Nevertheless, she triumphs the stimulating properties of meat, suggesting that this was partly responsible for the imperialistic success of the English 'carnivores' over their largely vegetarian vassals in countries such as India. This contrasts dramatically with Ghandi's exhortation to Indians to avoid meat because of its provocation to the sins of the flesh (Ghandi 1927)! Butter and cheese are given similar accolade by Carson, although her Freudian suggestion that the making of butter portrays female sexual behaviour is strange. Yoghurt is condemned as a product of the 1960s trend to vegetarianism at the expense of the 'complete' protein in meat. The book later contains a detailed account of the battle between margarine and butter producers in the USA, but there is little on the relevance to social aspects of cattle keeping. She also describes the development of safety legislation in the USA, with an account of the concerns over carcinogenicity of ripening agents used to treat apples, which is of dubious relevance.

The book also considers changes in the management of dairy cows over the twentieth century, with nutritional developments being the major concern. At times the author shows that she is not a scientist (for example, rabbits are not ruminants!), and the move towards byproducts as feeds for cattle is exaggerated. The high yields of modern dairy cows prevent low-quality by-products being used extensively, and the description of widespread use of excreta in the diet is potentially misleading. Laurie Carson ends the book with a valuable insight into the conflict between cattle keepers and environmentalists, principally in the USA, but she also places it in a world context by considering the situation in Africa. "Cattle have become an environmental football, tossed between opposing interests" she asserts. She returns to her favourite theme — the battle of the sexes, with the femininity of cow-keeping struggling against the masculinity of wild animals. At the very end she offers her most astute observation — that the behaviour of cattle has actually not changed much following domestication and, rather than humans domesticating cattle, they actually domesticated us!

This affordable book should be read by anyone interested in the place of cattle in the world today. The narrative is lively and littered with interesting insights into the origin of words from cattle-based societies, such as bulldogs (dogs used to bring down cattle by grabbing their nose, lip or ear) and Wall Street (an area of New York where walls were erected to contain cattle). An index is provided, but the reference list belies the fact that the author's background-reading on scientific aspects was somewhat inadequate. However, the social history of cattle cultures is fascinating and holds many lessons for farmers and politicians alike.

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Unlocking the Cage: Science and the Case for Animal Rights

S M Wise (2002). Published by The Perseus Press, P O Box 317, Oxford OX2 9RU, UK. 322 pp. Paperback (ISBN 1 903985 34 X). Price £10.99.

Steven Wise is an American lawyer who specialises in animal rights law both by litigating cases and by teaching animal rights law. This book discusses the factors that impede the giving of legal rights to animals, examines the concepts of personhood and practical

autonomy and then assigns an autonomy value to a range of animal species. The author evaluates whether a range of species including his own son, honeybees, the family dog, parrots, elephants, dolphins, orangutans and gorillas are worthy of legal rights. The autonomy value is based on scientific evidence and observation. The book is written in the first person as a personal journey through a series of meetings, interviews and observations of various animals. It is an emotional book tempered by the author's recognition that it may be difficult to bestow rights on some species such as honeybees and dogs for a variety of social and economic reasons.

There are two introductory chapters that lay the foundation for the autonomy scale developed by the author. The scale, from 0 to 1, has four categories with humans valued at 1, placed in category 1, and deserving full legal rights. Animals that rank above 0.9 deserve basic legal rights because they have sufficient autonomy; those in this group include bonobos, gorillas, orangutans and dolphins. Animals in category 2 that rank above 0.7 probably deserve legal rights and include African grey parrots and African elephants; however, those in this same category but between 0.51 and 0.7, including dogs and honeybees, may not be sufficiently autonomous to deserve legal rights.

There are eight chapters discussing the scientific knowledge of the behaviour and cognitive abilities of these different species and how they fit on the scale. The chapters are well referenced and easily read. The third chapter on human development is particularly important in that it forms a framework upon which the discussions in the succeeding chapters are built. The final chapter is a summary on legal rights for non-human animals.

The book is well argued but there are always limitations in deciding the category to which an animal belongs. Thus, honeybees have highly developed communication skills, are quick learners, have good memories and are capable of rudimentary thinking but are thought by the author to be insufficiently autonomous to be granted legal rights. The physical, economic, political and psychological obstacles to granting honeybees legal rights are mentioned, but the suspicion lingers that the author wants to avoid the popular distain that might accompany the proposition that honeybees deserve legal rights.

In the second chapter, the problems that confront an advocate for legal rights for animals are categorised as physical, economic, political, religious, historical, legal and psychological. These are discussed efficiently, but the biological, environmental and animal welfare problems are not mentioned.

The book is well written with a few typographical errors and an occasional mistake, such as the statement that orangutans are indigenous to Africa. A figure at the end of the text illustrates the classification of animals very effectively.

This book is an excellent discussion about why some species of animal should or should not have legal rights. It is not about animal welfare. The biological and animal welfare outcomes of giving some species legal rights are not discussed, nor are the likely outcomes of the bestowing of rights to animals in category 2, such as elephants. A basic right is that of life, and making it illegal for humans to kill species such as elephants and dogs has serious implications for their welfare, for the environment and for human—animal relations.

This book is easily read, enjoyable and very interesting. It provides a good foundation for the general reader interested in animal rights. Much of the detail will be familiar to those well versed in the literature of animal behaviour, cognition and intelligence but these readers may not appreciate the legal perspective. I will keep it on my bookshelf and refer to it regularly.

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