

supported by the changes which took place after domestication; this argument places a very interesting emphasis on neoteny, the retention of juvenile characteristics, as mutually advantageous to animals and humans. Unfortunately other aspects of the story which he tells are just as lacking in support as the one he criticizes, so he overstates his case. He implies that sheep, goats and cattle also 'chose' domestication but never explains how, and in fact says in passing that people who left optimal areas [where food was abundant] were perhaps 'forced to plant grains and husband livestock'.

The pot denigrates other kettles as well. Budiansky ridicules those who look back to a mythical time when noble savages lived in a balance of nature with wild animals – and who apparently hope to return to such a balance in the future. Yet he idealizes the relationship between farmer and farm animals to almost the same extent. Certainly there are many farmers – perhaps especially part-time farmers like himself – who do empathize with their animals and treat them well. However, he goes too far in implying that criticism of intensive farming is unfounded: he dismisses criticism of battery cages by saying that he has seen his barnyard hens peck each other too.

And yet, and yet . . . what matters most is attitude. The attitude of cooperation which Budiansky extols may not be as prevalent as he claims, but it is surely the attitude which needs to be encouraged. I do not believe in the extreme animal rights position of 'No use of animals'. I do believe that it is possible for domestic animals to have a gentle life and a quiet death, and that it is better for them to have such a life – with all the interactions with humans that are involved – than to have no life at all. This book, by challenging our preconceptions about domestication, encourages such a positive attitude. And this may then affect how people actually treat animals: the Covenant, in Budiansky's words, 'implies an obligation on our part to live up to our side of the bargain.'

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Alternatives to Animal Testing: New Ways in the Biomedical Sciences, Trends and Progress

Edited by C A Reinhardt (1994). VCH: Weinham, New York, Basel, Cambridge and Tokyo. 180pp. Paperback. Obtainable from the publishers, 8 Wellington Court, Cambridge CB1 1HZ, UK; or 220 East 23rd Street, New York, NY 10010-4606, USA (ISBN 3 527 30043 0). Price DM148.

This book is an account of a meeting held in Zurich in December 1992. When one saw the announcement of the meeting one's reaction was – not *another* conference on 'alternatives'. However, reading the list of participants showed a mixture of well-known names in the field together with 'new' names, indicating that the former would probably give worthwhile presentations stemming from their experience, and that the latter might produce new ideas, methods and techniques. In the event, the conference did fulfil this promise and was extremely useful. The editor, Dr Reinhardt, would have had an easier task had a book been the primary objective of the exercise rather than it being just the proceedings of a conference. He would then have had more control over the contributors. However, he is to be congratulated on assembling and editing an assortment of disparate papers into a coherent volume.

The contributions vary from the general and philosophical to the specific and scientific, leaving no stone unturned in the great river of information on alternatives now flowing from laboratories worldwide. Our knowledge of possible alternatives has increased extraordinarily since the days of, for example, Pomerat C M and Leake C D 1954, *Annals of the New York Academy of Sciences* 58: 1110-1128, 'Short term cultures for drug assays: general considerations'. It should not be forgotten, however, that these and other early works were written to demonstrate that the teachings were sound, scientific methods in their own right, and this was before the whole field was swamped by the concept of them solely as alternatives.

The meeting opened with a well-presented account of the development of the concept of alternatives by Professor Andrew Rowan, and continued with the descriptions of the attitudes of regulatory authorities in various countries. It is pleasing to find so many countries now concerning themselves with alternatives, and not only that but cooperating as shown by the presentation of Marafante and Balls.

There were only two papers on computers, I imagine that this number will increase in future meetings as I have the impression that the pharmaceutical industry realizes the possibilities of this approach in refining drug design. Further papers were specific examples of methods and applications, until the concluding one which describes attitudes of the Swiss regulatory authorities.

The book is well worth reading.

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Humane Slaughter – Taking Responsibility: An Open Learning Package

Produced and published by the Humane Slaughter Association (HSA) (1995). Trainee Workbook 90pp. Helpful Hints for Trainers 19pp. Colour VHS video 80 min. Obtainable from HSA, 34 Blanche Lane, South Mimms, Potters Bar, Herts EN6 3PA, UK (ISBN 1 871561 09 4). Price £35.

There have always been competent stockmen working to transport animals to the lairages of abattoirs and to look after them once there. These men have been trained by the example of their seniors and by their own experience over the years. There have always been competent slaughtermen, again trained by their seniors and by their own experience and in this case also examined for competence by the Local Authority. The skills of these men, stockmen and slaughtermen alike, have in general not been appreciated, perhaps because their image has been tarnished by a percentage of incompetent persons who have little understanding of animal psychology and needs. These persons, mainly of the macho variety, believe for example that it is proper practice to walk into a lairage before dawn, to switch on the lights and then to bang loudly on the metalwork and to whistle shrilly to wake the animals up. They then wonder why they spend the rest of the day in fractious and exhausting physical confrontation with the animals.

The recent reorganization of the meat inspection service has replaced several hundred local regulatory and advisory bodies with the single national Meat Hygiene Service (MHS). The Official Veterinary Surgeons employed by the MHS in each abattoir are already required