Sale: Illinois. Open Court.
- Lane, H. (Ed) Philip, F. (Trs.). 1984. The Deaf Experience. Cambridge MA: Harvard University Press.
- Le Guin, U. 1990. Buffalo Gals and Other Animal Presences. Victor Gollancz Ltd.
- Le Pla, F. 1988. In Quaker Faith and Practice. Quaker Publication.
- Leahey, T. 1980. A History of Psychology. Englewood Cliffs, NJ: Prentice-Hall.
- Lecky, W. In Wynne-Tyson, J. 1990. The Extended Circle: An Anthology of Humane Thought. London: Sphere Books Ltd: 256.
- Lenneberg, E.H. 1980. A World Between Us. In T. Sebeok and J. Umiker-Sebeok (Eds) Speaking of Apes. NY: Plenum Press: 71–83.
- Levinson, B.M. 1969. Pets and Old Age. Mental Hygiene, 53: 364–368.
- Levinson, B.M. 1972. Pets and Human Development. US: Charles Thomas.
- Limber, J. 1977. Language in Child and Chim? American Psychologist 32: 280.
- Linden, E. 1976. Apes, Men and Language. London: Pelican Books: 103–104.
- Linzey, A. and Cohn-Sherbok, D. 1987. After Noah: Animals and the Liberation of Theology. Lincoln, RI: Mowbray.
- Linzey, A. 1994. Animal Theology. London: SCM Press.
- Linzey, A. and Yamamoto, D. (Eds). 1998. Animals on the Agenda. London: SCM Press Ltd.
- Lorenz, K. 1954. Man Meets Dog. London: Methuen.
- Lubbock, J. 1885. On the Intelligence of the Dog. Nature, 33: 45–46.

- Mackie, J.L. 1990. Ethics, Inventing Right and Wrong. London: Penguin Books Ltd.
- Mason, W.A. 1976. Environmental Models and Mental Modes. American Psychologist 31: 293.
- Masson, J.M. and McCarthy, S. 1996. When Elephants Weep: the Emotional Lives of Animals. London: Vintage.
- McAdams, D.P., de St. Aubin, E. and Logan, R.L. 1993. Generativity Among Young, Midlife, and Older Adults. Personality of Aging 8(2): 221-230.
- McAdams, D.P. 1994. The Person: An Introduction to Personality Psychology. Fort Worth: Harcourt Brace and Company.
- McAdams, D.P. and de St. Aubin, E. 1994. A Theory of Generativity and its Assessment Through Self-Report, Behavioral Acts and Narrative Themes in Autobiography. Journal of Personality and Social Psychology, 62(6): 1003-1015.
- McCulloch, M.J. 1981. Animals in the Treatment of Medically Ill, Depressed Outpatients. In B. Fogle (Ed) Interrelations between People and Pets. Springfield: Charles C. Thomas: 101-123.
- McCulloch, M.J. 1993. Animal-Facilitated Therapy: Overview and Future Direction. In A.H. Katcher and A.M. Beck (Eds) New Perspectives on Our Lives with Companion Animals. University of Pennsylvania Press: 410-426.
- McDaniel, J.B. 1993. A God who Loves Animals and a Church that Does the Same. In C. Pinches and J.B. Mc Daniel (Eds) Good News for Animals? Christian Approaches to Animal Well-Being. NY: Orbis Books: 75-102.
- McFarland, D. (Ed). 1981. The Oxford Companion to Animal Behaviour. Oxford University Press.
- Messent, P. 1983. Social Facilitation of Contact with Other People by Pet Dogs. In A.H. Katcher and A.M. Beck (Eds) New Perspectives on Our Lives with Companion Animals. University of Pennsylvania Press: 37-46.
- Midgley, M. 1980. Beast and Man, the Roots of Human Nature. London: Methuen.
- Midgley, M. 1994. Bridge Building at last. In A. Manning and J.Serpell (Eds) Animals and Human Society. London and New York: Routledge: 188-194.
- Midgley, M. 1999. Utopias, Dolphins and Computers. London: Routledge.
- Midgley, M. 1999. Animals and the Philosophers. In R. Hursthouse, Humans and Other Animals. Open University Press: 280-281.
- Miles, H.L.W. 1993. Language and the Orangutan: The Old 'Person' of the Forest. In P. Cavalieri and P. Singer (Eds) The Great Ape Project. Fourth Estate Ltd:42-57.
- Miller, G.A. 1962. Psychology, the Science of Mental Life. London: Penguin.
- Mitchell, R.W. and Edmonson, E. 1999. Functions of Repetitive Talk to Dogs during Play: Control, Conversation, or Planning? Society and Animals 7(1): 55-79.
- Morris, P., Fidler, M., and Costall, A. 2000. Beyond Anecdotes: An Empirical Study of 'Anthropomorphism'. Society and Animals 8(2): 151-165.
- Nagel, T. 1979. Mortal Questions. Cambridge University Press.

