guide to the views of such authorities as Aristotle, Hobbes, Kant and Mary Midgley on these issues. I particularly valued the analysis of Homeric codes of morality.

However, this chapter also reveals what comes across as a

certain superficiality, even naivety, of treatment in places. For example, Broom writes "It is my view that the concept of rights causes too many problems. All behaviour and laws should be based on the obligations of each person to act in an acceptable way towards each other person rather than to assert the rights of anyone. Hence it would be better if any public statement which refers to rights, such as national constitutions and laws, were rewritten to avoid the use of the term rights." There is a huge academic literature on whether rights exist (and what the question actually means, anyway) but is it really credible, in the foreseeable future, to envisage a country like the USA completely rewriting its constitution? I was surprised to read "Although many aspects of utilitarianism are helpful when deciding what is morally right (eg Feldman 1980), as a general approach it is flawed." Broom goes on to advance precisely those criticisms of utilitarianism that none other than John Stuart Mill used to defend it. Later on I came across "Pictures from Bibles and other Christian books often portray Paradise as a situation where the needs of all are provided for and all people are good. They may also show a child, a chick, a lamb and a lion resting together. This indicates a condemnation of normal interspecific biological relationships and perhaps a fear of man's biology." A fear of man's biology?

The chapter on the evolutionary basis of religion is, I am glad to say, one of the most successful. Broom treats the subject rigorously, though I am sure his conclusions will not please all those with a religious faith. The heart of it is summed up in the following paragraph. "If morality has evolved and morality is the core of religions then the basis for religions has evolved. All human societies have a propensity for religion because religion provides a valuable structure for the moral code which is valuable in all of those societies. The religious framework makes it easier for the average person, or perhaps more importantly the likely transgressors of moral codes, to understand what should and should not be done. Those societies which formed such a framework were more likely to remain stable because antisocial, disruptive actions would have been less likely to occur. They were also less likely to have uncooperative, unproductive individuals among their members."

To many readers with a religious faith I suspect this reasoning will lead them to hope that Broom would address the question of whether or not religious faith is valid. (The connections between how a thought evolved and whether or not that thought is valid are not straightforward.) However, Broom doesn't do this explicitly, though it gradually becomes clear that his view of religious faith would be held by many to be 'thinner' than that conventionally held by religious believers. Thus, his argument for the worth of prayer is that "Prayers are often communicated to other individuals and the conscience, which is affected by other

individuals, may guide the person who has spelt out the problem. Hence it may be said that God is hearing prayers and helping via the individual concerned and via others." This is rather like saying that the miracle of the feeding of the 5000 is that everyone shared their sandwiches. More generally, Broom concludes that "The great value of religion is as a structure supporting and mechanisms promoting moral codes" and that "God did not create the universe but started to have an impact after sentient beings had evolved and interacted significantly with one another." This conclusion follows logically from Broom's argument. Whether it becomes widely accepted among religious believers and others we shall see.

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Practical Lambing and Lamb Care, Third Edition

A Eales, J Small and C Macaldowie (2004). Published by Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK. 247 pp. Paperback (ISBN I 40511546 7). Price £24.99.

Good welfare is dependant — probably more than anything else — on good stockmanship. Whilst reading a book cannot, by itself, improve the practical skills of a stockperson, it is nevertheless essential to have a thorough understanding of why people are asked to do things in a certain way. Training in practical skills can be taught down on the farm — although, sadly, this is a neglected area. However, without knowledge of the supporting science, training is incomplete.

When the late Andy Eales and John Small published their first edition of this book (Practical Lambing, A Guide to Veterinary Care at Lambing published by Longman, 1986) it filled a real need for a handy lambing-time pocket book covering the essentials any competent shepherd should know, and it was successful in achieving its objectives. It was, for example, the first time the essentials of how to detect, treat and prevent hypothermia in lambs was spelled out in language easily understood by non-scientists and, in particular, shepherds and sheep farmers. The research carried out by these workers must have saved — and continues to save — the lives of thousands of lambs that previously would have perished because of a lack of understanding of what precisely to do. The second edition improved on the success of the first edition by including sections that added to the usefulness of the book and as a result became of interest to a wider readership.

This third edition — with the additional authorship of Colin Macaldowie — is even more comprehensive and informative, with significant updating of husbandry and health matters in several sections. The majority of losses of neonatal lambs are as a result of failures in management during the entire period of pregnancy and even prior to conception. The book takes account of this and covers, in

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chapter one, topics such as placental development, which can have a profound effect on lamb viability.

