Animal Ethics

Corine Pelluchon*
University of Franche-Comté, Besançon, France

Abstract

The transformation of farm animals into industry-produced "biomachines" explains that the plight of animals worldwide has never been more serious than it is today. The description of the abuse of animals raised for food and the denunciation of the painful death they experience in slaughterhouses were the starting point of the animal movement in the 1970s. Promoting activism as well as academic studies, this movement, which first brought analytical ethics, and particularly utilitarianism, to bear on many animal welfare issues, goes hand in hand with the rejection of speciesism. Coined in 1971, this word suggests that membership in the *Homo sapiens* species is not a sufficient measure of moral worth. Animal ethics is an inquiry into the criteria that are decisive to grant a being moral consideration and evaluate the rightness or wrongness of some practices involving animals. Although Peter Singer and Tom Regan do not have the same arguments, they both provide an alternative to speciesism by referring to some value-laden labels that pertain to a cognitive ontology. This is why many ethicists coming from different countries are trying today to think through the animal question in order to overcome the dichotomies human/man, body/mind, and nature/culture we find in humanism.

Keywords

Animal factories; Equal consideration of interests; Sentience; Speciesism; Violence; Vulnerability; Welfare

Introduction

Over the course of the last two centuries, traditional forms of the treatment of animals have been turned upside down by industrialized farming, genetic experimentation, artificial insemination, and other techniques (hormones, crossbreeding, cloning, and so forth). These techniques transform animals into "biomachines" which have to produce the highest possible yield at the lowest possible cost. The depiction of this reduction of animals "not only to production and overactive reproduction of meat for consumption, but also of all sorts of other end products," as Derrida says in *The Animal That Therefore I Am*, was the starting point of the animal movement in the 1970s. "The unprecedented proportions of this subjection of animals" raised for food due to the increase of the global meat production since 1970; the confinement of chickens, cows, and pigs that make it impossible for them to fulfill their nature, as seen with pregnant sows in gestation crates; the slaughtering of animals at such high speeds that some are cut apart while still alive; and the number of species endangered because of man's activities drove some thinkers into taking part in the public debate to make such cruelty to other living beings a pressing ethical issue.

^{*}Email: cpelluchon@yahoo.fr

The descriptions of the large-scale, highly mechanized animal factories are the entry point to Peter Singer's animal ethics. In *Animal Liberation*, Peter Singer further develops the ideas he found in *Animals, Men, and Morals*, a book published in 1971 by three Oxford University philosophers, Rosalind and Stanley Godlovitch and John Harris. *Animals, Men, and Morals* is indeed the first important text dealing with the moral status of nonhuman animals. After having written a review of this book for the *New York Review of Books* in 1973, Peter Singer, following himself the Oxford analytic style, applies moral philosophy, especially utilitarianism, to animal issues and operates on a case-by-case basis, evaluating the rightness or wrongness of our practices involving animals by the expected consequences of these practices.

Although his utilitarian approach, which comes from Jeremy Bentham, is put into question and even rejected by other leading figures of animal ethics such as Tom Regan, it provides some guidelines to denounce abuses of animals, which exceed, in sheer number of affected individuals, any other mistreatment, as seen with the meat industry. Moreover, the key concepts of Singer's animal ethics are worth examining since they revolve around the principle of equality of interests, which does not imply the equality of treatment but the taking into account of the suffering of a sentient being.

One can discuss the way Singer equates sentience with a capacity or a power to experience pleasure, pain, and suffering and his reinstating the human/animal, mind/body dichotomies he first considered as responsible for the cruelty to animals. By the same token, Regan's vocabulary of rights, which grants any subject of a life inherent value, may pertain, in spite of the abolitionist implications of this approach, to a liberal framework that falls into a metaphysical tradition grounding ethics on the capacities argument and determines the human/animal difference on the basis of some animal deprivations (MacCance 2013).

