

Chapter 2

Educational Themes Related to Reduction in Animal Suffering

This chapter examines a number of separate though related themes that are relevant to the role of education in improving the protection of animals against suffering inflicted by humans. Indeed, education is tremendously important in communicating an appreciation of these themes and in stimulating actions to create a better life for animals.

2.1 Animal Suffering and Sentience

In the Hindu religion, there is concern for animal suffering, and in Buddhism universal compassion extends to animals as well as to humans (Singer 1985, p. 2). By contrast, in Western countries the attitude of humans to animals has tended to be different and had its foundation in the philosophical thought of Ancient Greece and the Judeo-Christian tradition, with the influence of Greek philosopher Aristotle having a dominant effect on later developments. This is despite encouragement for respect in the treatment of animals by the philosopher and mathematician Pythagoras (Singer 1990, pp. 186–189). The view of Aristotle that there was a natural hierarchy in which those beings with a lower reasoning ability existed for the benefit of those with higher reasoning ability was compounded in the West by the religious tradition expounded in the Bible in the Book of Genesis. Indeed, in the account of man's creation described in Genesis 1:24–28, it is asserted by God that man shall:

... have dominion over the fish of the sea, and over the fowl of the air, and over every other living thing that moveth upon the earth.

Moreover, the dominion of man over animals was elaborated further subsequent to the flood with the pronouncement by God in Genesis 9:2–3 when blessing Noah and his sons:

And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea: into your hands they are delivered.

Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things.

Furthermore, it is observed by Singer (1990, p. 11) that there is a complete absence in the New Testament of any injunction against cruelty to animals, and there is no recommendation for their interests to be considered. Nevertheless, the traditional attitude to animals was questioned by an enlightened twelfth to thirteenth century Christian thinker Saint Francis of Assisi, who was reputed for gaining the confidence and affection of animals (Budd 1988, p. 11), and he envisaged all creatures as mirrors of the creator (Armstrong and Botzler 2003, p. 3). However, the influence of Aristotle and similar thinkers together with the Bible continued to hold sway, although morally desirable lessons taught in the Bible, while not directed towards animals, might have had a “trickle-down” effect for their benefit.

An important breakthrough in Western philosophical thought was made a little over two centuries ago when the British philosopher Jeremy Bentham in 1780 published his book *Introduction to the Principles of Morals and Legislation* in which he identified *suffering* as the critical factor in determining the relationship of humans to animals when he stated (Singer 1990, p. 7):

The day *may* come when the rest of the animal creation may acquire rights which never could have been withheld from them but for the hand of tyranny. . . . The question is not Can they *reason*? nor Can they *talk*? but, Can they *suffer*?

Moreover, the capacity to suffer or experience enjoyment is adopted by the eminent contemporary philosopher Peter Singer as the defining characteristic in the relationship between humans and animals in his influential book *Animal Liberation* (Singer 1975, 1990) first published in 1975 and updated in 1990. In this book, animal suffering is regarded as the fundamental moral basis for animals needing protection from the actions of humans.

It should be mentioned that in recent years Christian theologian and animal ethicist Andrew Linzey of the Oxford Centre for Animal Ethics observed contradictions in the Book of Genesis, and from his interpretation of Genesis and other books in the Bible concluded that it is not necessary for humans to kill animals and that a life of vegetarianism is closer to the biblical ideal of peace (Armstrong and Botzler 2003, pp. 227–234). Indeed, the practice of vegetarianism provides an important means of reducing the aggregate amount of suffering that would otherwise be experienced by individual animals during their lifetime as well as at slaughter. However, it needs to be recognised that there is a distinction between the issue of terminating life and that of suffering during slaughter, the latter of which is relevant in the present work. Moreover, even though both killing and suffering can be regarded as morally wrong, killing accompanied by suffering is morally worse than painless killing. Furthermore, where animals are consumed by humans as a source of food, the prevention of suffering during their capture, rearing, transport, and slaughter needs to be properly addressed (Eadie 2009, p. 2).

A major advance in scientific knowledge regarding the relationship between humans and animals was heralded with the publication by Charles Darwin in 1859 of *The Origin of Species* in which Darwin observed that the work would illuminate

“the origin of man and his history” (Singer 1990, pp. 205–207). Subsequently, after his theory of evolution had gained wider acceptance, Darwin in 1871 published *The Descent of Man* in which he was more explicit regarding the implications of the theory of evolution on humans. By the present time, the findings of science have discredited entirely the long-held view dating back to Aristotle that animals did not have either mind or reason, and there is now much scientific evidence that many types of animal experience suffering as well as emotions (Armstrong and Botzler 2003, pp. 79–105). Nevertheless, it is observed by Charles Birch, former Challis Professor of Biology in the University of Sydney, in *Living with the Animals: The Community of God’s Creatures* (Parkes 2000, pp. 28–29) that the expanding body of scientific knowledge showing the similarity between humans and animals has not resulted in general compassion regarding the way many animals are treated by humans as evidenced by animal experimentation, factory farming, and live exports. This slow change in the tyranny of man over animals is attributed by Singer (1990, p. 212) to past moral attitudes being too deeply embedded in human thought and practices to be dislodged by a change in knowledge regarding our similarity with animals. Progress has probably been retarded also by some scepticism in the community regarding the validity of evolution as seen in the vigorous debate between those expounding the opposing views of evolution and creation as the basis of life. Moreover, this slowness of change has been accentuated by the existence of powerful vested economic interests coupled with a general lack of transparency about the terrible living conditions and treatment to which many animals are subjected. Fortunately, there is growing awareness of such practices, but there is a long way to go. In this, education can make a valuable contribution.

In Britain in 1821 Richard Martin, Member for Galway in the House of Commons, was successful in persuading parliament to enact legislation making it an offence to wantonly mistreat farm animals or beasts of burden, even though the legislation was couched in terms of protecting the property of an owner rather than the welfare of an animal, and this legislation became the first national law against cruelty to animals (Singer 1985, pp. 204–205; Budd 1988, pp. 11–12). More such protection legislation was enacted subsequently in Britain and other countries including Australia. In Britain, the existing legislation was consolidated in the *Protection of Animals Act* 1911, and suffering was given a wider meaning to include, for instance, the commission of cruelty by infuriating or terrifying an animal (Radford 1999, pp. 703–704). However, in the 1925 case of *Barnard v Evans*, Justice Shearman in the King’s Bench Division of the High Court succinctly described cruelty as “causing unnecessary suffering”. The qualification “unnecessary” placed serious limitations on the effectiveness of the animal protection legislation and implied that animals could be subjected to suffering that was not legally regarded as cruelty. Such suffering might be described as cruel in the general sense of that word, and the suffering of an animal is not lessened by the cruelty being regarded as necessary from a human point of view. Although the legislation did provide some protection to animals, its protection was far from comprehensive.

Even though the legislation was useful in giving protection to animals against gratuitous acts of cruelty in the traditional sense, its limitations became more evident

with the enormous growth since the Second World War in both industrial agriculture and biomedical research that cause animal suffering, but are not motivated by animal cruelty (Rollin 2003, p. xiii). Previously, animals generally had been well treated and needed protection only from deviant acts of cruelty. The publication of her celebrated book *Animal Machines* by Ruth Harrison in 1964 (Ryder 1989, p. 1, 1998, p. 30) raised awareness of the terrible situation of animals under modern factory farming conditions, and this led to the setting up by the British Government of an enquiry by the specially appointed Brambell Committee (Singer 1990, pp. 141–142) to investigate the welfare of animals kept under intensive livestock husbandry systems, and its report released in 1965 stated that in principle an animal should not be subjected to a degree of confinement that necessarily frustrates most of the major activities that make up its natural behaviour. Moreover, the report stated that an animal should at least have sufficient freedom of movement to be able without difficulty to turn around, groom itself, get up, lie down, and stretch its limbs. These five minimum requirements specified in the Brambell report are known as the “five basic freedoms”. Subsequently, the British Parliament enacted the *Agriculture (Miscellaneous Provisions) Act* 1968 (RSPCA UK 1999, pp. 43, 48) to improve the protection of farm animals, and that act has been amended from time to time since its original adoption.

The general concept of animal freedoms has been expanded and elaborated further subsequent to the Brambell report, and the freedoms are expressed in various though similar forms. For instance, RSPCA Australia (2008, p. 6) specifies the following five freedoms for animals:

1. Freedom from hunger and thirst: by ready access to fresh water and a diet to maintain full health and vigour
2. Freedom from discomfort: by providing an appropriate environment including shelter and a comfortable resting area
3. Freedom from pain, injury, or disease: by prevention through rapid diagnosis and treatment
4. Freedom to express normal behaviour: by providing sufficient space, proper facilities, and company of the animal’s own kind
5. Freedom from fear and distress: by ensuring conditions and treatment which avoid mental suffering

The enunciation of such freedoms provides a valuable educational basis for the way animals should be treated by humans, and the freedoms can be used also as a yardstick against which the legal protection of animals can be measured. It is suggested by the present author that breach of any of the five freedoms should be regarded as the infliction of suffering on an animal and that where there is any doubt an animal should be given the benefit of such doubt.

The capacity of animals to experience pain, emotions, and consciousness, as well as methods for studying these, are described in various readings in Armstrong and Botzler (2003, pp. 65–105). There is some scientific controversy regarding what species of animals experience suffering, but Gary Varner (Armstrong and Botzler (2003, pp. 92–93)) concludes from a review of the literature that all

vertebrates including fish probably experience pain and that certain invertebrates also such as octopus and squid may experience pain. Furthermore, Marian Dawkins (Armstrong and Botzler 2003, pp. 94–99) concludes that many animals experience conscious awareness of pain and pleasure similar to humans, while acknowledging that consciousness is an elusive concept. According to Singer (1990, pp. 173–174) and Rosser (2003, p. 26), some crustaceans such as crayfish and crabs also experience pain. Regarding the scientific basis for assessing suffering in animals, Dawkins (1985, pp. 27–40) suggests suffering is a kind of subjective experience having the two characteristics of being unpleasant and extreme, and she asserts it is necessary to examine indirect evidence from various sources to provide a reasonably coherent case that an animal is suffering. She specifies the three primary sources of such evidence as physical health, physiological signs, and behaviour. Regarding such evidence, Bernard Rollin (Armstrong and Botzler 2003, pp. 67–74) considers it desirable for the scientific community to be more receptive to anecdotal evidence and anthropomorphic interpretation as being important in appreciating animal capacities.