Considering the title and aim of the book, and the practical importance of the subject, the second chapter — which deals with lambing the ewe — is somewhat lacking in detail. For example, in the section on 'Specific Problems', twins are dealt with in one short sentence: "Twins present no specific problems providing you are sure which legs belong to which lamb." This may indeed be the case for most experienced shepherds or veterinary surgeons, but it is certainly not necessarily the case for newcomers to sheep keeping, of which there are an increasing number, many of whom are avid readers of books like this one! (There are, however, other texts, for example A Manual of Lambing Techniques by A Winter and C Hill, which deal with the subject in greater detail.)

Chapters three and four deal with problems in lambs and ewes respectively. This is done in alphabetical order rather than by presenting the conditions in groups according to the time they are most likely to occur — a problem that frequently confronts authors of texts of this nature. Some will find it useful when looking up specific conditions, whilst others may find it irritating when they cannot put a name to what they might be dealing with. However, the information is concise and well presented under the usual headings and deals with diseases confronting both new born and older lambs. It is a matter of opinion as to whether it would have been better to concentrate on the problems of very young lambs and to include more detail, rather than to cover the diseases of all ages of lambs in rather less detail.

In the notes on prolapse of the vagina and of the uterus in ewes, the authors describe a method of stitching to retain the replaced organs. Veterinary surgeons disagree amongst themselves on whether this is an appropriate technique to use in the first place, but most would probably agree that from the point of view of the welfare of the ewe it is best carried out by a veterinarian and under anaesthesia. Including stitching methodology may be likely to encourage some to attempt the technique — without training or anaesthesia — to the detriment of ewe welfare. Some will say that in today's difficult economic climate farmers will inevitably have to do more for themselves, but the line has to be drawn somewhere. In fairness, the authors do recommend that untrained people do not attempt the technique and should refer cases to their veterinary surgeon.

The chapter on abortion is most useful as these diseases are the cause of a substantial proportion of lamb losses. The information is mostly clear and concise and there are warnings regarding the dangers of human infection. However, occasional contradictory advice appears. For example, when discussing enzootic abortion in ewes (EAE) it is stated (p 129 and Table 5.2) that culling policy will depend on the size of the flock and number of ewes aborting, yet in the section on toxoplasmosis ('Future Flock Policy', p 134) it is stated that ewes that have aborted with EAE 'should most definitely be culled.' Again, in the text they state that ewes may get metritis following abortion due to EAE (p 128) yet Table 5.2 records no effect on the ewe following abortion.

The chapter on 'Prevention of Problems' (6) contains a useful section on the assessment of losses in lambs through record keeping and the lessons that can be learned for future lambings, with excellent examples from actual flock case records. There is also an excellent and well-balanced section on the special problems relating to organic systems. They draw attention to a number of restrictions imposed by the accreditation bodies that may compromise welfare. For example, the ludicrous (my word) requirement to double the withdrawal period applied to all authorised medicines, which might discourage some farmers from providing vital treatments in order to get their lambs away to slaughter and the preferred use of herbal or homeopathic remedies when, as the authors point out, there is little or no sound evidence for the efficacy of many of these treatments. The accreditation bodies would do well to read, mark, learn and act on the comments in this short section but somehow I doubt it judging by the illogicality of many of their rules in relation to animal health matters — in particular, their restrictions on the use of vaccines for the prevention of clostridial diseases, those most potent and deadly killers of baby lambs and ewes, often in a decidedly welfare-unfriendly manner.

Any new edition would not be complete without the inclusion of a chapter (7) on 'Techniques for Treating Newborn Lambs' — so helpful to shepherds, for however experienced they might be, there will be something to learn and put into practice from this section. It covers such subjects as: examination of lambs; feeding techniques for sickly animals; administration of drugs; warming of hypothermic lambs; fostering; castration and tailing, and navel dressing — all procedures that have welfare implications. It is crucially important for all shepherds, sheep farmers and sheep keepers to be thoroughly conversant with and skilled at performing these techniques in order to ensure the welfare of their charges. The days of warming lambs in the Aga are truly a thing of the past!

Following on nicely from this section is the final chapter (8) on 'Welfare at Lambing'. Rather much of this is taken up with welfare codes and legislation, but there is a most helpful section on the humane destruction of sick or injured animals - something which, I suspect, farmers are going to have to become more familiar with — an unpleasant task which must be carried out with skill, care and humanity.