- Nemiroff, R.A. and Colarusso, C.A. 1990. New Dimensions in Adult Development: NY: Basic Books Inc.
- Nicholson, G. 1998. Animal Welfare: the Church has neglected this for too long. The Catholic Herald, 20 February. Re-printed in The Ark (181), Bulletin of the Catholic Study Circle for Animal Welfare, Autumn 1998.
- Noske, B. 1989. Humans and Other Animals: Beyond the Boundaries of Anthropology. London: Pluto Press.
- Oldroyd, D.R. 1980. Darwinian Impacts: An Introduction to Darwinian Revolution. Open University Press.
- Passmore, J. 1980. Man's Responsibility for Nature. London: Gerald Duckworth and Co. Ltd.
- Patriarch Dimitrios. 1989. Orthodoxy and the Ecological Crisis. World Wildlife Fund International.
- Patterson, F. and Gordon, W. 1993. The Case for the Personhood of Gorillas. In P. Cavalieri, P. and Singer, P. (Eds). The Great Ape Project. London: Fourth Estate: 58-77.
- Paul, E.S. and Serpell, J.A. 1993. Childhood Pet Keeping and Humane Attitudes in Young Adulthood. Animal Welfare 2: 321-337.
- Paul, E. 2000. Love of Pets and Love of People. In A. Podberscek, E. Paul, J. Serpell (Eds) Companion Animals and Us. Cambridge University Press: 168-186.
- Peek, C.W. 1997. Religion and Ideological Support for Social Movements: The Case for Animal Rights. Journal for the Scientific Study of Religion 36(3): 429-439.
- Phillips, A. 1999. Darwin's Worms. London: Faber and Faber Ltd.
- Pifer, L.K. 1996. Exploring the Gender Gap in Young Adults' Attitudes about Animal Research. Society and Animals 4: 37-52.
- Pinches, C. 1993. Each According to its Kind. In C. Pinches and J.B. McDaniel (Eds) Good News for Animals? Christian Approaches to Animal Well-Being. NY: Orbis Books: 187-205.
- Plous, S. 1991. An Attitudes Survey of Animal Rights Activists. Psychological Science 2: 194-196.
- Quigley, J.S., Vogel, L.E. and Anderson, R.K. 1983. A Study of Perceptions and Attitudes Toward Pet Ownership. In A.H. Katcher and A.M. Beck (Eds). New Perspectives on our Lives with Companion Animals. University of Pennsylvania Press: 266-276.
- Rachels, J. 1993. In P. Cavalieri and P. Singer (Eds), The Great Ape Project. London, Fourth Estate: 153-157.
- Rajecki, W., Rasmussen, J.L., Sanders, C.R., Modlin, S.J. and Holder, A.M. 1999. Good Dogs: Aspects of Humans' Causal Attribution for a Companion Animal's Social Behavior. Society and Animals 7(1): 17-34.