There appears to be growing community awareness of animal suffering, and this is reflected in some political recognition of animals as sentient beings. First, within the European Union, under the *Protocol on the Welfare and Protection of Animals* that is annexed to the 1997 *Treaty of Amsterdam* (Camm and Bowles 2000, pp. 200–205) and forms an integral part of that treaty, animals are referred to in EC law for the first time as *sentient beings*. Moreover, both the Community and Member States are required to have *full regard* for animal welfare in the formulation and implementation of policy in relation to agriculture, transport, internal market, and research. Secondly, in 2003 an Intergovernmental Conference on Animal Welfare attended by government delegations from 19 countries as well as by observers from the European Commission and the USA was hosted in Manila by the Government of the Philippines. The agreed outcome of the conference was *A Proposal for a Declaration on Animal Welfare* (World Society for the Protection of Animals 2005a, pp. 3–4). This document in its preamble recognises that “animals are living, sentient beings and therefore deserve due consideration and respect”, and one principle of the proposed declaration states that “all appropriate steps shall be taken by nations to prevent cruelty to animals and to reduce their suffering”. This Manila agreement constitutes a significant step towards the eventual achievement of a *Declaration on Animal Welfare* by the United Nations. Thirdly, in Australia in 2005 the *Australian Animal Welfare Strategy* was launched (Department of Agriculture, Fisheries and Forestry 2005). The strategy was developed “to provide the national and international communities with an appreciation of animal welfare arrangements in Australia and to outline directions for future improvements in the welfare of animals”. Recognition of the characteristic of suffering is embodied in the concept of sentience and in the *Australian Animal Welfare Strategy* (Department of Agriculture, Fisheries and Forestry 2005, p. 7):

A sentient animal is one that has the capacity to have feelings and to experience suffering and pleasure. Sentience implies a level of conscious awareness.

Thus, it is seen there is developing political awareness of animal suffering and sentience at national, regional, and international levels, and such developments should lead to improved animal protection law as well as serve as educational vehicles for increasing awareness of the existence of animal suffering and sentience. Moreover, they raise the status of animal protection as an issue to be considered. In this regard, the sentience of a particular animal type will depend on its capacity to have feelings as well as experience suffering and pleasure.

A study of the attitudes on animal sentience and the use of animals in society was made by Phillips and McCulloch (2005, pp. 17–24) based on a questionnaire completed by a multinational group of well-educated students studying at a number of leading British universities and advanced English language schools. In the study, it was found that across nationalities there was a variation in the attribution of sentience to different species among which in descending order of attribution of sentience were monkey, dog, newborn human baby, fox, pig, chicken, rat, and fish, even though among nationalities there was some variation in attribution of sentience to the various species. For instance, students from Southeast Asia attributed high levels of sentience to pigs and chickens, and Chinese students attributed particularly high levels of sentience to rats and fish. It was also found in the study that cruelty to animals on farms was less likely to be condoned by European students, as well as to some extent those from the USA, than it was by students from Asian countries. Moreover, European students were more concerned than those from Asia about animal suffering during life. This illustrates the importance of increasing global recognition of animals as sentient beings and demonstrates the need for greater appreciation of the sentience of all species capable of suffering. Indeed, there may not be a direct correlation between attribution of sentience to a particular species and its physiology that determines its capacity to suffer. Thus, it is more important to know the actual sentience and capacity to suffer of the various types of animal that are farmed or used in experimentation. For instance, an ape has greater sentience than a fly. Education can play a major role in changing attitudes so that the sentience of all creatures capable of suffering is properly understood, and in all countries there is scope for improvement in this regard.

2.2 Speciesism and Need for Attitudinal Change

The word *speciesism* was coined in 1970 by British psychologist Richard Ryder (1998, p. 238) to describe discrimination by humans against animals, and it is adopted by Peter Singer in *Animal Liberation* (Singer 1975, 1990). In the *Oxford English Dictionary* (Brown 1993, p. 2972), *speciesism* is defined as:

Discrimination against or exploitation of certain animal species by humans, based on an assumption of human superiority

This dictionary definition is not fully explicit. Indeed, speciesism occurs when humans inflict suffering on or treat a sentient animal in any way they choose,

merely because it is an animal and not a human. Moreover, the killing of animals by humans is allowed, whereas the killing of (innocent) humans by humans is not permissible. Richard Ryder, who created the word, discusses speciesism in detail in the final chapter of his book *Animal Revolution – Changing Attitudes Towards Speciesism*, and he concludes (Ryder 1989, p. 336):

People who are cruel to nonhumans are not all wicked; most are just unthinking. Those of us who seek change must not resort to hatred or violence, but press on with our campaigns to educate and legislate. We want people to open their eyes and to see other animals as they really are – our kindred and our potential friends with whom we share a brief period of consciousness upon this planet.

In the present study, the role of education coupled with legislation is regarded as fundamental key in the elimination of speciesism, and in consequence, a reduction in the suffering inflicted by humans on animals.

Speciesism is analogous to racism and sexism in which discrimination is based solely on the criterion of race and gender, respectively. It is now increasingly appreciated that such discrimination in relation to suffering is neither justified nor acceptable, although the killing of animals continues. This selectively improved situation has been achieved by changes in culture and attitude, and it has been assisted and reinforced by legal provisions making such discrimination unlawful. Moreover, the need to eliminate racial and sexual discrimination is now recognised at a global level as reflected in international conventions of the United Nations, namely the *International Convention on the Elimination of All Forms of Racial Discrimination* 1965 and the *Convention on the Elimination of All Forms of Discrimination against Women* 1979 (United Nations 1984, pp. iv. 4, iv. 6). In the case of animals, progress is being made towards the adoption by the United Nations of a *Declaration on Animal Welfare* as seen in the Manila agreement (World Society for the Protection of Animals 2005a, pp. 3–4). Such a declaration would be similar to the *Universal Declaration of Human Rights* 1948 (United Nations 1984, p. iv. 1). Indeed, it has been suggested (Eadie 2009, p. 219) that it could be regarded as *international speciesism* for the global community to enter into international agreements to protect humans from suffering but to disregard the suffering of animals. Moreover, in each case, the protection against suffering is based on morality.

The moral indefensibility of speciesism is demonstrated clearly by Peter Singer (1975, 1990) in his classic work *Animal Liberation*, and in that work Singer describes in disturbing detail the terrible suffering inflicted by humans on animals as tools for research in the laboratory and as victims in factory farming operations. Singer acknowledges that many other categories of animal also are subjected to suffering arising from speciesist attitudes but concentrates his in-depth exposure of human-inflicted animal suffering to experimental and farm animals because of the enormous number of animals involved in these two activities. In the case of experimental animals. Singer (1990, pp. 25–94) describes the suffering inflicted on animals in laboratories operated by defence, industry, and university

organisations, and in the case of farm animals, Singer (1990, pp. 95–157) examines the suffering inflicted on broiler chickens and layer hens, pigs, veal calves, dairy cows, and beef cattle as well as during the transportation and slaughter of farm animals.

Since its first publication in 1975 *Animal Liberation* has been extremely influential in exposing the terrible ways many animals are treated by humans in experimental and farming situations, and it has been an important catalyst contributing to the bringing about of significant improvements in the treatment of animals including the banning of certain practices and the achievement of incremental legislative reform. Indeed, Rollin (2003, pp. xi–xiii) outlines a number of advances, particularly in Europe, that have taken place over the last 30 years or so to improve the legal protection of animals, and on his retirement as Director of Eurogroup in 2003, Dr David Wilkins observed (Eurogroup for Animal Welfare 2004a, p. 17):

In 1992 I doubt whether even the most optimistic of our supporters would have believed that within ten years, legislation would be passed to spell the end of veal crates, the battery cage and the sow stall, an end to animal testing for cosmetics would be in sight, and a protocol on animal welfare would be written into the EC Treaty.

This indicates that the attitude of humans towards animals is changing for the better, and this change is being reflected in legislation. Moreover, in *Animal Liberation* Singer (1990, pp. 159–183) provides powerful arguments for humans becoming vegetarian to achieve a reduction in animal suffering as well as increase world food production at lower environmental cost. Indeed, vegetarianism is one important way of overcoming animal suffering arising from speciesism, and there is evidence that the practice of both vegetarianism and veganism is growing significantly as well as of these being more widely recognised and accepted in society. The changing attitudes of humans in relation to ethical eating are described in a book by Peter Singer and Jim Mason entitled *The Ethics of What We Eat* (Singer and Mason 2006) that provides case studies of the traditional American diet, of conscientious omnivores who take animal welfare as well as other ethical and health issues into consideration in their eating, and of the vegan diet that excludes entirely the consumption of animal products. Also on the matter of food consumption, Eurogroup recently produced an informative report entitled *Responsible Retailing* (Eurogroup for Animals 2008) that makes animal welfare the focus in the food production supply chain. The report is educational in that it provides information on the relevant EU legislation and gives examples of good practice.

Even though there has been significant change in the attitudes of many humans towards food animals over recent years as well as a consequent reduction in animal suffering, there is much that remains to be done. This applies even in the European Union that has been particularly progressive in the improved treatment of animals. Indeed, many remaining concerns in the EU have been identified by Eurogroup (Eurogroup for Animal Welfare 2004b), and these relate to various animal categories and activities. Moreover, in Australia recent reports by Voiceless entitled

From Paddocks to Prisons (Sherman et al. 2005) and *From Nest to Nuggett* (Sharman and Kossew 2008) that deal with pigs in New South Wales and Australia's meat chicken industry, respectively, highlight the terrible conditions under which these animals continue to be intensively farmed and demonstrate the need for legislative reform to improve the conditions under which these animals are kept.

In relation to experimental animals, the British scientists Russell and Burch in 1959 advocated the so-called 3Rs for lessening the suffering experienced by such animals (Eurogroup for Animal Welfare 2004b, pp. 91–93). These comprise procedures that replace the use of animals in experiments (*replacement*), reduce the number of animals involved (*refinement*), and lessen the pain or distress suffered by such animals (*reduction*). These 3Rs are now widely accepted and provide the basis of important provisions of EC legislation covering the protection of laboratory animals. In Australia, the *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* (Commonwealth of Australia 2003) specifies that consideration of the 3Rs be given in the conduct of scientific research and teaching activities involving animals, and under the *Queensland Animal Care and Protection Act 2001* (reprint no. 2A 2003), for instance, compliance with the code is made mandatory in Chap. 4 of that act entitled: *Using Animals for Scientific Purposes*. It should be mentioned that the code is an Australian Commonwealth instrument whereas under *The Constitution* (Castles 1986, pp. 8–27; Dwyer 2000, pp. 3–4) animal protection in Australia comes within the jurisdiction of the individual states and territories. A serious question arises as to how effective *in practice* are the relevant legislative provisions in genuinely addressing the 3Rs, and whether real efforts are being made to properly consider them and find alternatives to animal use. Moreover, research conducted by Siobhan O'Sullivan (2006, pp. 1–15) on transparency and animal research regulation in Australia suggested the absence of an adequate system of transparency, and that any enhanced transparency was likely to come only as a result of change in public policy. Such change would result in a better informed public and help ensure the effectiveness of any regulation designed to reduce the suffering of experimental animals. In the opinion of Malcolm Caulfield (2008, pp. 158–159), many laboratory animals are made to suffer by biological scientists motivated more by job security than good science. Greater transparency would enable such concerns to be properly addressed, and where appropriate, lead to attitudinal change. Moreover, the teaching of animal ethics to carers and experimenters working with animals, as well as to the members of animal ethics committees that oversee animal research, should contribute to an improvement in attitudes towards the animals involved.