A lambing checklist, useful addresses/websites and a glossary complete this valuable work of 247 pages. One would imagine that this fine book in its new edition would be of greatest interest to veterinary and agricultural students and postgraduates than maybe to practical farmers and shepherds. However, this would be a great pity as there is a mine of practical information for everyone with an interest in the welfare of sheep and particularly in keeping lambs alive. If the information within its covers were to be implemented on all sheep breeding enterprises, the welfare of the species would be significantly improved overnight. If you're reading this review you should have a copy in your library, farm office or in the lambing shed.

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References

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Zoo: A History of Zoological Gardens in the West

E Baratay and E Hardouin-Fugier (2004). Published by Reaktion Books Ltd, 79 Farringdon Road, London ECIM 3JU, UK. 400 pp. Paperback (ISBN I 86189 208 X). Price £19.95.

Many books about zoos have been written over the centuries but particularly in the past couple of decades. Animals are of perpetual interest to human beings and that interest is growing exponentially — about as fast as we are being educated about the exponential decline in species and populations. So it is surprising, if not startling, to read in Zoo: A History of Zoological Gardens in the West the myriad reasons why people are attracted by animals in captivity, not including the fact that species and populations are declining or, for that matter, that people possess more environmental and welfare consciousness. Conservation is mentioned, but only just. For a book which describes its purpose as "to reveal the perceptions and ambitions (of people) that gradually transformed them (zoos)", this is unforgivable. Animal welfare in zoos is covered historically, but the immense work creditable to veterinary doctors in zoos is not described sufficiently.

Conservation is defined in the book as zoos' attempts to become "increasingly perfect imitations of nature" as "zoos...endeavoured to become wildlife conservatories." The word 'conservatory' suggests something a rich man might have in his garden or on his estate, without any hint of the quantum leaps of zoos right into the wild, where zoos of all sizes through their associations or on their own, contribute masses of money, expertise and support for wild habitats and their denizens in a dynamic manner. The subsection which is apparently supposed to sum up conservation does so, making a great beginning with the title 'Noah's Impossible Ark'; again, a total misunderstanding of the evolution of consciousness of the drivers or activers of current zoo thinking at all levels. There are many mistakes in this chapter, such as the erroneous statement that the IUCN concerned itself with "legislation and the acquisition of reserves..." and that its programme for captive breeding (CBSG) was led by a zoo director (US Seal, excuse me!).

The world's zoo associations' conservation efforts have been described as their "own plans" for survival of endangered species, and we read that "zoo chiefs presented plans for preservation" with "their role so prominent that wildlife conservation has been essentially...seen in terms of captivity." The various zoo association members who run scientific conservation programmes would be interested to learn that "they make it a rule that the more a species is endangered in the short term, the larger a captive population should be and the faster it should be removed from the wild." This is only the tip of a mammoth iceberg of errors. This is very careless writing and more damning in its way than the worst diatribe by animal rights folks. It is the last few pages in the textual part of the book, and an embarrassment to the authors.

In regard to welfare, a potentially interesting but perplexing section ('A Public Quest') relates the attitudes of the general public and of protection societies in the mid-1940s in Europe, particularly France. It states that "Enthusiasm for zoos also found expression in wildlife magazines which proliferated in Europe after 1945", describing the journal's tone as evolving toward becoming "more naturalistic" and presenting the zoo as a "haven of peace and plenty"! It goes on to say that "protective associations shared this approach" and that its stand on zoos evolved from "indifferent" to "more favourable". The Society for the Protection of Animals (SPA) inspected zoos for living conditions, including transport practices (in 1931), and although SPA was satisfied with Vincennes (1934), it did not question the principle of captivity. The authors also report that between 1880 and 1925 there was tension between society members from the aristocracy and those of the middle class, with the middle class taking the "upper hand" and focusing on homeless dogs and vivisection instead of the "noble" horse and its trials. At the same time an anthropomorphic and individualised understanding of animals was adopted and also applied to zoos. It is not very easy for the reader to follow the historical jumping around (which gets much worse as this chapter progresses) or the rationale behind the points which are attempted or, for that matter, the points themselves.

By the 1960s (a big leap from the immediate previous historical reference, which was 1880–1900) visitors "made pointed remarks about the size of the cage" but still did not question the propriety of the zoo itself. The authors belabour this point so frequently that the reader is tempted toward the impression that this work is primarily a biased search for the exact point in which the "zoo" as a concept came under attack, instead of an academic exercise eg the historical treatise on zoos which it purports to be.

Another hurdle to the flow of dialogue and also a strained point is the leap between Europe and America, which is expressed as if there were a united and growing dissatisfaction in the two regions, each feeding somehow on the other, which was not the case or at least it was not proven to be the case by this volume.

Nevertheless, these facts and many others, such as Ted Reed's criticism of children's zoos and the inducement of

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