

Observing Animal Behaviour: Design and Analysis of Quantitative Data

Marion Stamp Dawkins (2007). Published by Oxford University Press, Great Clarendon Street, Oxford OX2 6DP, UK. 166 pp Paperback (ISBN 978-0-19-856936-7). Price £27.50.

The study of animal behaviour provides one of the most useful windows into animal welfare. Observational studies, in particular, provide us with an understanding of normal behaviour in the animal's 'natural' habitat (which, for domestic animals, can include farms, laboratories, and households, as well as in the wild). Moreover, observational studies involve little disturbance to the system, providing practical benefits for the researcher and reducing the risk that the research itself can harm the welfare of the animals that are being studied. Unfortunately, observational approaches are typically considered the poor relative of experimental studies and, too often, researchers jump into a problem with an experiment, without first doing the observational work that allows for a proper understanding of the system and the factors that are most likely to respond to experimental manipulation.

Marian Stamp Dawkins' new book, *Observing Animal Behaviour*, bravely confronts this bias, providing powerful arguments for a resurgence in observational studies, as well as a manual for how to carry out good research using observational techniques. As with her other writing, this book is lucid and succinct. The easy prose makes Dawkins' arguments easy to follow, such that I would feel equally comfortable recommending the book to undergraduates attempting their first project on behaviour and to grizzled professionals looking for a refresher on the pitfalls and potential of observational techniques. In what might be the highest of compliments for a text on study design, I found this short book quite readable — in a few hours a reader unfamiliar with the topic is provided with an engaging overview and sense for how to design and analyse their own observational studies.

The book consists of 10 chapters, beginning with a call to arms on the value of observational studies. The first chapters provide an overview of how to do research, including the formulation of testable hypotheses and the principles of study design. Dawkins then goes on to the details, providing her insights on the choice of observational unit, sample size, dependent variables, sampling methods, and how these should be packaged in a research protocol. The book ends with advice on how to make projects work in real world settings, such as commercial farms and zoos, provides some direction on useful statistical approaches, and discusses the usefulness of new technologies used to automatically record behaviour, such as using GPS collars to provide continuous data on animal locations.

I do have some quibbles with Dawkins' book. In her (successful) attempt to keep the text accessible for undergraduates, Dawkins steers clear of all but the most basic discussion of statistics. She points readers to other texts

that deal with this topic, but I would have liked to see the design and the statistics better integrated. The wonderful writing deserved to be accompanied by beautiful illustrations, but Oxford University Press has used what I think are rather poorly reproduced black-and-white photographs and an odd collection of supporting visuals (such as a table with Beaufort wind scales). I only disagreed with the author on one substantial point. Dawkins argues (eg p 138) that well-designed observational studies can be just as useful as experimental work, but never addresses the ultimate limitation in this approach; observation alone can never fully distinguish cause from effect. I felt that her arguments in support of more observational work would have been more useful if tempered with some discussion of, at least, this most serious limitation of the approach. That said, these are only the most minor of complaints, and do little to diminish this excellent book.

In summary, *Observing Animal Behaviour* provides a wonderful introduction to the science of conducting observational research. I heartily recommend this book to anyone embarking on new research using behaviour to understand animal welfare.

Daniel M Weary

Animal Welfare Program, The University of British Columbia, USA

Welfare Aspects of the Long-Distance Transportation of Animals: Veterinaria Italiana, Volume 44(1), January-March 2008

Edited by DB Adams, PM Thornber and G Murray (2008). Published by Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G Caporale" (IZS A&M), Campo Boario, 64100 Teramo, Italy. 288 pp Paperback (ISBN 88-9017-258-4). Price €50. www.izs.it/vet_italiana

Veterinaria Italiana is a quarterly journal devoted to veterinary public health, veterinary science and medicine. This volume, which is in monograph format, is wholly devoted to providing material, based on practical experience, relating to improving the conditions under which animals (primarily farmed livestock but including horses and zoo animals) are transported. It is an important contribution that deserves to be widely read, and its lessons put into practice. The volume has come about as a result of the formulation by the World Organisation for Animal Health (Office Internationale des Épizooties: OIE) of its IVth Strategic Plan in which animal welfare is identified as a key issue.

There are 27 chapters, with a total of 54 authors from 13 countries. The very practical nature of the work may be inferred from the observation that only 8 authors have a university affiliation.

After an overview chapter, there are sections on history, the views of 'civil society organisations', the development of public policy, quality management and its future direction, design and engineering of infrastructures, and the safety and welfare of animals in transport. The volume concludes with a section on training and education.

The editors make it clear that this is not a compendium of scientific knowledge. It is concerned primarily with policy formulation and a historical perspective is strongly in evidence.