However, the founding fathers of animal ethics in the Western tradition have contributed to two major changes in ethics. First, the criteria for ethics change once one considers that membership in the *Homo sapiens* species and the faculty of discourse are not some sufficient measures for moral worth. The word speciesism, which was coined in 1971 by the Oxford psychologist Richard Ryder, suggests that such discrimination is as unjust as sexism and racism. In other words, there is a need for a nondiscriminatory approach of ethics. Animal ethics, which for Singer and Regan goes hand in hand with the rejection of speciesism, is part of such effort to overcome the human-centered or anthropocentric traditional ethics. To be sure, animal ethics shares with environmental ethics a common effort to provide an alternative to anthropocentrism. Both denounce the posture of man as a tyrant prone to dominate nature and reduce other living beings to their instrumental value. By focusing on the individuals, animal ethics however distinguishes itself from environmental ethics, especially from ecocentrism for which the species is all-important.

The second major change in ethics that occurs thanks to animal ethics is due to the focus on the animal viewed as a sentient being, whose uniqueness and own biography are taken into account. This insistence upon the richness of animal life and the acknowledgment of the subjectivity of animals, although they do not have the same cognitive capacities as humans, explain why animal ethics is currently turning into a more critical interdisciplinary study (MacCance 2013). The animal question, far from being "one question among others," is "the limit upon which all the great questions are framed and determined," as Derrida puts it (Derrida and Roudinesco 2004). The status and the meaning of ethics are at stake in the way some ethicists from various countries envisage the animal question. Their goal is actually to displace the moral boundaries and dichotomies we inherited from the humanist tradition. The latter has excluded the animal from the sphere of our moral consideration and advocates a position of dominion over the other beings, which explains and sometimes justifies violence and mistreatment to animals.

The feminist contribution to animal studies and Derrida's approach indicate that animal ethics is no longer a specialized ethics (Adams and Donovan 1995). Making our relations with animals the point of departure of an inquiry into the framework of our ethics, politics and ontology lead us to adopt a new way

of thinking, which is post-humanist or implies another humanism (Pelluchon 2011). Whereas animal ethics dealt with the moral status of animals and sometimes advocated the extension of rights to animals, as seen in the Great Ape Project, many philosophers and ethicists deeply committed to the defense of animals and promoted a nonviolent, vegan lifestyle, showing that the animal question drives us into making responsibility and vulnerability the major concepts of ethics and politics, which concern both humans and animals. The way we understand justice toward animals, be they domesticated, wild, or liminal, is at stake in the animal question, which is part of a broader, holistic approach encompassing the reflection upon our inhabiting the earth and sharing resources with other species (Pelluchon 2015).

Singer's Principle of the Equal Consideration of Interests

Singer's approach to ethics involves the calculation or counting of interests: a good action is an action that maximizes the expected satisfaction of interests. As in Bentham, all the parties affected by my possible action count, including animals. Acting morally is choosing the action that results in the greatest net satisfaction of interests.

Utilitarianism is a type of situation ethics that rests upon a case-by-case basis and implies the calculation of net interests in each case. Along with the idea that various mental capacities make a difference in the anticipation of death, for instance, such an approach to ethics leads Singer to assess that, under certain circumstances, animal experimentation is morally acceptable, whereas a carnivorous diet imposing upon billions of animals a life of suffering and a painful death is not. To be sure, a deontological approach such as the rights-based approach we find in Regan has abolitionist consequences. However, the point that makes Singer's ethics break up with the tradition is his reference to the principle of the equality of interests.

As Bentham wrote in *The Principles of Morals and Legislation*, the question was not whether a being can think or talk, but whether he/she can suffer. Sentience is thus a sufficient measure for moral worth. A sentient being has interests: he/she wants to be free from suffering and is looking for enjoyment and pleasure. No matter what the species of the being, the principle of equality requires that its suffering be counted equally with the like suffering of any other being (Singer 2009). Singer's animal ethics revolves around the principle of the equal consideration of interests. It is not the faculty of reason or discourse that should be decisive when the moral worth of animals is concerned, but the capacity to suffer is sufficient to grant or ascribe a moral status to a being.

Therefore, animals and humans who have the capacity to suffer have interests. More precisely, the cognitive capacities that make the anticipation of a painful experience or a pleasure more intense are taken into account in Singer's calculation. Such argument drives Singer into justifying some comparisons between an encephalic baby or a comatose patient and a chimpanzee or a horse, which are more conversable than the "defective persons." The standard capacities upon which Singer's ethics is based are questionable. However, the impact of Singer's animal ethics has been stressed worldwide: not only does it show that speciesist prejudices are arbitrary and in conflict with the values we cherish in our life or the possessions we consider as essential in order to enjoy life, but it also provides guidelines to make some drastic changes in our lifestyles. According to Singer, when we are eating, we are brought on into direct touch with the most extensive exploitation of animals that has ever existed. Our food choices are political and they have consequences on other beings, including other human beings experiencing hunger in part because the cereals produced by local farmers in Africa are sold to Europe and the USA to feed their cattle.

