

illustrate different aspects of parasitic disease and natural resistance – and hence the possibilities for exploiting these by selective breeding programmes or vaccination strategies.

Part 3 has a similar approach for bacterial diseases, using ovine footrot, mastitis in cattle and *E. coli* and *Salmonella* diarrhoea in pigs as the examples.

The first chapter of Part 4 is principally concerned with genetic resistance to viral disease in poultry, the second to diseases caused by Maedi-Visna viruses in sheep and the third tackles the problems of transmissible spongiform encephalopathies.

Part 5 first examines the genetics of susceptibility in cattle and sheep and argues that as more genetic markers are identified there will be a possibility of improving disease resistance on a flock or herd basis by way of genetic marker traits. The next chapter considers production diseases in poultry and the opportunities to address these by means of breeding. It argues that conventional breeding methods will be the most important approach to improve disease resistance and that new genetically engineered improvements to resistance will only be used if both economically and psychologically justified. The chapter on genetic aspects of health and disease resistance in pigs concludes that health and productivity may be improved by the alteration of some polygenic traits – but that for the present there are no candidate genes for resistance to infectious diseases. The final chapter summarizes the requirements for claw and leg quality in relation to lameness in dairy cows and discusses the findings of an unfavourable genetic correlation between milk yield traits and foot problems.

For the most part this book is very readable, although this reviewer found the introductory editorial the least reader-friendly. Here there was a tendency to use jargon – but this may have been because the writers were attempting a summary of a topic which is vast and complex. For the most part, the editors and contributors are to be congratulated on producing a text that should stimulate ideas on how to develop alternative strategies for combating disease other than the use of chemicals or prophylactic drugs. It does not provide answers, rather it suggests approaches – but anything that will reduce diseases in a manner that will be commercially acceptable and, therefore, used, must improve the welfare of our livestock.

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Recognizing the Intrinsic Value of Animals: Beyond Animal Welfare

Edited by Marcel Dol, Martje Fentener Van Vlissingen, Soemini Kasanmoentalib, Thijs Visser and Hub Zwart (1999). Van Gorcum: Assen. 139pp. Paperback. Obtainable from the publishers, PO Box 43, 9400 AA Assen, The Netherlands (ISBN 9023234693). Price NLG50.00.

This is the second volume in the *Animals in Philosophy and Science* series, the aim of which is to present interdisciplinary research and discussion of animal issues. The present volume (henceforth, *RIVA*) is a selection of papers about the notion of intrinsic value and its role in the Dutch debate about man's duties towards animals. All nine papers have Dutch authors.

This century, in the Netherlands, as in a number of other European countries, there has been an ongoing political debate about the ethical limits to our use of animals in experimentation and food production etc. The notion that animals have intrinsic value was first reflected in Dutch legislation in 1981. Frans Brom, who is the author of the first essay in this collection, gives the following explanation (p 23):

...the term 'intrinsic' is chosen because it is the opposite to 'instrumental'. With 'intrinsic value' is designated that animals have a value independent from their 'instrumental' value to human beings. 'Intrinsic value' is used to express that animal[s] are not 'mere things'. This implies that for their own sake, their well being should be taken into consideration: we are obliged not to impose suffering upon them, or at least not without sufficient justification.

So far, it seems that when the Dutch speak about the intrinsic value of animals they just use another word for what people from other European countries mean when they speak about animal welfare. However, as is indicated in the subtitle of *RIVA – Beyond Animal Welfare* – there is more to it than just that. In the Dutch debate, ethicists have moved towards the view that our duties to animals involve more than due regard for animal welfare, ie more than preventing suffering or securing positive well-being. The move is expressed in a recent revision of the Dutch *Animal Health and Welfare Act*. According to this, usages of animal biotechnology must be assessed by an independent advisory committee, and assent should only be given if the following two criteria are fulfilled: '... if (1) there are no unacceptable consequences for the health and welfare of the animals and if (2) there are no ethical objections' (*RIVA*, p 22). Frans Brom explains that, according to the explanatory memorandum relating to the act, 'these two criteria are both expressions of the "intrinsic value" of the animals concerned'. Thus, there are ethical aspects of animal use over and above animal health and welfare. The main aim of *RIVA* is the attempt to define, discuss and apply this idea.