It is not only in intensive farming and animal experimentation that animals are subjected to suffering by the actions of humans. Examples of such suffering in other situations include:

- The killing of chimpanzees, gorillas, and orangutans (the great apes) for the capture of their babies for the illegal international market
- The slaughter of whales by harpooning for the alleged purpose of scientific research

- The confinement of Asiatic black bears in small cages for the extraction of their bile
- The cruel training and keeping of dancing bears for human entertainment
- The shot gun wounding and killing of wild ducks for sport
- The cruel practice of bull fighting as entertainment
- The holding of dangerous jump races in which horses are frequently injured and killed
- The slaughter of stray dogs by beating to death or electrocution
- The chopping off legs of living frogs to satisfy a growing consumption of frog legs as food
- The indiscriminate wounding and killing of bats by shot gun to control their numbers
- The poisoning of foxes using 1080 baits that cause agonising death
- The cruel use of glue boards to catch mice
- The holding of pigeon shoots for recreational entertainment
- The painful killing of crustaceans such as crayfish and lobster by putting them into boiling water
- The bludgeoning to death of seal pups for their fur

These practices as well as those in laboratory and farming operations illustrate the enormous diversity of the suffering inflicted by humans on animals. They demonstrate a great need for change in human attitudes towards animals. It is suggested by the author that to be properly effective change has to be made both in the general attitude of humans to animals and in relation to specific types of action by humans that cause suffering to animals. Fortunately, there is some evidence that attitudes are changing as seen in legislation to improve farm animal welfare in Europe, and in relation to specific activities such as the banning in Britain in 2004 of the hunting of foxes using hounds and the banning in Australia in 2004 of the tail docking of dogs for cosmetic purposes. However, the continued existence of many practices involving suffering inflicted on animals shows that much needs to be done to enlighten human attitudes. In her book *Shark's Fin and Sichuan Pepper – A Sweet-Sour Memoir of Eating in China* chef and food writer Fuchsia Dunlop (2008, p. 49) describes terrible acts involving suffering to which food animals in China are subjected at the time of their slaughter or more correctly their cooking and eating. The question is raised by Dunlop as to whether such disregard in China for animal suffering and sentience might originate from the Chinese word for animal, namely *dong wu*, that means “moving thing”, so that an animal is not thought of as a living creature. However, even though this linguistic factor might have some influence on the attitude of Chinese towards animals, it is unlikely to explain fully the lack of caring in relation to animal suffering found in China.

Much of the speciesist behaviour of humans towards animals that causes enormous suffering is not motivated by cruelty in the traditional sense, but rather because humans are unthinking, ignorant, blindly following established practices, self-deluded, or motivated by financial gain. Education can play an important role in making people more aware of animal suffering and sentience, open their eyes,

become better informed through greater transparency as to what is actually happening, cease to act in a certain way merely because it has been done in the past, and recognise that ethically a price cannot be put on suffering. There is need also to dispel the misguided perception among some people (Ryder 1989, pp. 319–323) that it is strong to be macho or weak to be squeamish about animal suffering. Moreover, Jeffrey Sachs (2005, pp. 367–368) observed in relation to ending world poverty that there has to be a personal commitment by individuals. Similarly, the elimination of animal suffering inflicted by humans requires the making of a personal commitment. Indeed, political and other change is brought about by the calculus of individual actions. Moreover, those motivated by economic gain could well take cognisance of *the caring revolution* described by Riane Eisler (2007, pp. 213–235) in her book *The Real Wealth of Nations – Creating a Caring Economics*. It is suggested by the present author, even though perhaps simplistic, that individual commitments to improve the lives of animals could be significantly enhanced if we became more conscious of the existence of the animals that share the world with us and think more about the effect on animals of each of our actions including those as consumers. However, there needs to be transparency for this to be properly achieved, and in this education has a valuable contribution to make. Furthermore, any individual commitment could be made stronger by thinking more about the deep empathy that can exist between humans and animals and by observing as well as relating to the behaviour and lives of the animals around us such as the birds that share the world with us. Over recent years, there appears to have been a greater interest in animals including of their suffering inflicted by humans, despite less contact with them due to urbanisation, but as morality dictates much needs to be done to change human attitudes more generally and bring about improvement in the lives of many animals in a diversity of situations. It is observed by Don Broom (2001, p. 25) and Jane Goodall (2003, pp. 229–251) that future change to improve the lives of animals can be facilitated by working with young people as they are especially receptive to change, and in this the role of education is particularly relevant as a means for achieving change regarding the attitude of humans towards animals.

2.3 Animal Protection Legislation and Its Limitations

Over the last two centuries, there has been substantial change in the approach of the law towards animal protection. Throughout Europe from the Middle Ages up to the nineteenth century, animal trials took place (Evans 1906). For instance, a pig was convicted and cruelly executed for murder, and sparrows were prosecuted for chattering in church. In general, no provision was made by the law to deal with the behaviour of humans towards animals no matter how cruel that was, although there were exceptions to this such as the early laws protecting animals that were approved in America by the Massachusetts Bay Colony in 1641 (Armstrong and Botzler 2003, p. 6). However, the first national legislation protecting animals was

the British Act of 1821 introduced into the House of Commons by Richard Martin to protect the wanton mistreatment of farm animals and beasts of burden referred to earlier. This act and other legislation passed subsequently in Britain and other countries such as Australia required the commission of an act of cruelty on an animal before legal action could be taken. Eventually, the desirability of preventing such suffering became recognised, and this led to legislation imposing a duty of care to prevent such suffering. In essence, a duty of care involves the anticipation of animal suffering occurring, and acting to avoid such suffering. However, the formal legal definition of duty of care imposed in any particular statute is as it is defined in that statute.

In Britain, a duty of care in relation to farm animals was introduced into the *Agriculture (Miscellaneous Provisions) Act 1968*, and now a similar duty of care is imposed in the recently enacted *Animal Welfare Act 2006* that applies to non-farmed captive animals in England and Wales. Similarly, in Australia a duty of care to protect animals is applied in Tasmania in the *Animal Welfare Act 1993* and in Queensland in the *Animal Care and Protection Act 2001*. Moreover, even though not described as a duty of care, under the South Australian *Prevention of Cruelty to Animals Act 1985* (reprint no. 2, 2000) the offence of ill treating an animal was committed by an owner failing to provide appropriate and adequate food, water, shelter, or exercise. This is similar to some of the requirements specified as breaching a duty of care under the Queensland *Animal Care and Protection Act 2001*. Thus, it is necessary to examine the specific provisions in any particular animal protection legislation to ascertain where in practice a duty of care is required, whether or not it is described as such.

There has been substantial progress in some jurisdictions as in Britain, Australia, and the USA, as well as in the European Union, in the passage of legislation designed to protect animals. By contrast, in some other parts of the world such legislation is absent or has only recently been introduced. For instance, following the SARS epidemic and prior to the 2008 Olympic Games, the Beijing municipal government planned to introduce the first ever animal protection legislation in China (Jing 2004; TerraDaily 2004). However, Beijing is only one city in China, and what is needed is Chinese national legislation dealing with animal protection. Such legislation does not exist at present despite acts of cruelty taking place (O'Regan 2009, pp. 1–2). Moreover, prior to joining the European Union in 2004 and 2007, some of the newly admitted countries such as Latvia and Bulgaria had only recently passed their first animal protection legislation (Eurogroup for Animal Welfare and RSPCA International 2001, pp. 44–47).

In jurisdictions where animal protection legislation does exist, the legislation frequently contains both general provisions such as the offence of cruelty under the Western Australian *Animal Welfare Act 2002* or the breach of a duty of care under the Queensland *Animal Care and Protection Act 2001*, and specific provisions such as prohibitions against certain activities such as organised dog fighting, cock fighting, and the bleeding of greyhounds under the Queensland *Animal Care and Protection Act 2001* or the use of electrical devices for controlling animals in contravention of the regulations under the South Australian *Prevention*

of *Cruelty to Animals Act 1985* (reprint no. 2, 2000) that on recent reform became the *Animal Welfare Act 1985*. Moreover, there is often legislation dealing with particular categories of animals such as in Britain the *Wildlife and Countryside Act 1981* designed to protect certain wild species and prohibit certain methods of trapping and killing, in the USA the *Marine Mammal Protection Act* (16 USC 1361-1407), and in Australia the *South Australian National Parks and Wildlife Act 1972* that deals with wildlife protection. In Australia, under *The Constitution* (Dwyer 2000, pp. 3–4), legislative power in relation to animal protection rests with the states and territories, so that each of these has its own separate animal protection legislation. However, under *The Constitution*, power is granted to the Commonwealth in relation to trade and commerce with other countries, so that conduct of the live animal export trade comes under Commonwealth legislation, in particular the *Export Control Act 1982*, the *Australian Meat and Livestock Industry Act 1997*, and the *Navigation Act 1912* (Keniry et al. 2003, pp. 21–23, 60). Thus, the legislative landscape in relation to animal protection can be quite complicated.

The existence of extensive animal protection legislation in many developed countries suggests that animals in these countries are well protected from suffering. However, a closer examination of the legislative provisions shows that this is not the case. This is because certain categories of animal, most notably farm animals, experimental animals, and pest animals whose numbers in each case are large, are exempt from the general provisions in animal protection legislation. Moreover, some categories of animals capable of suffering are excluded entirely from protection because they are not included in the definition of *animal* specified in the legislation, and effectiveness of the legislation in providing proper protection for animals that are included in the definition is frequently reduced by use in the legislation of qualifying terms such as *unnecessary* in relation to suffering.

In some jurisdictions, as in Australia, farm animals are not covered by the general provisions in prevention of cruelty or animal welfare legislation, although they are protected to some extent by codes of practice. The Commonwealth Scientific and Industrial Research Organisation (CSIRO 2008) has published a series of *Model Codes of Practice for the Welfare of Animals* for use by the states and territories in developing their own codes. These model codes cover a range of animals including cattle, poultry, pigs, and sheep, land transport of cattle, horses, pigs, and poultry, and animals at saleyards and slaughtering establishments. Generally, breach of a code does not constitute an offence per se, but rather can be used as evidence that an offence has been committed and conversely compliance with a code can be used as evidence in defence to a charge of cruelty. The *South Australian Prevention of Cruelty to Animals Act 1985* (reprint no. 2, 2000) specified that nothing in the act renders unlawful anything done in accordance with a prescribed code of practice, and that act contained a schedule listing 20 codes of practice covering a range of specified animals including cattle, pigs, and poultry as well as activities such as the transport and slaughter of animals. In the case of the *Western Australian Animal Welfare Act 2002*, there are 23 codes listed in a schedule to the regulations made under that act. Codes of practice contain minimum

standards approved by an Animal Welfare Advisory Committee, and these standards are generally lower than those that would satisfy general provisions in animal protection legislation.