The principle of the equality of interests does not imply that animals and humans will receive the same treatment. Singer's capacities argument therefore has some drawbacks since it pertains to a cognitive ontology that goes hand in hand with hierarchical and elitist representations drawn from an archetype or a

model of normality, which explains that the beings who are "most like us" will have more interests, whereas the persons suffering from cognitive impairments and some animals with whom we do not have any relation have less to lose. However, it highlights something essential: moral consideration and thus respect toward animals does not necessarily mean that they will be granted some rights (Cavalieri and Singer 1993).

Furthermore, the relevance of Singer's approach to ethics lies in the assertion that once we place some beings outside the sphere of our moral consideration, cruelty to these beings is predictable. There is no way of speaking of animal welfare since we continue to draw a line between the members of our species, who deserve respect, and the others, who do not count. Moral progress lies in the extension of our moral consideration to other sentient beings, whose life is as important for them as ours is for each of us. When we come to include animals in the sphere of our moral consideration, we can no longer accept to rear them for food, since meat is nowadays a substitutable pleasure and, as Plutarch said, it is neither necessary nor natural to people who can eat fruits and vegetables and find other sources of protein than the flesh of another living being.

Animal ethics therefore means that the starting point for some changes in our lifestyles as well as in the production of food is the individual, since he/she becomes aware of the moral status of animals. Although the chances of persuading all the persons worldwide to abandon animal products may be remote, as Singer himself acknowledges, the animal question has entered the public debate (Singer 2006). Many philosophers involved in grounding a less anthropocentric or chauvinist ethics but also consumers, even when they are not prone to adopt a vegan lifestyle, want to know the origin of the animal products they buy, and some of them try to replace meat, because animal welfare has become an ethical issue for them or because they understand that industrialized factories have an environmental cost and generate hazards to human health (epizootic diseases, cancer, and so forth).

Regan's Rights-Based Approach: The Subject of a Life

Regan stands for the abolitionist approach to animal ethics. However, his contribution to such field is not only due to his refusal of any reformism. To be sure, he rejects any strategy trying to improve the welfare of animals used in farming: "animal rights require empty cages, not larger cages," as he says (Regan 2004). Individuals who experience life and have perception, memory, desire, belief, self-esteem, intention, and a sense of the future are holders of fundamental rights. To be the subject of a life is the criterion for moral worth in such a non-speciesist theory, which also advocates the inclusion of any individual as possessing fundamental rights (Regan 1983).

Thus, for Regan, some nonhuman animals and only some human beings are holders of such rights that are considered, as Dworkin said, as trump cards, that is to say, their basic rights are to be protected. The utilitarian approach, which leads to tolerate animal experimentation for the benefit of a large number of human beings or even animals, is no longer relevant in Regan's animal ethics. Good ends do not justify the exploitation of animals, whose inherent value is assessed.

Any subject of a life has the prima facie right of individuals not to be harmed and killed. Regan's theory, which implies that some animals have negative rights and that we have the obligation to guarantee their inviolability, is interesting because it deeply puts into question some traditional beliefs and cultural habits that draw a line between those whom "thou shall not kill" and the others. Once individual rights rest upon the capacity of an individual to be the subject of a life, killing an animal can no longer be so easily distinguished from murder. Regan's approach invites us to ground human rights on the individual sentient being who has a subjective experience of life, even if he/she does not have a philosophy and cannot take part in deliberative democracy as framed in Rawls or Habermas. This makes a difference in the human

rights theory that will lead to more comprehensive developments, as seen in *Zoopolis* by Kymlicka and Donaldson.

To be sure, there is no consensus that the use of animals for food or research is morally reprehensible. The controversy is particularly important when we opposed the rights-based approach in animal ethics and those who assess that the pro-animal use does not raise any ethical issues. However, even if one accepts Stephen Schiffer's view that biological evolutionary offers a sound explanation for the validity of animal modeling in human disease, it is necessary to provide a metaphysical foundation in order to justify that some sentient beings be sacrificed for the good of other beings and for the sake of science (Schiffer 2012). We then come back to a utilitarian approach of the animal question, and the answer depends on our speciesist or anti-speciesist convictions.