In another paper belonging to the first part of the volume, Bart Rutgers and Robert Heeger give examples of the sorts of interference with animals that can give rise to ethical concerns beyond animal welfare (p 43):

...animals may be subjected to interferences that do not lead to actual suffering, or have no significant effects on the animal's health or welfare, but which are nonetheless morally objectionable. Examples of such treatments include ear-cropping in dogs, removing body parts, such as tails and genitals (castration/sterilisation), administering growth and production enhancers, genetic modification (eg Herman, the Dutch transgenic bull) and cloning (eg Dolly the sheep). These examples show that there is a need for a normative criterion that reflects a sense of respect for animals beyond simply the care for their health and welfare.

Rutgers and Heeger try to develop a notion of what they call 'inherent worth' and 'respect for animal integrity' that will serve to set ethical limits to the use and manipulation of animals. They state three criteria that must be fulfilled if people are to act in a way that respects animal integrity: '... people should not interfere with the wholeness and completeness of animals, [and] should not deprive animals of the ability to maintain themselves independently in an environment suitable to the species'. In a clear and instructive way they try show how these criteria seem to be at work in a number of discussions concerning animal issues. It is stressed that infringements of animal integrity will sometimes be morally acceptable on their approach. There may be good moral grounds justifying action which, in the absence of such grounds, would be considered morally unacceptable. The issue is not about whether to weigh human interests against concern for animals. It is rather about what should be taken into consideration when an animal's predicament is seen from the point of view of that animal.

The two papers just considered clearly state that without a notion of intrinsic value, understood as going beyond animal welfare, we will not be able to articulate what is going on

in recent debates concerning the limits to what we may do to animals. However, a lot of questions remain to be answered. Some of the most pertinent of these questions are, indeed, formulated by the editors of *RIVA* in their introduction (p 9):

The phrase intrinsic value ... is borrowed from human ethics and has for a considerable period of time been exclusively applied to man. If the term is applied to animals, its meaning and import have to be reconsidered. Does it apply to individual animals, for example, or rather to species? Does it apply to domesticated animals in the same manner as it does to their wild relatives? What are the philosophical implications of the recognition of intrinsic value, and what are the practical consequences for our daily interaction with them?

Unfortunately, what appear to be the key contributions to *RIVA* do very little to help the reader with getting to grips with these questions. Many pages are spent on issues which are, at best, of limited relevance to the questions raised here. There are long discussions of the relationship between science and ethics and even longer discussions about whether or not values are part of the world (objective) or in some way imposed by valuers (subjective). Furthermore, some of these discussions (notably that of Albert W Musschenga) are conducted in an academic style that will be followed only with difficulty by a substantial number of the intended readers: that is, 'researchers in the relevant disciplines, advisors on public policies, administrators, animal ethicists, and the general public interested in the academic analysis of animal issues'.

A paper by Thijs Visser makes an honest attempt to apply the idea of animal integrity to issues raised by the development and use of transgenic animals. Unfortunately, he does not succeed in making himself understood. It is clear enough that Visser thinks that the genetic engineering of an animal is *prima facie* wrong because it violates animal integrity; but it is not clear what reasons he would give us for sharing this view. Henk Verhoog makes a praiseworthy attempt to summarize the discussions of the previous papers, but he has a tough task, since he is clearly limited by the quality of the material that he is trying to summarize.

Two short, but very interesting, papers at the end of the volume approach the issues from quite a different angle to that of the previous philosophical contributions. J Martje Fentener van Vlissingen describes the kinds of deliberations that go into ethical assessments of animal experimentation. It becomes clear that animal suffering and other aspects of animal welfare are only part of the picture when negative aspects and problems regarding animal experimentation are discussed. Besides integrity, notions such as dignity and the value of life seem to be relevant. In a more down to earth way, Tjard de Cock Buning has checked how much use the Dutch committees reviewing animal experimentation make of the concept of 'integrity'. The result is: not much. However, de Cock Buning remains convinced that the concept plays an important role in motivating the whole project of looking at animal use from an ethical perspective.

In brief, *RIVA* raises important issues. Unfortunately, it does not bring the discussion of these issues as far as might have been hoped. The discussion of animal integrity, and other attempts to grapple with issues in animal ethics using concepts which go beyond animal welfare, are clearly still in their infancy.

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