

use animals as research models for human medicine. Akhtar is here making a purely empirical claim that use of animals in biomedical research has actually stifled the development of novel medicines. Nevertheless, she succeeds in problematising the utility of animal models for biomedical experimentation and is persuasive that the issue is more of an open question than many realise.

Therefore, in judging whether Aysha Akhtar succeeds in her overall thesis that treating animals better is critical for human welfare, the jury must still be out. Whereas there may be sufficient evidence that trade in wild animals and industrial farming are detrimental to human welfare, the issue of biomedical experimentation requires further evidence and more deliberation. This provisional judgement might seem conservative but it should be viewed in the light of the considerable scope of this book. Indeed, Akhtar has succeeded in her principal goal, that public health should put a strong spotlight on the relationship between our treatment of animals and human welfare. *Animals and Public Health* can be recommended to a wide audience. Akhtar covers a tremendously diverse field, and for this reason at least I would be surprised if many did not learn something from this book. As Akhtar puts it: "If public health is concerned about public health, we must turn our attention to the elephant (and every other animal) in the room".

Steven P McCulloch
Royal Veterinary College, UK

In Defence of Dogs. Why Dogs Need Our Understanding

J Bradshaw (2011). Published by Penguin Books Ltd, 80 Strand, London WC2R 0RL, UK. 324 pages Hardback (ISBN 978-1-846-14295-6). Price £20.00.

Konrad Lorenz did it more than 60 years ago. He wrote an entertaining book about dogs. He mixed the latest scientific findings and personal anecdotes, his own opinions and the hypotheses of others about man's best friend (Lorenz 1950). John Bradshaw did the same in his 2011 book: *In Defence of Dogs: Why Dogs Need Our Understanding*. Bradshaw tackles important theoretical and practical topics such as the origin of dogs, domestication and dog training. Like Lorenz in his famous book: *Man Meets Dog* Bradshaw presents new findings and tells interesting anecdotes. For dog lovers this mixture between anecdotes and scientific findings is revealing and entertaining.

As a scientist I can enjoy this mixture as well. However, I would prefer to be able to grasp the difference between anecdotes, the author's own opinions and results from scientific studies. Scientific knowledge should be separated from stories and beliefs. Although there are notes for each chapter in which Bradshaw cites a few studies, it is often not clear when he is presenting his own opinion and when he is presenting approved assumption or conclusions from controlled experimental studies. But, in my view, to mark that difference is important — especially when one is talking about dogs. Everyone knows a dog; that is why there are so many claims about them. As Bradshaw points out, neither dog training nor the treatment of behavioural disorders in

dogs are regulated professions, so formal education is not required to become a 'dog expert'. Therefore, Bradshaw emphasises that it would be important to integrate scientific understanding of dogs into training methods, for example. But also in his book the difference between scientific and 'personal' understanding of dogs could have been clearer.

The dog is not a wolf. This is the main message from Bradshaw's book. It sounds simple and obvious, but it is really important to point that out. The dog has become another, a new species. For a long time science has treated the dog as merely a 'silly' wolf that had lost many of the abilities that its wild ancestor possessed. Dogs have smaller brains than wolves, and cannot hear or smell with the acuity of their wild ancestors. Lately, however, this view has changed. Scientists accepted that dogs have faced selection pressures that are just different from those of wolves. In a smart and detailed way Bradshaw argues against the prejudice that dogs are just silly tamed wolves. Over more than 10,000 years dogs were selected to live in the human environment. That means dogs have been under selection pressures from the human environment for a long time: animals that were able to best adapt to life with humans would reproduce the most. As a result, dogs now are perfectly adapted to live with us. Research from the previous 15 years has shown that indeed dogs have evolved new skills during domestication, especially in the domain of communication. And, of course, our modern dogs also have different needs compared to a wolf.

It is true that the wolf is the only ancestor of the domestic dog, and therefore its closest living relative. So it might sometimes be reasonable to explain dogs' behaviour by comparing them with their ancestor. However, in the common picture of the wolf, there is another big prejudice that Bradshaw is arguing against. Wolves are said to live in packs with a strong hierarchy. This is the case in a captive environment. However, according to recent observations, this is not the case in the wild. Wolves live in family groups with one breeding pair and its offspring. Thus, the common assumption is wrong, that an owner has to be careful that his or her dog always tries to climb to a higher position of the hierarchy in the human pack. Bradshaw explains in detail why it is not important to 'dominate' a dog. But he also emphasises that it is important to control a dog, and that a dog is not learning to behave well, simply 'because it is loved'. As the title of the book implies, it is important to understand dogs as dogs. They are neither wild wolves nor better humans. For treating them appropriately it is important to understand them, not only their origin, but also their newly evolved skills. Bradshaw explains this convincingly but also entertainingly. By reading this book, the reader indeed learns to understand the dog better, and this knowledge will help owners to treat their dogs in a more appropriate way.

