

display unwanted behaviours, including relinquishment to shelters. In some countries very few cats leave a shelter, and many become a euthanasia statistic. The Royal Society for the Prevention of Cruelty to Animals (RSPCA) in Australia reported that in 2016–2017, 53,912 cats entered their shelters nationally. Twenty-seven percent were euthanased and of these 2,273 cats were euthanased for behavioural issues (RSPCA 2017). Scratching is one such unwanted behaviour and the author describes strategies for helping a cat learn where it is appropriate to scratch and where it is not. Of course, an alternative to training is to declaw the cat, a practice outlawed in many countries but sadly widely practiced in others. There is ample evidence to indicate that declawing cats can result in significant welfare consequences for cats, not just at the time of surgery but later too. Since 2003, the American Animal Hospital Association has been strongly opposed to the declawing of cats and supports veterinarians' efforts to educate cat owners and provide them with effective alternatives (AAHA 2015). The American Veterinary Medical Association does not discourage the procedure, although this position is currently under review (AVMA 2019).

The second part of the book provides extensive practical advice. The chapter for prospective cat owners describes everything that a prospective owner should know, but the issue is that very few people will have read this book before they obtain a kitten or rescue an adult cat. This is where the role of the veterinary profession or other professionals, eg those working in shelters or breeders, is important in ensuring that prospective owners are equipped with this knowledge before they take delivery of their new pet. Inevitably, the key aim is to prevent the establishment of behaviours in cats that will compromise their welfare, but where inappropriate behaviours are starting to be displayed it is important to address these quickly and effectively. This book provides excellent advice in both prevention and treatment strategies and should become a standard text for anyone working with cats. For the cat owner, understanding what underpins their pet's personality will go a long way towards ensuring a strong human-animal bond that should enrich the lives of both the owner and the cat. As for me, well I realise that much of the behaviour I have observed in cats throughout my career has now been rationalised and having had the opportunity to review this book I have added to my knowledge.

References

- AAHA: Declawing** 2015 <https://www.aaha.org/professional/resources/declawing.aspx>
- AVMA: Declawing of domestic cats** 2019 <https://www.avma.org/KB/Policies/Pages/Declawing-of-Domestic-Cats.aspx>
- RSPCA** 2017 *Australia National Statistics 2016–2017*. <https://www.rspca.org.au/sites/default/files/RSPCA%20Australia%20Annual%20Statistics%20final%202016-2017.pdf>

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Domestic Animal Behaviour for Veterinarians and Animal Scientists, Sixth Edition

KA Houpt (2018). Published by Wiley Blackwell, The Atrium, Chichester PO19 8SQ, UK. 448 pages Hardback (ISBN: 978-1-119-23280-3). Price £66.50.

This is the sixth edition of a text that has inspired generations of academics and practitioners (myself included), since the first edition was published in 1982. It is written by an equally inspirational individual, who continues to share so much of her experience with both young and experienced researchers; a career that spans first-hand experience of the famous Bar Harbor work of Scott and Fuller (1965) on the social behaviour of dogs, through an illustrious career as a pioneering female scientist ascending the ranks at Cornell University, to being a founding diplomat of the American College of Veterinary Behaviorists.

The text follows a reassuringly similar structure to previous editions, divided on this occasion into nine sections: Communication; Aggression and social structure; Biological rhythms and sleep and stereotypic behavior; Sexual behavior; Maternal behavior; Development of behavior; Learning; Ingestive behaviour: food and water intake; Behavioral genetics, over 275 pages, with a further 123 pages of references. A quick look at my third edition indicates that at around 2,600 references this edition has over 1,000 more than my twenty-year-old earlier one. This reflects the growth of research in the field and while I think that it is inevitable that such a well-cited, single author text can only grow by editing previous versions of the text, I did find the occasional editing error. For example, on page 258 in the discussion of impulsivity in dogs it says: "Impulsivity is a trait that may be linked to aggressiveness. Border Collies were more impulsive and aggressive than Labradors, if they were field rather than show strains, indicating different selective pressures on the dogs depending on their purpose (ref 661 [Fadel *et al* 2016]). Nevertheless, pit bulls, Akitas, and Jack Russell terriers ranked high in inter-dog aggression among the owners surveyed." However, the second statement, actually refers to an earlier and quite different study by Duffy *et al* (2008) that is in the next sentence. The way this was written it could lead to some misunderstanding and misattribution of research findings (I must admit I only spotted this as I am an author of the first study and didn't think it sounded right!). This is a minor point, and I believe small issues like this are more than outweighed by the wealth of references in the text (which, by being included as numerical superscripts, will make the text easier to read for many). Indeed, issues like this may help to ensure students go back to original sources if using the text as a point of reference, which is no bad thing. What is important is that they have the references to go to.

