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.

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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.

https://doi.org/10.1017/S0962728600027974 Published online by Cambridge University Press