Moreover, the theological ordering of animal and human that can be mentioned to ground man's superiority upon animals and enable us to use the latter for food and research is fragile. Not only does the *Genesis* advocate the image of man as a steward of the creation or even as a member of a biotic citizenship he shares with the other beings and with nature, as B. Callicott put it, but there is also Francis of Assisi for whom God's glory requires the respect for all creatures (Callicott 1999). Be that as it may, it seems that any attempt to ground animal experimentation upon metaphysical reasons does not succeed. The only justification for animal experimentation is that men and even animals may benefit from the progress of science that it makes possible. The point, for those who refuse the rights-based approach and its absolute anti-speciesism, is then to show respect toward animals during the experimentation. This leads to the guidelines that are at the core of the ethics of animal experimentation: *reduce*, *refine*, and *replace*.

It is because there is no way of overcoming such opposition between anti-speciesism and the pro-animal use that the animal ethics has entered another stage of its history, drawing a path that travels from ethics to justice toward animals. This shift implies a further inquiry into the animal-rights debate, but it also suggests that the focus be less on the legal status of animals than on the foundations of our ethics and politics that the animal question helps us to critically examine.

Justice Toward Animals

The authors of *Zoopolis: A Political Theory of Animal Rights* contend that animals have negative rights, but they abandon the capacities arguments and the cognitive ontology underpinning them (Kymlicka and Donaldson 2011). Whereas the interpretation of subjectivity as a capacity or a power drives into excluding some animals and also the human beings who are suffering from severe cognitive impairments, they equate selfhood with vulnerability. This reinterpreting of Bentham's criteria for ethics goes hand in hand with their effort to sort out political theory and even political liberalism from the intellectualist framework that explained why disabled persons were the recipients of justice but could not take part in collective decisions (Nussbaum 2006). Following the insights of some researchers who have reconfigured autonomy to make it relevant in the case of dependent agents, they provide a political theory in which the interests of animals can be included in our policies.

Moreover, they give content to the concrete obligations we have toward them. These obligations, which enable them to speak of positive rights for animals, are drawn from the relations we have with them. Wild animals that have their own societies and do not want to live with us do not have the same needs or the same rights as domesticated animals that are dependent on us. Lastly, we do not have the same obligations toward liminal animals, such as mice or foxes, which colonized our gardens without our inviting them at home, but it does not enable us to deny them the right to exist. There is a duty to promote the circumstances of justice, which make the killing of an animal an exception, Kymlicka and Donaldson said, referring to paragraph 22 of Rawls' *Theory of Justice*.

The core notion of such theory is the notion of *zoopolis*, which was first coined by Jennifer Wolch to design the coexistence of human beings and animals in urban areas. In Kymlicka and Donaldson, this word suggests that the interests of nonhuman animals are to be integrated in the definition of the common good. This means that we have to take into account the interests of animals in our policies since we share with them the resources, the lands, the sky, and so forth. Our politics is no longer to be considered as if it only concerned human beings and nations. Our politics is a cosmopolitics, because we are always dealing with nature and natural elements that make us live or breathe, and it is also a *zoopolis*, a community in which the different interests of other beings have to be taken into account.

This way of highlighting the political dimension of the animal question implies that our relations with animals are a matter of justice and not only of morality (Pelluchon 2011, 2015). Far from reducing the justice toward animals to a rights-based approach, such inquiry requires our reassessing the main ethical, legal, and ontological categories that are the framework of our relations to animals but also of our relations to the others in general. Animal ethics is no longer a specialized discipline: although the animal question calls for an examination of all the pressing animal issues, the point of departure of the reflection is less the moral status of other living beings than our way of understanding them and our relations with them.

The question of who we are is at stake in such an approach, which inherits the reference to the key concept of sentience from animal ethics. The way we treat animals is a mirror in which human beings look at themselves. The awareness of the violence we impose upon other beings and which also refers to the lines we draw between humans and animals, excluding the latter from our moral community and operating on the basis of dichotomies (human/animal, mind/body, nature/culture, freedom/instinct), stresses the strategic role of the animal question. The philosophers who are currently writing another chapter of animal studies borrow from the founding fathers of this field a pathocentric ethics and the insistence upon sentience. However, the two major concepts that aim at displacing the traditional moral frontiers, that is to say, vulnerability and responsibility, request the overcoming of the capacities argument we find in Singer and Regan.