- Rasmussen, J., Rajecki, D.W. and Croft, H.D. 1993. Human Perceptions of Animal Morality; Ascriptions of Thinking. Journal of Comparative Psychology 107(2): 282-290.
- Reber, A.S. (Ed). 1985. Penguin Dictionary of Psychology. London: Penguin Books.
- Reddy, V., Dale, H., Murray, L. and Trevarthan, C. 1997. Communication in Infancy: Mutual Regulation of Affect and Attention. In G. Brenner, A. Slater, G. Butterworth (Eds) Infant Development: Recent Advances. Psychology Press: 247-273.
- Redshaw, M.E. and Mallinson, J.C. 1991. Learning from the Wild: Improving the Psychological and Physical Well-Being of Captive Primates. Jersey Wildlife Preservation Trust, 27: 18-26.
- Regan, T. 1983. The Case for Animal Rights. Berkeley, University of California Press.
- Richards, R.J. 1987. Darwin and the Emergence of Evolutionary Theories of Mind and Behaviour. The University of Chicago Press: Chicago and London.
- Richter, P. and Francis, J. 1998. Gone But Not Forgotten: Church Leaving and Returning. London: Darton, Longman and Todd.
- Ritvo, H. The Emergence of Modern Pet-Keeping. 1998. In A.N. Rowan (Ed) Animals and People Sharing the World. Hanover, NH: University Press of New England: 13-31.
- Robin, M., Bense, R.T., Quigley, J.S. and Anderson, R.K. 1983. Childhood Pets and the Psychosocial Developments of Adolescents. In A.H. Katcher and A.M. Beck (Eds) New Perspectives on Our Lives with Companion Animals. University of Pennsylvania Press: 436-443.
- Robinson, I. 1995. The Waltham Book of Human-Animal Interaction. Oxford: Pergamon.
- Rogers, J., Hart, L.A. and Boltz, R.P. 1993. The Role of Pet Dogs in Casual Conversations of Elderly Adults. Journal of Social Psychology 133: 265-277.
- Rollin, B.E. 1990. The Unheeded Cry, Animal Consciousness, Animal Pain and Science. Oxford University Press.
- Rollin, B.E. 1992. Animal Rights and Human Morality. NY: Prometheus Books.
- Rollin, B.E. 1993. The Ascent of Apes - Broadening the Moral Community. In P. Cavalieri and P. Singer (Eds) The Great Ape Project. London: Fourth Estate Ltd: 206-219.
- Rollin, B.E. 1995. The Frankenstein Syndrome. Cambridge University Press.
- Romanes, G.J. 1892. Animal Intelligence, 5th edn. London, Kegan, Paul, Trench and Co.
- Rowan, A.N. 1988. Animals and People Sharing the World. Hanover, NH: University Press of New England.
- Ryder, R.D. 1975. Victims of Science. London: Davis-Poynter.

- Ryder, R.D. 2001. Painism: A Modern Morality. London: Centaur Press.
- Sanders, C.R. 1999. Understanding Dogs, Living and Working with Canine Companions. Philadelphia: Temple University Press.
- Schaie, K.W. 1996. Generational Differences. Encyclopedia of Gerontology, 1. San Diego, CA: Academic Press Inc.
- Schaller, G. 1964. The Year of the Gorilla. London: Collins.
- Schweitzer, A. 1959. Letter to Aida Flemming, cited in J. Wynne-Tyson, 1990, The Extended Circle. London, Sphere Books Ltd: 461.
- Scruton, R. 1996. Animal Rights and Wrongs. London: Demos.
- Scruton, R. 1999. The Moral Status of Animals. In R. Hursthouse (Ed) Humans and other Animals. The Open University Press: 256-278.
- Serpell, J. 1981. Childhood Pets and their Influence on Adults' Attitudes. Psychological Reports 49: 651-654.
- Serpell, J.A. 1983. The Personality of the Dog and Its Influence on the Pet-Owner Bond. In A.H. Katcher and A.M. Beck (Eds) New Perspectives on Our Lives with Companion Animals. University of Pennsylvania Press: 57-63.
- Serpell, J. and Paul, E. 1994. Pets and the Development of Positive Attitudes to Animals. In A. Manning and J. Serpell (Eds) Animals and Human Society: Changing Perspectives. London: Routledge: 321-337.
- Serpell, J. 1996. In the Company of Animals. Cambridge University Press.
- Seyfarth, R., Cheney, D. and Marler, P. 1980. Vervet Monkey Responses to Three Different Alarm Calls. Evidence of Predator Classification and Semantic Communication. Science, 210: 801-803.
- Shakespeare, W. 1602. Troilus and Cressida, 111,iii,175.
- Sieber, J.E. 1986. Students' and Scientists' Attitudes on Animal Research. American Biology Teacher: 85-91.
- Singer, P. 1975. Animal Liberation. London: Jonathan Cape.
- Singer, P. 1983. Practical Ethics. Cambridge University Press: 89-90.
- Singer, P. 1985. In P. Singer (Ed) In Defence of Animals. Oxford: Basil Blackwell Publishers Ltd: 1-10.
- Singer, P. 1987. A Covenant for the Ark? In Oswald Hanfling (Ed) Life and Meaning. Oxford: Basil Blackwell: 141-152.
- Singer, P. 1997. How are We to Live? Ethics in an Age of Self-Interest. Oxford University Press.
- Smith, J.A. and Boyd, K.M. 1991. Lives in Balance: Report of a Working Party of the Institute of Medical Ethics. Oxford University Press.