Indeed, the codes are a compromise between animal welfare and animal industry interests. They frequently contain inconsistencies, allow for painful mutilations on animals without anaesthetic, and their existence enables both industry and government to claim that animal welfare interests are being properly addressed (Oogjes 1997, pp. 23–25). The reality is that if a pet bird or a dog was kept under conditions allowed under certain codes of practice covering poultry and pigs, the owner of the pet would be liable to prosecution. Both Dr Hugh Wirth of RSPCA Australia and Glenys Oogjes of Animals Australia (Das 2004, p. 5) were severely critical of the codes of practice covering farm animals in Australia. A *Review of the Australian Model Codes of Practice for the Welfare of Animals* was made for the Australian Government by veterinary surgeon Dr Geoff Neumann. He proposed (Neumann 2005, pp. 53–54) that the codes be replaced by standards approved by the Primary Industries Ministerial Council (PIMC) for adoption by the states and territories and then incorporated into legislation without amendment. Neumann recommended also the formulation of new national guidelines for animal welfare reflecting best practice for inclusion in accreditation and quality assurance programs. Dr Wirth saw the Neumann recommendations as heralding “great change” (Wirth 2005). However, it is not yet known how effective any such changes will be in reducing or eliminating farm animal suffering, and a great deal will depend on the content of any standards actually adopted.

In New Zealand under the *Animal Welfare Act* 1999, the National Animal Welfare Advisory Committee (NAWAC) is required when considering draft codes of practice to have regard for good practice, scientific knowledge, and available technology (National Animal Welfare Advisory Committee 2003, p. 4). Nevertheless, the early experience of code development in New Zealand under the new act, particularly in relation to broiler chickens and pigs, has been strongly criticised by both Save Animals from Exploitation (SAFE) and the Animal Rights Legal Advocacy Network (ARLAN) (Terry 2002, p. 17; Animal Rights Legal Advocacy 2001, pp. 1–15). Furthermore, in the USA concern has been expressed by Sunstein (2002, p. 11) regarding the exemption of farm animals from anticruelty laws. Thus, in various jurisdictions, farm animals are treated in legislation less favourably than animals that are covered by general animal protection legislation.

It has been seen earlier that there are separate legislative provisions covering experimental animals. Indeed, in Australia in New South Wales the supply of animals for research and the use of animals in research are subject to a separate *Animal Research Act* 1985, and conduct of activities satisfying the requirements of that act provides a defence to an offence under the NSW *Prevention of Cruelty to Animals Act* 1979. In the other states of Australia, experimental animals are covered by a separate part or chapter of the general animal protection legislation. Even though some legislative protection is provided for experimental animals, their protection is far less than would be required under general animal protection

provisions. Moreover, the extent of their suffering will depend to a considerable extent on the attitude and compassion of those involved in experimentation using animals. In the case of the USA, concern has been voiced by Sunstein (2002, p. 11) about the exemption of experimental animals from the anticruelty laws, and according to Francione (1995, p. 233) the federal *Animal Welfare Act* that covers some, but *not* all, experimental animals is not effectively enforced.

Pest animals are another category of animal exempted from the provisions of general animal protection legislation. For instance, under the Western Australian *Animal Welfare Act* 2002 a defence to the offence of cruelty is provided in the case of killing a prescribed pest, and under the South Australian *Animal and Plant Control (Agricultural Protection and Other Purposes) Act* 1986 (reprint no. 2, 1997) the destruction of prescribed pest animals is mandated while the issue of their suffering is not addressed. It needs to be remembered that even though pest animals might be regarded as a threat to humans, they are sentient beings capable of suffering. They include, among others, foxes, rabbits, and rodents (Jones 2003, p. 13), and their pronounced suffering during extermination emphasises the need for developing alternatives to reduce or eliminate such suffering. In 2003, RSPCA Australia conducted a scientific seminar in Canberra entitled *Solutions for Humane Vertebrate Pest Control* (RSPCA Australia 2003).

Animals used in entertainment and sport are another category of animal not adequately protected by legislation. Indeed, race horses are whipped to improve performance, and in jump events horses are frequently injured during falls and have to be “put down” (Oogjes 2002, p. 10). Fortunately, in each of the states of Australia except Victoria and South Australia, jump racing has now been banned. During hunting for sport, animals become the victims of indiscriminate shooting as in the case of wild ducks, and ducks lucky enough to escape are subjected to significant fright (Bossence 1999, p. 16). Such activity is allowed, for instance, by the South Australian *National Parks and Wildlife Act* 1972 under which an open season for the hunting of a protected animal may be declared (Trone 2004, p. 63).

Another factor limiting the scope of protection from suffering provided by cruelty prevention or animal welfare legislation arises from the definition of *animal* in the legislation. For instance, in the South Australian *Animal Welfare Act* 1985, the word *animal* is defined as any species of vertebrate *except* human beings and *fish*. Thus, fish are not covered by the legislation even though they experience pain (Singer 1990, p. 172; Pope 1997, pp. 14–16). Also exempt are crustaceans that experience suffering during transport and killing, particularly so when killed by being put into boiling water (Singer 1990, pp. 173–174; Rosser 2003, p. 26).

Where animals are slaughtered for meat, conflict can arise between religious practice and humane killing (Singer 1990, pp. 152–156), and legislative exemptions have been made in various jurisdictions including Britain, the USA, and Australia to provide for Jewish and Moslem rituals allegedly requiring animals to be fully conscious when slaughtered. The issue of ritual slaughter was considered in some detail in the 1992 New South Wales Ministerial Review of the *Prevention of Cruelty to Animals Act* 1979 (NSW Agriculture 1992, pp. 47–49), and the review team that was chaired by Professor John Egerton, Professor of Animal Health in the University of Sydney,

concluded that slaughtering a conscious animal for meat should constitute an offence of cruelty. Mention should be made here that for many years it has been agreed by the Moslem community in Australia that halal killing using pre-slaughter head stunning is in accordance with the Quran (Wirth 2005), and this could perhaps provide a precedent for ritual slaughter in other Moslem communities so as to reduce animal suffering.

A general problem limiting the effectiveness of animal protection legislation is the use in such legislation of the word “unnecessary” in relation to pain or suffering. Indeed, the concept of “unnecessary suffering” is regarded by Mike Radford (1999) as the cornerstone of animal protection legislation, and it has been discussed previously in the present work. According to Gary Francione (1995, pp. 4–5, 13–15), the word “unnecessary” in animal protection legislation is interpreted on the basis that animals have the status of property, and as legally interpreted the concept is prejudicial to animal interests.

It is seen that there are a great many limitations in the protection to animals provided by the so-called prevention of cruelty or animal welfare legislation and that the main beneficiaries appear to be companion animals. Moreover, there is probably a perception in the community that the existence of such legislation provides protection to animals in most circumstances, whereas in reality it seems that animal welfare considerations are either compromised or disregarded when economic or other human interest factors are involved. Indeed, it is necessary to examine very carefully the contents of any protection legislation to ascertain the extent to which in practice it provides proper protection to animals.

It should be observed that animal protection legislation *as such* is not speciesist, although there are many provisions in existing legislation that reflect speciesism. In theory, there is no reason why animal protection legislation should not consist entirely of prohibitions, and in any event greater use of them could be made in such legislation to provide enhanced legal protection to animals.

There is an important role for education in making the community aware of both the contents of and limitations in animal protection legislation. Indeed, without an appreciation of the contents of existing legislation, there is no proper basis for the achievement of legislative reform to improve the lives of animals. Moreover, it is desirable for a watching brief to be kept of legislative developments relating to improved animal protection enacted in other jurisdictions so that any progressive provisions that are introduced can be adopted more generally so as to provide better protection for animals on as wide a geographical basis as possible. Furthermore, greater transparency and increased awareness through education have an important contribution to make in the achievement of improved animal protection through legislation.

2.4 Enforcement of Animal Protection Legislation

Even though legislation has educational value in providing information on what is required by the law, it needs to be enforced to make it properly effective. In the USA, there are detailed state and federal laws dealing with animal protection, but

according to Sunstein (1999, pp. 1–11) the legislation is frequently ineffective due to weak and sporadic enforcement. He attributes this to the lack of standing for animals that prevents people from being able to bring successful legal actions on their behalf and to the granting of a monopoly on enforcement to public officials. In contrast to enforcement in the USA by public officials only, in other jurisdictions such as in Britain and Australia, there is a long-established practice under which enforcement rights in relation to animal protection are granted by law to RSPCAs that are private charitable organisations.

In a British Royal Commission research study, it was observed by Lidstone et al. (1980, pp. 92–93) that the RSPCA had a role of investigation and prosecution comparable with many public agencies, and in doing so, it was able to draw on specialised knowledge lacking in agencies such as the civil police. Moreover, they observed that this independent right of prosecution was regarded by the RSPCA as an extremely important safeguard against ignorance or inertia of public authorities. This sentiment is similar to the view expressed by Sunstein (2002, p. 11) that the granting in the USA of a monopoly on enforcement to public officials provides a basis for continued illegality. In Australia, the role of the RSPCA in prosecuting animal cruelty was examined in the New South Wales Ministerial Review of the *Prevention of Cruelty to Animals Act 1979 and Regulations*, and the conclusion was reached (Egerton 1992, pp. ii–iii) that despite the review team being concerned about public criticism of the role and operational procedures of the RSPCA in enforcing legislation, especially in rural areas, there was no convincing evidence that the RSPCA operated in a manner other than allowed by law. Indeed, the review team concluded that, with some improvements in accountability, no change was required in relation to the organisations that already had enforcement powers under the act. Moreover, the role of the RSPCA and Animal Welfare League was regarded as important and should be retained. In Victoria, under the *Prevention of Cruelty to Animals Act 1986*, four categories of persons can be authorised as inspectors to conduct enforcement activities, namely, any member of the police force, approved stock inspectors, approved local council inspectors, and approved officers of the RSPCA. Nevertheless, according to Dr Hugh Wirth, then President of RSPCA Victoria, most prosecutions were left to the RSPCA and the police tended to refer animal cruelty matters to it (Das 2004, pp. 4–5).