Thinking Through the Animal Question

The animal question is an essential chapter of Derrida's deconstruction of the metaphysical tradition, which assimilates differences into sameness. Animal is a word that men have given themselves the right to give, in order to draw a line separating human and man and to ground the notion of the subject defined as an autonomous individual. The word "animot," which Derrida coined to show that ethics and politics are caught up in language, suggests that most philosophers, even those who advocate animal rights, reinstate the same hierarchy and reconstitute, in spite of their opposition to Descartes, a version of the rational Cartesian subject (Derrida 2008).

Animals, whose diversity is neglected, are deprived of the *logos*, even in Levinas, whose notion of the otherness of the other nonetheless inspired Derrida, who speaks of the individual animal as a wholly other. The description of his encounter with his cat in his bathroom, at the beginning of *The Animal That Therefore I Am*, aims at reversing the traditional trend. Whereas most philosophers continue to think that the subject is a first person who speaks and decides, Derrida, suggesting that there is somebody behind the fur and that the cat looking at him is not totally understandable, says that there is a call coming from the animal. The latter is the object of my responsibility, and animals also put us into question, asking us who we are.

As in Levinas, I am insofar as I answer the call of the other. I come after, that is to say that I follow the other who may be an animal. Moreover, the images of mistreatment to animals are also a trauma that haunts us and makes us aware of the necessity to critically examine the liberal framework upon which our

ethics and our politics rest. The violence we impose upon animals has something to do with the sacrificial structure of our civilization, Derrida says. He then speaks of carno-phallogocentrism in order to compare the reduction of animals to products with other forms of dominion encouraged by the discourse of the subject, which appears to be the discourse of the male (Derrida 1991).

This comparison between sexism and speciesism we find in Bentham and at the beginning of the animal movement will be further analyzed by feminist ethicists. As in Derrida, the main point is to overcome the dichotomies human/animal, man/woman, mind/body, nature/culture, and reason/affects, which characterize a dualist ontology. The insistence upon sensitivity is the starting point of such critique of dualism, but as in Derrida sentience ceases to be considered as a capacity or a power. It is rather viewed as a certain passivity that is constitutive of the self of any other. Vulnerability, which becomes the core category of such ethics and its underlying embodied ontology, means that human beings and animals are experiencing a "not being able," a non-power, and this sense of one's vulnerability before another being is the entry to ethics.

Responsibility does not make any sense, except for a being who is suffering in his or her flesh, except for a vulnerable person, Levinas said. Today's animal ethics insist upon the responsibility we have toward all the vulnerable beings. Even nature, whose frailty and finitude are acknowledged, has become the object of our responsibility. This focus on vulnerability, which does not mean that animals are always frail creatures, pertains to an ontology wherein the corporality of the subject is all-important. The mortality that belongs to the finitude of life, the needs we have as embodied beings, calls for an ethics that exceeds any calculation and rules (Pelluchon 2015).

Virtue ethics is an approach that describes and encourages the moral traits that make us feel responsible in our daily life as well as in our social and political commitments and that enable us to be open to the other – including the wholly other which is the animal. It plays an important role in animal ethics in promoting a nondiscriminatory ethics and in reinstating compassion in justice. As both Carol Adams and Derrida said, our violence toward animals is a war on compassion (Adams and Donovan, 1995). It calls for an examination of the place of compassion in justice. Thinking through the animal question is thus an opportunity to reinvigorate ethics and to move toward a more comprehensive, if not holistic, approach of justice toward both human beings and animals.

Conclusion

Animal ethics has become an important academic field and has contributed to make the animal question enter the public sphere, at least in Western countries. First focused on the moral status of nonhuman beings and involved in the denunciation of mistreatments to animals in factories-farms and other human activities, the pathocentric utilitarian ethics of Singer and the rights-based approach of Regan were decisive to promote an alternative to anthropocentric ethics. Pointing out the speciesism that justifies the subjection of billions of animals, they have made sentience, not reason, the decisive criterion for moral worth and provided some guidelines to act in conformity with such ethics that grants animals moral consideration.