It is clear that this remains an authoritative text for anyone with a serious interest in quickly appreciating many aspects of animal behaviour. Indeed, even for

experienced academics this remains a great starting point when confronted with wanting to gain insight into areas that we may be less familiar with. To me, one of the enduring strengths of this text is that it provides a solid grounding in the basic behaviour of domestic species — it tells you what animals do, or at least what we know about what they do, without being heavy on underlying theoretical paradigms. A thorough understanding of what is the biological norm is essential but, in my opinion, sometimes overlooked in favour of a focus on what might be considered by many as the more exciting fixes for what we find problematic about animal behaviour. However, it is my belief we obtain a much deeper appreciation for understanding what is often referred to as abnormal, problematic or a disorder, through a grounding in basic behaviour and this is a real strength of this text. It is something few other texts deliver so clearly to the serious reader. Within certain aspects of the veterinary profession, and elsewhere, there is a growing trend to try to medicalise problem behaviour and, as a consequence, sometimes take it out of the realms of biological understanding in favour of a focus on pharmaceutical treatments. While this can have pragmatic value, it does raise concerns about the biological validity of the ideas generated as a result. This is something of growing concern within the human health field for many reasons (Moynihan *et al* 2002) and it is important that in relation to animal behaviour we do not make the same mistakes (Mills 2003, 2017). This book does not profess to be an animal welfare text, (indeed the terms, 'stress' and 'welfare' are not even in the index, nor cortisol mentioned much), but I believe the insight the reader will gain into the normal biology of the behaviour of animals from reading this text, will do more for their understanding of animal welfare than many supposed welfare texts. Like the best tutors, Professor Houpt does not dictate to the reader, but rather she presents them with the information to make their own informed decisions, nudging the reader to think about the issues and reflect on the implications of their own thoughts. This is done in this text, by providing thought-provoking insights, which she is uniquely able to do given her standing and experience in the field. For example, in the discussion of temperament tests, she mentions how no-one seems to have focused on developing any tests for identifying the positive attributes desired by many owners. I feel a rush of new experiments coming on!

The inclusion of additional resources in the form of MCQs and all the figures as PowerPoint slides is helpful to both the student and academic alike. I regularly use the chronological development charts in Chapter 6 in my teaching and it is great to now have author original copies. Although the text indicates there are also videos in the support site, I must confess to being a little disappointed at the number of these,

but this is something which can be easily rectified and I am sure will develop over time.

If I am to be further critical of what I consider to be an excellent text, then my main point would be the somewhat traditional classification of, and emphasis given to, some aspects of behaviour. For example, in the description of aggressive behaviour, some of the categories used refer to the context of behaviour (social aggression), some to its emotional basis (fear-induced aggression) and some to the motivation (predatory aggression). These are not mutually exclusive levels of categorisation and so are biologically inconsistent and this can, in my experience, be confusing to students and hinder scientific thinking on this issue. Likewise, the discussion of social behaviour, in my opinion, perhaps puts too much emphasis on dominance over the importance of social bonds. The collection of stereotypic behaviour within the chapter on biological rhythms and sleep may also seem strange to many. In the case of stereotypic behaviour, despite their widespread significance among farm animals, the emphasis is very much on horses, (indeed I think the author's passion for this species is quite clear throughout the text) with issues like tail-biting in pigs addressed within the chapter on aggression. These are minor issues and perhaps areas for discussion with students to whom I will continue to unhesitatingly recommend this text. In summary, over the years this title has attained an iconic status in the field and I believe this latest edition ensures that this status as a 'classic' is maintained.

References

- Duffy DL, Hsu Y and Serpell JA** 2008. Breed differences in canine aggression. *Applied Animal Behaviour Science* 114(3-4): 441-460. <https://doi.org/10.1016/j.applanim.2008.04.006>
- Fadel FR, Driscoll P, Pilot M, Wright H, Zulch H and Mills D** 2016 Differences in trait impulsivity indicate diversification of dog breeds into working and show lines. *Scientific Reports* 6: 22162. <https://doi.org/10.1038/srep22162>
- Houpt KA** 2018 *Domestic Animal Behavior for Veterinarians and Animal Scientists*. John Wiley & Sons: Chichester, UK
- Mills DS** 2003 Medical paradigms for the study of problem behaviour: a critical review. *Applied Animal Behaviour Science* 81(3): 265-277. [https://doi.org/10.1016/S0168-1591\(02\)00286-1](https://doi.org/10.1016/S0168-1591(02)00286-1)
- Mills DS** 2017 Perspectives on assessing the emotional behavior of animals with behavior problems. *Current Opinion in Behavioral Sciences* 16: 66-72. <https://doi.org/10.1016/j.cobeha.2017.04.002>
- Moynihan R, Heath I and Henry D** 2002 Selling sickness: the pharmaceutical industry and disease mongering. Commentary: Medicalisation of risk factors. *British Medical Journal* 324(7342): 886-891. <https://doi.org/10.1136/bmj.324.7342.886>
- Scott JP and Fuller JL** 1965 *Genetics and the Social Behavior of the Dog*. University of Chicago Press: Chicago, USA

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