In a *Four Corners* documentary program on ABC Television (Fullerton 2004), the resolve of RSPCAs in Australia in prosecuting animal cruelty at intensive farming operations and in the live export trade was questioned, in particular in relation to layer hens in New South Wales, pigs in South Australia, and live sheep exports in Western Australia. Regarding issues raised in the program, the present author suggests (Eadie 2009, pp. 102–103) that if RSPCAs are given responsibility under law to conduct investigations and prosecutions, then they should be provided by government with adequate funding to employ a sufficient number of inspectors to do so effectively; any decision making by an RSPCA should not be conducted by anyone having a vested interest in an industry or farming practice being investigated; prosecutorial activities of the RSPCA should not be subjected to any intimidation by actual or veiled threat by government to withhold funding; any inability

of an RSPCA to prosecute animal suffering because of inadequacy in the law or a code of practice should be seen as a law reform issue; and any decision by an RSPCA as to whether or not to prosecute in a particular situation should have regard to all available legal opinions and advantage taken where appropriate of *pro bono* legal services provided by lawyers willing to assist in prosecutions. During the *Four Corners* program, Dr Hugh Wirth observed that Labour Parties generally favour abolition of non-public prosecutions of all kinds but warned any government to look hard before adopting any such policy in relation to animal protection.

In any event, the present author regards the welfare of animals and reduction in their suffering as *paramount* and that any means that can contribute to ensuring their protection should be retained or adopted. Moreover, there needs to be complete transparency in relation to the enforcement of animal protection law as recognised by Mike Radford (2001, p. 392), and in this, education has a significant role to play. It is important also that people observe and report acts of animal cruelty or ill treatment and that members of the public speak out loudly and clearly about animal suffering wherever it takes place.

2.5 Achievement of Legislative and Other Reform

Improvements in animal protection can be achieved both by legislative reform and by direct action. In the case of legislative reform, changes in the law to improve the lives of animals can comprise major revisions of existing animal protection statutes as well as in some jurisdictions the introduction for the first time of such a statute, or it can involve specific amendments to existing legislation to address a particular situation. In each case, the impetus for improvements in the law to provide better protection for animals frequently arises from lobbying of government by animal protection organisations or individual activists, as well as from the influence of public opinion galvanised by the media. Such legislative change generally follows an enquiry into its desirability made by an animal welfare advisory committee or a specialised review.

In the case of the relatively new animal welfare legislation in Western Australia, a public discussion paper setting out proposals for inclusion in revised animal welfare legislation was prepared by the Animal Welfare Advisory Committee of the State Government and released in 1994 to seek public submissions in response to the proposals (Animal Welfare Advisory Committee 1994). During 1998, a Green Bill for a new animal welfare statute to replace the *Prevention of Cruelty to Animals Act* 1920 was released by the Minister for Local Government (Omodei 1998), and submissions sought regarding proposals in the bill. The final outcome was enactment of the *Animal Welfare Act* 2002 to replace the *Prevention of Cruelty to Animals Act* 1920. In Britain, a Draft Animal Welfare Bill intended to apply to non-farmed captive animals in England and Wales and replace the *Protection of Animals Act* 1911 together with numerous other statutes was launched in 2004 (Department for Environment, Food and Rural Affairs 2004) following a process of

public consultation that commenced in 2002 and included meetings with key stakeholders to discuss proposals during the consultation process. This was followed by pre-legislative scrutiny of the 2004 Draft Bill by the House of Commons Environment, Food, and Rural Affairs Select Committee, and provision was made for the public to contribute views and comments to that committee. Subsequently, in 2006 an *Animal Welfare Bill* completed its passage through parliament, received royal assent, and became the *Animal Welfare Act 2006* (Department for Environment, Food and Rural Affairs 2006).

As well as the achievement of improved animal protection through major revisions to existing legislation, the passage of specific legislative provisions can provide enhanced protection, such as that achieved by the banning in New South Wales in 1996 of the use of tethers on pigs and in Queensland in 1999 the ending of face branding of cattle (Stoner 2000, p. 11). Other more recent specific legislative changes include the abolition in Australia in 2004 of the cosmetic tail docking of dogs and in Britain in 2004 the banning of fox hunting with hounds.

Mention should be made that the existence of carefully formulated policies and position papers, such as those of RSPCA Australia (2004) that deal with a range of different animal categories and practices, provide a valuable basis for law reform to improve the lives of animals. Such policy documents also have an important educational role, although it needs to be remembered that there is a difference between policy and law. For instance, Dr Hugh Wirth observed (Das 2004, p. 5) that the RSPCA Australia policy-determining political arm of the organisation advocates banning the keeping of egg-producing hens in cages, whereas RSPCA inspectors in the various states are constrained by the law that allows the use of battery cages for laying hens and can prosecute only when the law is breached.

In his book *Political Animals*, Dr Robert Garner examined animal protection politics in Britain and the USA (Garner 1998), and he concluded (p. 235) that, above all, his research revealed that public pressure has led to reform. Indeed, on various occasions, it was only after public concern materialised that legislative change to improve the treatment of animals took place, and frequently this was in response to wide publicity of a specific situation showing the need for reform. Moreover, Garner observes at the conclusion of his book (Garner 1998, p. 237) with some optimism that both the British and American political systems are reasonably responsive to change and that the task facing the animal protection movement in both countries is to mobilise in any way possible a sufficiently large constituency to achieve further improvements in the lives of animals. This should give encouragement regarding the potential of people power in a democracy to bring about legal reform to reduce or eliminate human-inflicted suffering on animals.

The animal movement has been divided between two extremes, comprising those who seek a complete abolition in the use of animals by humans and those who aim to improve the welfare of animals by legislative change (Jasper and Nelkin 1992, p. 178). However, as observed by Garner (1998, pp. 83, 92) the reality is that most national animal rights organisations advocating abolition in fact adopt strategies supporting non-abolitionist animal welfarist reforms as a means towards achieving their ultimate abolitionist goal. Moreover, prominent animal rights

advocates Tom Regan and Gary Francione recognise (Armstrong and Botzler 2003, p. 567; Francione 1995, pp. 260–261) that legislative prohibitions provide a means of achieving incremental improvements in animal protection. This demonstrates the scope for animal organisations with different goals to work together.

It is suggested by Jasper and Nelkin (1992, p. 176) that if a solution is possible to any rancorous conflict, it will require good faith from both sides to ensure dialogue and compromise that is basic to a democratic process. Indeed, such dialogue and compromise should provide the cement for animal protection organisations to work together cooperatively for the benefit of animals and to exert influence on politicians as makers of the law to reduce animal suffering. The approach of David DeGrazia (1999, pp. 23–34; Armstrong and Botzler 2003, pp. 252–261) in relation to experimental animals provides some inspiration for such cooperation. DeGrazia compares the perspectives of those supporting and those opposing the use of animals in research, and he identifies a number of principles on which the two perspectives can agree and potentially can be built upon. The present author adopts a pragmatic approach and contends that everything possible should be done to improve the lives of animals and reduce their suffering by whatever means this can be achieved realistically. Moreover, we should all work together harmoniously and constructively to achieve this aim whatever our ultimate goal rather than pursue a pipe dream of all or nothing.

In addition to the making of improvements in animal protection by means of legislation, reform can result also from other actions. An inspirational account of impressive outcomes that resulted directly from campaigning against unacceptable activities regarding the treatment of animals by humans is contained in the biography of Henry Spira by Peter Singer entitled *Ethics into Action – Henry Spira and the Animal Rights Movement* (Singer 1998). Spira attended an evening adult education course at New York University conducted by Peter Singer in 1974 prior to the publication of his book *Animal Liberation* but based on the contents of that book. The need for reform was evident from the course, and Spira was keen to do something about it. At the time he was in his mid-forties and had worked both as a seafarer with a maritime union involvement and as a school teacher. For the next 23 years from 1975 to 1998 Spira, working in collaboration with other organisations and individuals, achieved enormous reforms for both experimental animals and farm animals by means other than legislative change or legal action. However, the reforms brought about by Spira involved much more than merely making people aware of animal abuses. Indeed, he encountered opposition from animal experimenters with vested career interests, corporate executives more concerned with company profitability and image than with animal abuse, and government officials so complacent that they had not even given a thought to animal suffering.

Among the achievements of Henry Spira in relation to experimental animals (Singer 1998, pp. 45–139) were (a) the ending of publicly funded research at the American Museum of Natural History in New York on the sexual aberrations of male cats whose brains had been surgically mutilated; (b) the initiation of research by major corporations including Revlon and Avon to find alternatives to the cruel

eye blinding Draize test applied without anaesthetic to the eyes of rabbits to test cosmetics for use by humans, as well as taking action to get government to accept such alternatives; and (c) a huge decrease in the use by Proctor & Gamble as well as other corporations of the flawed and cruel LD50 test for product safety based on the lethal dose of ingested substance required to kill half the animals in a test group, as well as changing general corporate culture in relation to product testing. Indeed, by 1990, 11 of the largest cosmetic firms in America had ceased entirely product testing on animals. Even though these reforms were achieved other than through changes in legislation, they provided the catalyst for subsequent legislative changes in various jurisdictions around the world. For instance, in South Australia *Regulations under the Prevention of Cruelty to Animals Act 1985* (no. 10 of 2,000) forbid, though with exceptions, the use of practices on animals that correspond to the Draize and LD50 tests without actually mentioning them by name.

From 1985, Spira became involved in farm animal reform (Singer 1998, pp. 141–182), and his achievements included: (a) abolition of the practice of shackling and hoisting cattle in American slaughterhouses prior to Jewish and Moslem ritual slaughter, and its replacement by an upright restraining device; (b) removal of the requirement by the US Department of Agriculture that Mexican cattle imported into the USA be subjected to hot iron face branding for identification purposes; and (c) making progress towards getting McDonalds to adopt and enforce a policy requiring the humane treatment of animals reared by its suppliers. The principles involved in the successful campaigns of Henry Spira for reducing animal suffering are analysed by Singer (1998, pp. 184–192), and he lists ten useful points of advice to assist future campaigners in the achievement of reform in animal protection by means other than legislative change. Both the experience of Henry Spira and the advice of Peter Singer provide practical educational guidance to those involved in campaigning to produce a better life for animals, and successful outcomes from such campaigns can provide the catalyst for subsequent legislative changes to ensure better protection for animals in the future.

People for the Ethical Treatment of Animals (PETA) founded in the USA in 1980 by Ingrid Newkirk and Alex Pacheco (Ryder 1998, p. 38) is an animal protection organisation whose primary aim is to achieve reform by direct means rather than work for legislative change. Some appreciation of its mode of operations is provided in the autobiography of Dan Mathews, Vice President of PETA, entitled *Committed* (Mathews 2007). Mathews is of the view that campaigning has to be entertaining and fun in order to bring animal protection reform issues to people, particularly those people not influenced by traditional campaigns that basically expose the facts. Indeed, PETA uses both sensational methods and public celebrities to draw community attention to the plight of animals in various situations. An example of successful campaigning by PETA described in detail by Mathews (2007, pp. 119–141) is achievement of the ending by leading New York fashion designer Calvin Klein of the use of fur in his designs. It was only after a widely publicised sensational raid on his office in New York and persistence by Mathews that Calvin Klein agreed to view in the presence of Mathews a 4-min video showing the shocking cruelty to which fur animals were subjected during their capture and

killing. Immediately after watching the video, Calvin Klein declared he would stop using fur. This shows how the opening of a closed mind can bring out compassion following the facing of reality. Indeed, transparency coupled with education has a powerful role to play, even where vested interests are involved. Subsequently, Klein and Mathews became good friends and shared various activities together.