This is a well-balanced and very valuable contribution that deserves to be widely read. For readers of *Animal Welfare*, one of the most noteworthy aspects of the volume may prove to be the bringing together of the welfare aspects of transport, and quality assurance (QA) concepts and procedures. Industries, especially those in the food chain, are conversant with QA schemes and protocols, and researchers in animal welfare might well find it productive to orient their research in such a way that QA recommendations are easily derived from their scientific results. Educators wishing to set scientific results in context will also find it a most useful text.

The quality of the editing and production of this volume is excellent. The illustrations are well-chosen, reference lists are very thoroughly organised and the format makes it very easy to use.

Stephen JG Hall
Department of Biological Sciences,
University of Lincoln, UK

Sustainable Food Production

Edited by W Zollitsch, C Winckler, S Waiblinger and A Haslberger (2007). Published by Wageningen Academic Publishers, PO Box 220, NL-6700, AE Wageningen, The Netherlands. 550 pp Paperback (ISBN 978-90-8686-046-3). Price €59, US\$79.

Does nature have an intrinsic value? Do animals? How do we know when animals are happy — can we know? What do farmers think and do their opinions matter? What is a sustainable farming system and (how) does animal welfare fit in? Is sustainability itself a moral framework or is it part of a broader set of values? Where do organic farming and GM fit into all this? Does science yield ‘truth’ or is truth itself a socially-negotiated construct?

These are just a few of the questions explored in this volume, a collection of paper contributions to the Seventh Congress of the European Society for Agricultural and Food Ethics held in Vienna last year. For readers working in the fields of animal welfare and agricultural and food ethics — and it is this readership that the book is aimed at — many of the themes explored will be familiar and those they engage with on a daily basis. That said, the papers (nearly ninety of them) span a spectrum of approaches and different readers are bound to find new angles or insights.

The collection is divided into fifteen thematic sections or parts. These range from sections that are highly conceptual, with papers focused on exploring basic ethical values underlying our relationship with and approach to nature and to animals, to those that are more practically-oriented; there are papers that, for example, discuss ways of measuring animal welfare, review the effectiveness of different practices or technologies (such as automatic milking), investigate the legislative context, examine different stakeholder perspectives and highlight practical attempts at

achieving ‘sustainability’ and/or welfare. There are also sections on genetic modification, both of plants and animals, on issues relating to sustainable disease control, and on nature conservation and ethics.

There were some interesting discussions of the core values underlying organic farming and the extent to which these values are made manifest in actual farming practices. There are also explorations of the high value the organic movement places on ‘naturalness’ and what the implications (both positive and negative) might be for sustainability and animal welfare. Several contributors are concerned that when organic systems expand and enter the commercial mainstream they are at risk of losing grip of their core values, and the organic ethos is reduced to matters of compliance with regulations. While these discussions were interesting, I found them frustratingly theoretical and abstract; I would have liked some comparative analysis of specific farms.

Farmer perspectives are also given a voice here in a couple of fascinating papers exploring attitudes to animal welfare. One, (de Lauwere *et al*) reports on interviews with actual farmers (a practical approach that in my view makes all the difference); what emerges is the range of different views held by those so intimately connected with livestock — from farmers concerned only with meeting ‘minimum standards’ to those whose practices are governed by a sense of the intrinsic value of an animal. Most interesting (and perhaps ethically paradoxical) are those who concurrently practice two systems of agriculture on the same farm, with one herd reared to organic or higher welfare standards and the other intensively. Another paper, (Vanhonacker *et al*) finds differences in the importance ascribed to ‘naturalness’ between producers and consumers of animal products, with consumers placing a far higher value on this aspect of welfare.

There are a couple of papers that deal with technology (in its broadest sense, including breeding) and its implications for animal welfare. For example, Huetinck and Driessen note that technology can change the welfare agenda: “A notion such as ‘naturalness’ loses its seemingly solid ground on which to found arguments, for instance when breeding is used to change the welfare requirements of livestock animals. Issues can get reframed and agendas set with different priorities. What is contested and what taken for granted can shift. New experiences are generated and practical knowledge changes in character. And what is considered good practice together with the terms in which it is discussed can all become part of the innovation process”. All this begs the question of what is ‘morally good’ for animals and, indeed, for farming and whether one can know when something is good. Indeed, a number of papers try and get to grips with the moral underpinnings of our attitudes to various animal/sustainability questions — what we value in naturalness, what we mean by sustainability, what we understand ‘animal welfare’ to be. What emerges in many papers is the sense that it is necessary to understand ‘where people are coming from’, as it were. Concerns about, for example, BSE or GM are not just about the immediate issue in question, but about the framing world view that lies behind it and whether this is the morally right way to live and to