- Smith, J.A. and Boyd, K.M. 1994. Ethics and Laboratory Animals. In A.A. Tuffney (Ed) Laboratory Animals: an Introduction for Experimenters. Chichester: John Wiley: 1-13.
- Sorabji, R. 1993. Animal Minds and Human Morals: The Origins of the Western Debate. NY: Ithaca: Cornell University Press.
- Spalding, D. 1954. Instinct, with Original Observations on Young Animals. British Journal of Animal Behaviour, 2: 1-11.
- Sparks, J. 1982. The Discovery of Animal Behaviour. London: William Collins Sons and Co. Ltd.
- Stern, D. 1985. The Interpersonal World of the Infant. London: Harper Collins.
- Stewart, M. 1993. Human and Animal Death: a Comparison. Report to seminar, July 1993. Society of Companion Animal Studies: 13-14.
- Stokeo, W.C. 1976. Comments on Mounin's paper, Language, Communication, Chimpanzees. Current Anthropology, 17: 16-19.
- Sugarman, L. 1986. Life-Span Development, Concepts, Theories and Interventions. London: Methuen.
- The Holy Bible. Genesis Chapter 1. 1994 (Authorised King James Version). London: Diamond Books.
- Thomas, K. 1984. Man and the Natural World: Changing Attitudes in England, 1500-1800. London: Penguin Books.
- Trevarthen, C. 1993. The function of emotions in early infant communication and development. In J. Nadel and L. Camaioni (Eds) New Perspectives in Early Communicative Development. London: Routledge.
- de Waal, F.B.M. 1996. Good Natured: the Origins of Right and Wrong in Humans and Other Animals. Cambridge, MS: Harvard University Press.
- Waddington, C.H. 1963. The Nature of Life. London: Unwin.
- Walker, S. 1983. Animal Thought. London: Routledge and Kegan Paul.
- Ward, E.F. 1983. Teaching Sign Language to a Chimpanzee: Some Historical References. Journal of Experimental Analysis of Behavior, 40: 341-352.
- Warden, C.J., Jenkins, T.N., Warner, L.H. 1935. Comparative Psychology, Vol 1. NY: The Ronald Press Company.
- Wardhaugh, R. 1976. The Contexts of Language. NY: Newbury House Publishers.
- Warnock, M. 1998. An Intelligent Person's Guide to Ethics. London: Duckworth.
- Watt, H.J. 1913. Psychology. London: Dodge Publishing Co.
- Wemelsfelder, T. 1999. In F.L. Dolins (Ed) Attitudes to Animals: Views in Animal Welfare. Cambridge University Press: 37-53.
- Wheeler, W.M. 1939. Essays in Philosophical Biology. Cambridge MA: Harvard University Press.

Wise, S.M. 2000. Rattling the Cage: Towards Legal Rights for Animals. London: Profile Books Ltd.

Wrighton, B. 1987. Reason, Religion and the Animals. The Catholic Study Circle for Animal Welfare.

Wynne-Tyson, J. 1990. The Extended Circle: An Anthology of Humane Thought. London: Sphere Books Ltd.