There are other ways also of achieving reform to reduce animal suffering without the need for legislative change. According to Peter Singer (1990, p. 159), in relation to farm animals, a supremely important thing that can be done is to stop eating animals. Indeed, a decision to become vegetarian or vegan is a very direct means of reducing the extent of suffering experienced by farm animals, particularly those in factory farming situations. Another means of bringing about reform is to avoid purchasing products such as cosmetics that have been tested on animals. This requires transparency and, to assist in this, lists of accredited suppliers producing products made without subjecting animals to cruelty are published by organisations such as Choose Cruelty Free (2008) based in Australia. Moreover, there is growing awareness of the cruelty involved in producing eggs from hens kept in battery cages, and in the UK McDonalds now obtains its eggs from suppliers that deal only in free-range eggs (Sherman et al. 2005, p. 7). More recently, in response to the RSPCA Australia *Choose Wisely* campaign (RSPCA South Australia 2009, p. 6; Innes 2009, p. 15), the Hilton Hotel in Adelaide converted to using only free-range eggs.

However, the growing consumer awareness of animal protection issues has resulted in some suppliers of animal-derived products resorting to deceptive or meaningless advertising on packaging (Carrick 2009) to give an impression to consumers that their products are produced under conditions favourable for animals when in reality this is not the case. This demonstrates further the need for proper transparency and the appropriate education of consumers. This could be facilitated by mandatory and enforced effective product labelling as advocated in a report by Voiceless entitled *From Label to Liable: Scams, Scandals and Secrecy* (Sharman 2007).

It is seen that there are various ways involving both legislative change and other means by which reforms in animal protection can be achieved. Indeed, every possible avenue for bringing about reform to improve the lives of animals should be used. Each person seeking to contribute to reform should choose the approach or means that is suitable and attractive to him or her. Indeed, it is the cumulative effect of the various efforts made in a range of different situations that will result in widespread change to reduce or eliminate the terrible suffering to which many animals are subjected. Education can make people aware of how this can be achieved.

2.6 Training of Professionals, Carers, and Users Involved with Animals

There is wide scope for education to contribute to the proper training of professionals, carers, and users whose working lives involve interaction with animals, so as to provide a better life for the animals for which they are responsible. Such

persons include, among others, owners of companion animals, farm workers, experimental animal carers and users, animal transporters, slaughterhouse workers, and veterinary surgeons.

It is observed by Mike Radford (2001, p. 307) that a major factor influencing the treatment of domestic and captive animals is the attitude of those responsible for them. Indeed, the most important factor determining the welfare of animals is the standard of knowledge, conscientiousness, and sympathetic care that comprises good stockmanship, and even a system that is welfare friendly can fail if it is not combined with competent stockmanship and sound management. In relation to professional proficiency, it is shown by Radford (2001, pp. 307–315) that in the UK there is wide variation in the degree of sophistication in the extent of public control over activities involving animals and those responsible for them, ranging from detailed and complex regulation of the use of animals in scientific procedures to no formal licensing or certification for farming activities, markets, or circuses. Such variations probably exist also in other jurisdictions. Radford (2001, p. 316) concludes that the practical and symbolic influence of licensing, certification, and registration in respect of both establishments and personnel involved with animals must not be underestimated, and they provide a restriction on the traditional right of an owner to treat an animal as property in any way he or she sees fit. Education has an important role to contribute in making effective any such regulation of the way in which humans treat animals under their control.

In relation to companion animals, educational training of pet owners is provided by a range of agencies including government departments and statutory authorities, animal protection organisations, and local councils. For instance, the Dog and Cat Management Board (2008) of the South Australian Government produces a brochure *Golden Rules for Dog Owners*, RSPCA Queensland (2007, p. 24) operates an educational bus *EMU* that tours the state, and the City of Charles Sturt (2008) in South Australia produces an information sheet *Caring for Your Cat – Be Responsible and Make A Difference!* Regarding cats, education can assist also in making their owners aware of the problem of predation by cats on birds (Gibbons et al. 2007, pp. 31, 44) and other wildlife, and of precautions to take such as fitting a cat with a bell or sonic device to warn potential prey and reduce kills. Many pet owners are young people so education regarding companion animals has a particularly important part to play in the development of a caring attitude towards animals.

The celebrated medical practitioner and humanitarian Dr Albert Schweitzer observed of humans (World Society for the Protection of Animals 2004, p. 5) that “until he extends his circle of compassion to all living things, man will not himself find peace”, and in the view of Phil Brooke (2007, p. 2), Welfare and Education Development Manager of Compassion in World Farming (CIWF), “the central purpose of humane education is to widen the circle of compassion”. A recent report entitled *Stop-Look-Listen: Recognising the Sentience of Farm Animals* was produced by Dr Jacky Turner (2006) for CIWF, and this provides an informative educational account of farm animal sentience and welfare. Indeed, the report

demonstrates clearly the important needs of animals and shows the suffering to which many farm animals of various types are subjected. Another valuable resource on general animal welfare as well as on the welfare of specific types of animal, namely dogs, cats, horses, cattle, sheep, pigs, and laboratory animals, is the *Springer Animal Welfare Series* of books by various authors (Phillips 2009, p. ii). The editor of this series is Professor Clive Phillips, Director of the Centre for Animal Welfare and Ethics (CAWE) in the School of Veterinary Science at the University of Queensland, and in relation to the series he observes (Phillips 2008, p. 1):

It is hoped that these books will provide inspiration to all those people who are working tirelessly to improve animal welfare with little thanks or praise. . . . Working *for* animals, as opposed to *with* animals, requires courage and the people involved often face criticisms from those who seek to get the maximum from their animals for the smallest input. Some whose livelihoods depend on using animals are averse to any change that will affect the short-term profitability of their enterprise, although by improving animal welfare they are guaranteeing their future markets and the ethical acceptability of their business in the long-term.

Such educational materials can contribute greatly to improving the training and attitudes of farm animal operators and carers. Moreover, positive educational perspectives for improving the welfare of laying hens and pig production are contained in two comprehensive reports of Compassion in World Farming (CIWF), namely *Practical Alternatives to Battery Cages for Laying Hens: Case Studies from Across the European Union* (Arey 2004) and *Animal Welfare Aspects of Good Agricultural Practice: Pig Production* (Arey and Brooke 2006). It is hoped these reports provide a window to the future for layer hens and pig farming and contribute to a much needed enlargement of the circle of compassion.

In relation to experimental animals, a great deal of educational information is contained, for instance, in the *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* (Australian Government 2004). This code includes general principles for the care and use of experimental animals, institutional responsibilities and animal ethics committees, responsibilities of investigators and teachers, acquisition and care of animals, wildlife studies, and the use of animals in teaching, as well as extensive references to sources of information on a range of relevant matters including legislation and codes of practice, policies and guidelines, animal welfare and ethics, and alternatives to the use of animals. The question arises, however, as to what extent *in practice* is such information properly accessed, considered, and implemented by carers and users of experimental and teaching animals so as to improve the lives and reduce the suffering of the animals for which they are responsible. Indeed, it is seen in the Australian Animal Welfare Strategy Education and Training Working Group (2008, p. 4) Stocktake in relation to animals used in research and teaching that there is scope for improvement in the application of humane practices, the training of animal care staff, the implementation of legislation, the training of Animal Ethics Committee members, the wider use of teaching animal welfare and animal ethics to university students, and the monitoring of animal use for teaching purposes in schools and tertiary institutions. These insights suggest that much needs to be done to improve the situation of

animals used in research and teaching if they are used for these purposes and that better education of carers and users can contribute in this regard.

Animal transport is another area where there is serious need not only for greater regulation, but also for improved training of transport operators and animal transporters. This was evidenced in a graphic video *Journeys of Shame* and in a report *Summary of Suffering II* on long-distance animal transport in Europe (Eurogroup for Animal Welfare 2003, p. 8) that showed animal suffering caused by neglect, bad handling, and disregard for European rules by both transporters and Member States of the European Union. More recently, the *Handle with Care* campaign conducted by a coalition of animal protection organisations led by the World Society for the Protection of Animals (WSPA) produced a report *Beyond Cruelty. Beyond Reason. Long Distance Transport and Welfare of Farm Animals* (Handle with Care Coalition, World Society for the Protection of Animals 2008) that demonstrated the existence of widespread animal cruelty globally associated with long-distance transport. A more detailed account of animal suffering during long-distance transport is contained in Appleby et al. (2008). Education could contribute to a reduction in the extent of such suffering through the provision of animal welfare training for those involved in long-distance animal transport. However, much of the problem lies in the very existence of long-distance animal transport. Education could play a valuable role in this also by demonstrating the desirability of slaughtering animals close to where they are reared. This would reduce animal suffering during transport, the potential spread of disease among both animals and humans, costly and ineffective enforcement of transport regulations, and reduction in meat quality arising from animal stress during transport (Handle with Care Coalition, World Society for the Protection of Animals 2008). Indeed, there are good reasons that include animal welfare for replacing long-distance live animal transport by the transport of meat.

In their book *Animals Make Us Human: Creating the Best Life for Animals*, Temple Grandin and Catherine Johnson (2009) stress the importance of hiring and training good people to work with livestock. Managers need to be strong and caring, sadistic or bullying employees should be dismissed, constant training and retraining is required, and auditing from outside is desirable. This is especially so in slaughterhouses where animals should not spend the end of their lives in terror. Even though animal killing involves speciesism and can be regarded as morally wrong, the reality is that it is going to continue to take place for some time at least. Moreover, it is often accompanied by animal suffering, so that education has an important role to play in reducing or eliminating such suffering during slaughter. In relation to animal slaughter, it is observed by Grandin (Armstrong and Botzler 2003, pp. 187–189) that promotion of better stockmanship is essential to improving animal welfare. Moreover, attitudes can be changed, and such change can improve both animal welfare and productivity. However, to maintain such progress, the handling and stunning of animals at slaughter needs to be constantly audited, measured, and managed to avoid reversion to rough handling. Education can play an important role in achieving this. Moreover, the fast food companies can and do have an important contribution to make by requiring their meat suppliers to maintain high animal welfare standards.