In doing so, they paved the way to a second wave of animal ethicists, who put into question the cognitive ontology underlying the capacities arguments both Singer and Regan referred to. With the violence toward animals being viewed as the result of a dualist ontology or a tradition based on dichotomies between human and animal, man and woman, nature and culture, and mind and body, many philosophers involved in animal studies contend that thinking through the animal question may be the opportunity not only to excavate the metaphysical prejudices of humanism but also to understand better who we are, promoting a post-humanist way of thinking or another humanism. The latter revolves

around taking into account our common vulnerability with other beings, and it goes hand in hand with an effort to promote more justice toward the others, be they humans or animals. This strategic dimension of the animal question explains why animal studies are nowadays characterized by more comprehensive, interdisciplinary approaches, which also benefit from the diversity of the cultural contexts from which their main representatives come.

Cross-References

- ► Animal Research
- ► Animal Rights
- ► Animal Welfare
- ► Anthropocentrism
- ► Applied Ethics
- **▶** Biodiversity
- ► Cloning: Animal
- **▶** Compassion
- **►** Empathy
- **▶** Ethicist
- ► Food Ethics
- ▶ Justice: Theories of
- ► Moral Status
- ▶ Pain
- ► Research: Animals
- ► Research: Interspecies
- **►** Suffering
- ▶ Utilitarianism
- **▶** Veterinary Ethics
- **▶** Virtue Ethics
- **▶** Vivisection
- ► Vulnerability
- ► Xenotransplantation
- **►** Zoocentrism

References

- Adams, C. J., & Donovan, J. (Eds.). (1995). *Animals & women: Feminist theoretical explorations*. Durham/London: Duke University Press.
- Armstrong, S. J., & Botzler, R. G. (Eds.). (2008). *The animal ethics reader*. London/New York: Routledge.
- Bentham, J. (1968). Principles of morals and legislation. New York: Prometheus Books.
- Callicott, J. B. (1999). Genesis and John Muir. In J. B. Callicott (Ed.), *Beyond the land ethic: Essays in the environmental philosophy*. Albany: Suny Press.
- Calorco, M. (2008). Zoographies: The question of the animal from Heidegger to Derrida. New York: Columbia University Press.

- Cavalieri, P., & Singer, P. (Eds.). (1993). *The great ape project: Equality beyond humanity*. New York: St Martin's Griffin.
- Derrida, J. (1991). Eating well or the calculation of the subject: An interview with Jacques Derrida (trans: Connor, P., & Ronnell, A.). In E. Cadava, P. Connor, & J.-L. Nancy (Eds.), *Who comes after the subject?* (pp. 96–119). London: Routledge.
- Derrida, J. (2008). *The animal that therefore I am* (trans: Wills, D.). New York: Fordham University Press Derrida, J., & Roudinesco, E. (2004). Violence against animals (trans: Fort, J.). In *For what tomorrow?* (pp. 62–76). Standford: Standford University Press.
- Kymlicka, W., & Donaldson, S. (2011). *Zoopolis. A political theory of animal right*. Oxford: Oxford University Press.
- Pelluchon, C. (2011). Eléments pour une éthique de la vulnérabilité. Les hommes, les animaux, la nature. Paris: Le Cerf.
- Pelluchon, C. (2015). Les Nourritures. Philosophie du corps politique. Paris: Le Seuil.
- Regan, T. (1983). The case for animal rights. Berkeley/Los Angeles: University of California Press.
- Regan, T. (2004). Empty cages: Facing the challenge of animal rights. Lanham: Rowman & Littlefield.
- Schiffer, S. P. (2012). The evolutionary basis for animal research. In J. R. Garrett (Ed.), *The ethics of animal research: Exploring the controversy*. Cambridge: MIT Press.
- Singer, P. (Ed.). (2006). In defense of animals: The second wave. Oxford: Blackwell.
- Singer, P. (2009). *Animal liberation* (4th ed.). New York/London: Harper-Collins.

Further Reading

Coetzee, J.-M. (1999). Elizabeth Costello. London: Vintage.

Francione, G. L. (1995). Animals, property, and the law. Philadelphia: Temple University Press.

MacCance, D. (2013). *Critical animal studies. An introduction*. Albany: State University of New York Press.

Nussbaum, M. C. (2006). Frontiers of justice: Disability, nationality, species membership. Cambridge/London: Belknap.