From Darwin to behaviourism

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Psychology and the minds of animals

ROBERT BOAKES

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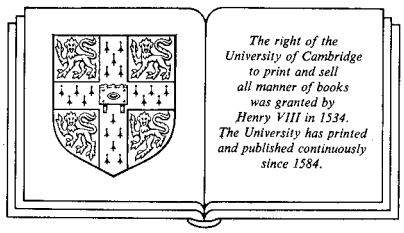

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To Mary, Stephen, Christopher and Leila

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Preface

My aim in this book has been to provide an account of the study of animal behaviour and of various ideas during the period from around 1870 to 1930 as to what kind of minds animals possess. I have emphasized those theories and discoveries which have most influenced the development of human psychology. 'Animal' is not used in the technical sense, but, following normal colloquial usage, refers to mammals other than human beings, birds, reptiles and amphibians. Except for a brief period at the beginning of this century the study of invertebrate behaviour developed independently and effectively had no influence on psychological thinking.

The detailed account begins around 1870 because this is when the behaviour of animals was first viewed within the context of a well-developed and widely accepted theory of evolution. From this point one can trace a continuous tradition which was often maintained by personal contact between contributors from different generations in a way that had not happened previously. My original plan had been to cover a full century. However the increasingly narrow concentration on conditioning that occurred after 1930 meant that it would not be possible to discuss the work of the next four decades without providing a full introduction to its theories and technical vocabulary. Up to this point it is feasible to attempt, as I have tried throughout the book, to describe what various animal psychologists did, using everyday English in a way that I hope will make the book comprehensible to a reader for whom experimental psychology is completely unknown.

There was another reason why 1930 seemed a good point at which to stop. A dramatic increase in the scale of animal psychology occurred around this time. It was therefore impossible to give subsequent developments the same comprehensive and detailed treatment that I found necessary for earlier studies.

My final comments concern the decisions that had to be made as to whether to concentrate on the work itself, on the people who had the ideas and put time and energy into their research, or on the intellectual and social context in which this took place. I found it difficult to maintain any kind of general rule about this. In asking myself such questions as 'Where did theory *A* come from?' 'Why did *X* choose to concentrate on *P* and not *Q*?' 'Why was idea, *R*, that had so much promise, not followed up?' and so on, I found that sometimes the answer was to be found mainly in the work itself, sometimes in what was happening in that person's life and sometimes in terms of very general changes in intellectual climate or in the institutions supporting such studies. Consequently the book switches from one level to another in a way that may seem unpredictable, but not, I hope, confusing.

In the past, histories of psychology have concentrated on general theories and large scale bodies of research, adding items of biographical information, usually of a respectful kind, concerning a few major figures. In general they have refrained from discussing such mundane, yet often crucial, questions as, for example, who paid for the animals, space, equipment and labour. Clearly such accounts provide a misleading view of science, both by ignoring such pragmatic factors and by undervaluing the contributions made by the many productive researchers who failed to acquire the status of a hero in psychology's list of honour. The past few years have seen the entrance of professional historians of science into this area and they have begun to unearth some fascinating archival material which bears on the various practical and political constraints that operated upon some of the

studies described in this book. I have been fortunate in being able to benefit from this work. However, to concentrate on such factors and give only a passing glance to the content of the theories and research that constitute a science is also a mistake. I hope that something else which will emerge from the following pages is that, when people have held strong beliefs about the nature of animals' minds and when these beliefs – or challenges by critics – have impelled them to leave the domain of words and find out what an animal does in some specific test, then very often the result has been a surprising one: they have discovered something that drastically changes their own beliefs and on some occasions such a discovery has had a profound effect on the way that a whole generation has viewed the human mind.