In the case of free-living wildlife, there are no carers as such. However, humans who impact on wildlife animals have a moral duty of care towards them, and this duty should be borne in mind by those whose activities affect them. Such activities include the use of anticoagulant rodenticides, the poisoning of wildfowl by the ingestion of lead shot, contamination of sea birds by oil, the consequences of shooting, injuries caused by road traffic, and predation by domestic cats (Sainsbury et al. 1995, pp. 183–206). These activities have severe adverse effects on the welfare of large numbers of animals. However, as shown by Sainsbury et al. (1995), practical approaches can be adopted to reduce or prevent some of these wildlife problems, and they suggest that consideration should always be given in environmental impact assessments to the consequences on the welfare of wildlife of any new developments or technologies prior to their introduction. In this the appropriate education of those involved can play an important role.

Finally, some observations are made regarding the education and training of veterinary surgeons, who are responsible for the care of a wide range of animal types in a variety of different situations. In the UK, the Royal College of Veterinary Surgeons (RCVS) Oath reads (Phillips 2007):

I promise above all that I will pursue the work of my profession with uprightness of conduct and that my constant endeavour will be to ensure the *welfare of the animals* committed to my care.

Moreover, Clive Phillips (2007) asserts that in veterinary education more than just science is needed. However, in some veterinary medicine courses, little animal welfare is taught due to time constraints, or animal welfare is regarded as an optional rather than a core subject. Fortunately, this situation is changing. In Britain, Donald Broom has since 1986 been the Colleen MacLeod Professor of Animal Welfare in the Department of Clinical Veterinary Medicine at Cambridge (Broom 2001). More recently, in Australia at the University of Queensland, Clive Phillips was appointed the first Professor of Animal Welfare and Director of the Centre for Animal Welfare and Ethics (CAWE) in the School of Veterinary Science, and at Sydney University the appreciation of issues in animal welfare and ethics is included among the stated professional practice outcomes in the veterinary science course (Phillips 2007).

A significant development relating to the teaching of animal welfare in veterinary courses around the world was the launch in 2003 by the World Society for the Protection of Animals (WSPA) and the University of Bristol School of Veterinary Science (de Boo and Knight 2005, pp. 451–453) of *Concepts in Animal Welfare* that comprises a syllabus in *Animal Welfare Science and Ethics for Veterinary Schools*. This comprehensive syllabus contains 7 core subjects as well as 23 elective modules that cover a wide range of animal welfare issues and animal categories. The syllabus can be adapted for use in any veterinary curriculum, and WSPA offers training and workshops in developing countries as well as assistance with implementing the syllabus. Indeed, the syllabus has the potential to contribute enormously to the inclusion of animal welfare teaching as an important part of veterinary education.

Over the last decade or so there have been moves to reduce the invasive use of live animals in veterinary education. In May 2000, two fourth-year veterinary students, Andrew Knight of Murdoch University in Western Australia and Lucy Fish of Sydney University in New South Wales, were presented by the World League for Animal Protection with an award at Parliament House, Sydney, for promotion of compassion for animals (Animals Today 2000, p. 7). These two students conducted successful campaigns to allow the conscientious objection by students to using live animals in experiments as part of their veterinary courses, and they promoted the use of non-animal alternatives. At the University of Sydney veterinary school, live animals are now used only for non-invasive teaching and demonstration as in clinical studies, animal handling, and examination (Phillips 2007), and all basic veterinary surgery training is done on cadavers. Moreover, it is anticipated that at Glasgow University in Scotland the use of live animals in veterinary training may be reduced with the increase in innovative alternatives. Thus, important developments are taking place both in the teaching and in the practice of animal welfare in veterinary education. Furthermore, it is seen that there is considerable scope also for the use of animal welfare education in a wide variety of situations involving animals.

2.7 Scope for Science to Contribute

Science can contribute to improvement in animal protection in a variety of ways. For instance, it shows the biological similarity between humans and animals and hence the capacity of animals to suffer, it provides credible evidence relating to animal needs and appropriate care, it helps find alternatives to animal use in a variety of situations, and it establishes health risks to humans associated with eating meat as well as the health advantages to humans that result from adopting a vegetarian diet and in doing so reduces the extent of animal suffering. Moreover, the establishment of animal welfare as a scientific discipline and the use of scientific evidence to support claims has been described by Broom (2001, p. 25) as the most important general achievement for animals during the latter years of the twentieth century.

In his book *The Origin of Species* published in 1859, Charles Darwin enunciated his theory of evolution by means of mutability, transmutation, and natural selection that is regarded by Radford (2001, p. 89) as the most profound and far-reaching development during the nineteenth century in our understanding of the world and the position of humans within it. Furthermore, Radford (2001, p. 118) emphasises the importance of using science and ethics as the proper basis for legislation designed to provide better protection for animals. Indeed, the emergence of animal welfare as a discrete discipline is primarily a *scientific* notion (Radford 2001, pp. 261–262) in contrast to the traditional concept of animal cruelty that was based on a long-established *legal* test. Moreover, Ryder (1998, p. 89) suggests that the

establishment of the science of animal welfare in Western universities may prove to be one of the most enduring achievements of the animal movement and that there is a growing fusion of hard-headed science with tender-minded compassion that should result in reduced animal suffering.

An early example of the role of science in examining animal welfare issues was the investigation and reporting in 1965 in Britain by the Brambell Committee (Singer 1990, p. 142) on the keeping of animals under intensive livestock farming systems. Subsequently, scientific studies have contributed to changes in both legislation and practice to improve animal welfare (Broom 2001, p. 25), and he cites banning the use of crates for veal calves that followed rigorous scientific research. Other important research findings referred to by Broom are the weakening of bones of hens kept in battery cages due to lack of exercise and severe adverse effects on the welfare of sows resulting from the confinement of pigs by means of stalls and tethers. These findings also have resulted in legislative change. By contrast, science has contributed to the development of genetically engineered pigs and poultry that are unable to stand up without suffering. It is important that awareness of scientific findings impinging on animal welfare is propagated by education so they become widely known. This can be achieved through conferences and other means. For instance, at the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) Conference on Farm Animals in Research held in Adelaide in 2000, a comprehensive review of the effects of housing on the behaviour and physiology of pigs and poultry was presented by Barnett and Glatz (2001, pp. 45–55). In 2004, a report on links between animal health and animal welfare in the context of transport was produced by Eurogroup in collaboration with RSPCA (Eurogroup for Animal Welfare and RSPCA 2004). This report was based on a detailed study by scientists at the Cambridge University Animal Welfare Information Centre, and it showed, among other things, the severe stress from handling experienced by range-reared beef cattle during transport and the significant adverse effect on pig welfare that results from rough handling or the use of harmful handling devices during transport. Moreover, pigs have a very low thermoregulatory ability so that death during transport can result from exposure to heat. Science has been used also by the World Society for the Protection of Animals (WSPA) to develop a bear detection kit (World Society for the Protection of Animals 2008) for use by CITES enforcement officers to identify bear parts and derivatives in traditional medicine products traded internationally in contravention of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES).

A strategic review undertaken in 1997 by the Universities Federation for Animal Welfare (UFAW) identified as priorities (Kirkwood 2007):

Encouragement and support of high-quality research likely to lead to substantial advances in animal welfare

Promotion of education about animal welfare, particularly at the tertiary (university and college) level

Promotion of animal welfare by provision of advice, dissemination of information, development of guidelines and legislation, and organisation of meetings and workshops

The motto of UFAW is *Science in the Service of Animal Welfare*, and in 2003 UFAW published a book entitled *Environmental Enrichment for Captive Animals* (Young 2003) that was the first in the *UFAW/Blackwell Animal Welfare Series*. Another useful series of books on animal welfare that covers specific animal types as well as animal welfare generally is the *Springer Animal Welfare Series* edited by Professor Clive Phillips of the Centre for Animal Welfare and Ethics (CAWE) at the University of Queensland (Phillips 2009, p. ii). Such publications make an important contribution to animal welfare education and help disseminate knowledge of scientific findings relevant to improving animal protection.

Another way in which science can make a major contribution to improved animal welfare and reduction in animal suffering is its application in finding alternatives to animal use. Following a 1986 Directive of the European Union (EU) on the protection of animals used for experimental and other scientific purposes, the European Centre for the Validation of Alternative Methods (ECVAM) was established in 1993 as a unit of the Environment Institute of the Commission of the European Union based in Italy (Hughes 1995, pp. 14, 15, 32). Professor Michael Balls was appointed inaugural head of ECVAM with the task of promoting worldwide the use of alternatives to animals in research as well as conducting research using non-animal methods. Indeed, since then ECVAM has been responsible for important advances involving alternatives to animal use, and its work is being increasingly recognised internationally (Eurogroup for Animal Welfare 2004b, pp. 91–93). However, for the work of ECVAM to be fully effective, it is essential that the European Commission and Member States act expeditiously to implement the adoption of alternative testing strategies developed by ECVAM. Moreover, the Commission needs to achieve international acceptance of alternative methods validated by the European Community, and this involves ensuring that the alternatives are included in OECD test guidelines that are recognised globally. Furthermore, use can be made of cooperative international agreements with countries outside the EU to get new alternatives accepted. In Britain, the Fund for the Replacement of Animals in Medical Experiments (FRAME) is very active in the development of alternatives to laboratory animals, and a journal *Alternatives to Laboratory Animals* (ATLA) edited at FRAME by Professor Michael Balls in conjunction with an international editorial board provides a valuable educational resource on alternatives (Balls 2007). The Physicians Committee for Responsible Medicine (PCRM) founded in the USA by Neal Barnard MD (Animals Today 1995b, pp. 10–13) is involved also in promoting the use of alternatives to animals in both education and research.

In New Zealand, the National Animal Ethics Advisory Committee (NAEAC) in 2003 instituted an award to recognise implementation in New Zealand of the 3Rs, namely reduction, refinement, and replacement, (National Animal Ethics Advisory Committee 2004, p. 18), and the inaugural prize was awarded to Associate

Professor Alex Davies of the Institute of Veterinary, Animal and Biomedical Sciences at Massey University for using computer technology as an alternative to animal use in teaching. Davies developed around 40 virtual teaching tools covering a range of animals for use in anatomical instruction to veterinary students. In Britain at Oxford University physiologist Professor Denis Noble CBE FRS developed a computerised model of the human heart (Noble 2004), and this enabled a reduction in the number of animals used in research. It is important that the development of alternatives to animal use is seen as a highly respected and worthwhile field of research that results in the avoidance of animal suffering.

Other types of scientific research projects leading to a reduction in animal suffering include, for instance, research by Ian McDonald at the Centre for Animal Welfare and Ethics (CAWE) in the School of Veterinary Science at the University of Queensland (McDonald 2008) on the use of immuno-contraception as a means of non-lethal control of over abundant kangaroo populations in urban areas and to assist in this research McDonald was awarded the 2008 Alan White Scholarship for Animal Welfare by RSPCA Australia (CAWE 2008). Recently, in Nepal Dr Andrew McLean tested scientifically based horse training methods on the training of elephants using positive and negative reinforcement techniques (Newby 2009). In a few days McLean successfully trained elephants without the infliction of suffering, whereas the traditional method used took around 6 weeks of harsh training to achieve similar results. These examples illustrate the diverse contribution science is able to make in finding alternatives that reduce animal suffering and indicate the desirability of applying thought and effort to the search for alternative means in a wide range of situations involving animals so as to improve their protection.