The book is divided into eleven chapters and illustrated with meaningful drawings, tables and figures. In the opening chapters, Bradshaw describes where dogs came from and how they were domesticated. He presents the latest genetic and archaeological evidence about the origin of the dog. This is followed by a detailed chapter about dog training. Here, Bradshaw describes different views of trainers. But he also

points out which training methods are useful by using scientific findings. He then describes the development of puppies and emphasises the importance of the sensitive period. In the sixth chapter, Bradshaw raises the question of whether ‘your dog loves you’ and points out how difficult it is to answer this question, using scientific methods. He describes the unique bond between humans and dogs and also mentions the potential problems that arise from this relationship. For example, he describes what is called ‘separation distress’, the difficulty of the highly social species (the dog) being alone. In the following chapter, Bradshaw writes about the cognitive abilities of dogs, describing some of the latest studies. For example, he presents the study about the Border Collie, Rico who had been trained to retrieve toys based on their names. Rico was able to learn the names of the objects by fast mapping. Here, Bradshaw argues that Rico’s abilities can be explained by categorising toys as ‘mine’ and ‘not mine’, ignoring an important control condition which had ruled out that possibility (Kaminski *et al* 2004).

Bradshaw then writes about emotion of dogs and their excellent olfactory sense. To imagine how dogs perceive the world mainly through their nose is important to understand them. Bradshaw presents some interesting studies to shed light on this. Finally, he talks about the different breeds. He claims that “selective breeding might be the greatest threat to dog welfare”. He illustrates that with the example of how frustrating it must be for a collie to be unable to work and chase something. Bradshaw concludes that focused selection “for the specific qualities that make dogs rewarding companions” is needed. In the last chapter of the book he expresses the hope that dogs remain a significant part of human life.

In conclusion, Bradshaw, in his book, succeeds in making domestic dogs better understood. What makes this book valuable are the entertaining style and the exciting new findings about dogs. Those who prefer pure scientific knowledge without anecdotes might prefer *Dog Behavior, Evolution and Cognition* by Adam Miklosi (Miklosi 2007). Those impressed by Konrad Lorenz’s book *Man Meets Dog* will also enjoy Bradshaw’s book, gaining an understanding of the science surrounding man’s best friend in an entertaining way.

References

- Kaminski J, Call J and Fischer J** 2004 Word learning in a domestic dog: evidence for “fast mapping”. *Science* 304: 1682-1683
- Lorenz K** 1950 *So kam der Mensch auf den Hund*. Dr G. Borothen-Schoeler: Vienna, Austria. [Title translation: *Man Meets Dog*]
- Miklosi A** 2007 *Dog Behaviour, Evolution, and Cognition*. Oxford University Press: Oxford, UK

Juliane Bräuer

MPI EVAN, Leipzig, Germany

Colour Atlas of Diseases and Disorders of Cattle, Third Edition

RW Blowey and AD Weaver (2011). Published by Mosby Elsevier, 32 Jamestown Road, London NW1 7BY, UK. 267 pages Hardback (ISBN 978-0-7234-3602-7). Price £94.00.

The third edition of this book opens with the foreword to the first edition of 1991 by Professor Douglas Blood which is as

relevant now as it was then. The publication of good quality photographic illustrations in cattle textbooks has always been a challenge because, as Professor Blood argues, amateur photography often “lacks the quality an atlas demands”; for educational benefit they should “contain explicit details of specific signs” and “need to be models of photographic artistry, well lit, well composed, with good contrast”. The first edition by the same two authors achieved this in spades, and by expanding the number of illustrations from some 730 to almost 850 in this third edition these principles and the value of such a collection have both been enhanced. The approach of the original has also been maintained in that it has a global perspective with illustrations from over 100 contributors around the world, with American spelling again being adopted throughout (eg *A Color Atlas...*).

The chapters are well grouped to avoid duplication of similar clinical signs with short textual descriptions of the conditions, differential diagnoses (with cross reference) and potential management options. The book has been brought up to date by the inclusion of novel diseases such as bovine neonatal pancytopenia (bleeding calf syndrome) and major revisions of foot-and-mouth disease, bluetongue virus and bovine spongiform encephalopathy have been undertaken to reflect developing knowledge.

From a welfare perspective the book has value as an adjunct to other welfare texts by providing illustrative examples of conditions that may have welfare implications. The introduction to the comprehensive chapter on locomotor disorders of cattle states that “In addition to significant welfare implications, lameness is a major cause of economic loss, as affected animals lose weight rapidly, yields fall and, in protracted cases, fertility is affected”. This is the only referenced use of the word ‘welfare’, and also contextualises the approach to animal welfare of the whole book. It is a light touch with regard to wider discussion and puts the reader, or possibly the ‘viewer’, in a position where they may be aided in the identification of a condition with sufficient text to stimulate further investigation elsewhere.

That being said, and although they are not presented in this context, the book contains graphic examples of conditions that could be the result of compromised welfare and should be considered when evaluating the welfare status of cattle farms. The major production diseases of lameness, mastitis and metabolic conditions are dealt with well, and given the increasing identification and acceptance of specific cattle-based measures for good and bad welfare, this is a good reference point to aid identification. There are excellent sections on skin diseases of cattle (a source of chronic debilitation and welfare compromise) and traumatic and physical conditions, often indicative of unsuitable environments.

This book is not a welfare text for cattle, nor is it designed to be. It is a tool for recognition and identification of signs. It is *A Color Atlas of Diseases and Disorders of Cattle*; it does what it says on the tin, and it does it well.

Carl Padgett

Bay Vets Ltd, Lancaster, UK