Finally, science can contribute to showing the advantages to humans of adopting a vegetarian diet. This involves both health and environmental issues as well as a reduction in animal suffering (Singer 1990, pp. 159–183). According to Neal Barnard MD (Animals Today 1995b, p. 11), there is an abundance of scientific research evidence that a vegetarian diet can reverse existing heart disease, lower cholesterol levels, and help prevent many forms of cancer. Indeed, US Government statistics reveal that 30–60% of cancers are attributable to dietary factors, particularly the eating of meat. Moreover, it is observed by Russell (2008, p. 16) that a recent detailed assessment of scientific research made by the World Cancer Research Fund showed that red meat causes bowel cancer, and the Victorian Cancer Council has estimated that in Australia around six thousand people a year are diagnosed with cancer resulting directly from eating more than one serve of red meat a week. A consequence of eating less meat would be a reduction in animal suffering, even though utilitarian philosophy might argue that the reduced suffering resulting from fewer animals needs to be weighed against the happiness these animals might otherwise have experienced (Singer 1990, pp. 227–230).

It is seen there are many different ways in which science can make a major contribution to improving animal protection and reducing animal suffering. Moreover, education can increase awareness of the scope for this as well as assist in fostering appropriate attitudes so that alternatives to animal use are both sought and used.

2.8 Regional and International Protection

Animals know no man-made geographical boundaries, and their suffering is universal. It is important that through education and other means every effort possible is made both within individual countries and from outside to reduce the suffering of animals and improve their lives all over the world.

On a regional basis, substantial improvements in animal protection have been achieved within the European Union. This has been assisted by a series of conventions on animal protection and conservation adopted by the Council of Europe (RSPCA UK 1999, p. 4; Eurogroup for Animal Welfare and RSPCA International 2001, p. 15) that deal with farm animals, experimental animals, animal slaughter, and international animal transport as well as wildlife and natural habitats. Under the principle of subsidiarity (Steiner et al. 2003, pp. 48–49; RSPCA UK 1999, p. 6) laws covering the welfare of farm animals, animals in research, and the protection of wildlife are made at European Community level for reasons of harmonisation, whereas laws covering general cruelty and companion animals are the responsibility of individual states. In the European Union, a great deal has been achieved regarding progressive reforms in the protection of animals including farm animals as described earlier. Moreover, since the 1957 Treaty of Rome that established the European Union (formerly the European Economic Community), the number of Member States of the EU has grown progressively from the original 6 states in 1957 to 27 states by 2007 so that the geographical jurisdiction and number of animals covered by European Community law have increased enormously. It should be mentioned that prior to being admitted as a new Member State of the European Union, a candidate country is required to adopt the *acquis communautaire* of EC law that includes the legal provisions applying to animal protection (Eurogroup for Animal Welfare and RSPCA International 2001). This has involved a major role for education, particularly that conducted by Eurogroup and by RSPCA International, and such education will continue to be needed as the European Union expands further in the future.

An important advance in animal protection in the EC was the adoption in 1997 of the Treaty of Amsterdam *Protocol on the Welfare and Protection of Animals* (Camm and Bowles 2000) discussed earlier. This protocol is annexed to the *Treaty of Amsterdam* so forms an integral part of the EC Treaty. It is possible that in the future other regional groupings of countries will contribute also to improving regional protection of animals in their regions. In any event, the progressive legislative developments in animal protection in the European Union can be used as an educational guide for developing better animal protection law in other national jurisdictions and in provincial jurisdictions as in the states of Australia. Indeed, the European Union offers many valuable lessons for enhancing animal protection around the world, and in this education can play a substantial role.

There is as yet no general international convention covering the welfare of animals. However, some progress towards a *Declaration on Animal Welfare* was achieved by the 2003 *Manila Agreement* described previously. Subsequent to that

agreement, the willingness of five countries from different geographical regions, namely Costa Rica, Kenya, India, Republic of the Philippines, and the Czech Republic, was secured for them to act as a Steering Committee to build broad intergovernmental agreement on a draft *Declaration on Animal Welfare* for eventual submission to the Economic and Social Council (ECOSOC) of the United Nations (World Society for the Protection of Animals 2005a, b). In November 2005, the Government of Costa Rica in cooperation with international animal welfare organisations including the World Society for the Protection of Animals (WSPA), Royal Society for the Prevention of Cruelty to Animals (RSPCA), Humane Society International (HSI), and Compassion in World Farming (CIWF) hosted the first meeting of the Steering Committee. It was decided the committee was to circulate the *Proposal for a Declaration on Animal Welfare* adopted at the Manila conference to all governments around the world, and its member countries attempt to develop support for the declaration in their own regions. Moreover, the coalition of animal protection organisations was to provide technical, logistical, and lobbying support to the governments on the Steering Committee (World Society for the Protection of Animals 2006) and represent the public face of the government led initiative to persuade the United Nations to adopt a *Universal Declaration on Animal Welfare* that would be analogous to the *Universal Declaration of Human Rights* 1948. Such a declaration is not legally binding, as distinct from a treaty that would be the next step, but they do have a very important educational and persuasive value. Indeed, the *Universal Declaration of Human Rights* remained the most widely cited human rights instrument (Steiner and Alston 2000, pp. 138–139).

Even though there is no specific international agreement on animal welfare, some existing international conventions on conservation and the environment do provide indirect protection to animals against suffering. For instance, the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES) (Eurogroup for Animal Welfare 2004b, pp. 48–49) does prevent many individual animals from suffering during capture or transport, and the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* (London Convention) and the *International Convention for the Prevention of Pollution from Ships* 1973 coupled with the 1978 Protocol (MARPOL 73/78) as well as the *United Nations Convention on the Law of the Sea* 1982 (LOSC) that imposes an obligation on states to prevent, reduce, and control land-based marine pollution (Heathcote 2003a, p. 9, 2003b, p. 1; Hassan 2002, p. 81; Eadie 2001, p. 7) do reduce the extent of suffering by sea animals resulting from either the ingestion of or entanglement with marine debris or being coated by oil. However, such conventions are not fully effective as evidenced, for instance, by the smuggling of baby orangutans from Indonesia in contravention of CITES (Smits 2004, p. 1), and the huge number of marine animals that do suffer from the existence of marine debris and oil pollution (Maritime Studies 2005, pp. 31–33). The various reasons for such international conventions not being fully effective are outlined by Eadie (2009, pp. 191–192). Nevertheless, animals are probably much better protected than they would be in the absence of such international agreements. Moreover, the

agreements have an important educational role both in their negotiation and in their existence.

Animals are provided some indirect protection also by International Humanitarian Law (IHL) provisions designed to protect the civilian population from hostilities because animals and the civilian population are frequently found in the same general location. Such indirect protection of animals is provided, for instance, by the *Regulations on Land Warfare* (Kalshoven and Zegveld 2001, pp. 21–23) that originated from the Hague Conference of 1899, and contained a basic rule prohibiting the bombardment of undefended towns, villages, dwellings, and buildings. More recently, under the two 1977 *Protocols Additional to the Geneva Conventions of 1949*, dealing with the protection of victims of international and non-international armed conflicts, respectively, provision is made for the protection of works and installations containing dangerous forces, namely dams, dykes, and nuclear electrical generating stations, and in practice, this prohibition protects animals as well as humans. Another example of indirect protection to animals is provided by the 1997 *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on their Destruction* (Ottawa Convention). This convention banning anti-personnel mines, commonly known as land mines (Kalshoven and Zegveld 2001, pp. 168–169), provides protection not only to humans, but also to animals such as elephants that fall victim to them and are severely injured.

In 2003, an important decision was made by the World Organisation for Animal Health (OIE) to embark, with multinational support, on preparing international standards and guidelines on animal welfare (Eurogroup for Animal Welfare 2004a, p. 7), and initially working groups were established to examine guidelines for land transport, sea transport, slaughter, and disease control emergency killing. Early in 2004 OIE held a *Global Conference on Animal Welfare* (Eurogroup for Animal Welfare 2005, p. 9), and to coincide with that conference Eurogroup published a report showing the links between animal health and animal welfare in the context of animal transport. Scientifically based animal welfare standards are being developed by OIE (Department of Agriculture, Fisheries and Forestry 2005, pp. 33–34), and these are to be consistent with agreed *OIE Guiding Principles on Animal Welfare*. These guiding principles, among others, include the acceptance that:

There is a critical relationship between animal health and animal welfare.

The internationally recognised “five freedoms” provide valuable guidance in animal welfare.

The internationally recognised “three Rs” provide valuable guidance for the use of animals in science.

At the World Health Organisation (WHO) *Global Forum for Health Research* held in Mexico City in November 2004, the World Society for the Protection of Animals (WSPA) presented a report entitled *Industrial Animal Agriculture – The Next Global Health Crisis?* that expressed grave concerns regarding the effects on human health of the growth in industrial animal farming, particularly in developing countries (World Society for the Protection of Animals 2005c, p. 12). Ironically, the 2009 swine flu pandemic originated in Mexico. Recently, WSPA produced a report

Industrial Animal Agriculture – Part of the Poverty Problem (Cox 2007) showing that rapidly growing industrial animal agriculture in developing countries in Latin America, Asia, and Africa is not only bad for animal welfare, but bad for the poor in those countries. Indeed, the report calls for international development agencies and NGOs to address the problem of industrial animal agriculture as a fundamental part of poverty alleviation. These concerns need to be borne in mind by OIE in developing animal welfare standards as well as its commitment to the “five freedoms”.

The major international animal protection organisations campaign against the suffering of various types of animals in countries where they are abused or neglected. For instance, the World Society for the Protection of Animals (WSPA) campaigns against issues such as wildlife poaching in Kenya, street dogs in Indonesia, and bear farming for bile in China, Vietnam, and Korea (World Society for the Protection of Animals 2005c, pp. 4, 18–20, 24–26, 28–29). The present author suggests it might be useful to compile country reports covering the whole world similar to those published by Amnesty International in relation to human rights (Amnesty International 2008) that could highlight the more serious types of animal suffering and abuse that occur in each country as well as record positive developments that take place. Such reports could be used as an educational resource for campaigning for reform both within an individual country and from outside the country concerned. It has been observed by Keith Suter (2007, pp. 213–227) that in relation to human rights the world is entering a new era of *global accountability* to replace the long-held notion of national sovereignty, and in the view of the present author it would be desirable for such global accountability to extend to the treatment of animals by humans around the world.



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