

Preface

Anyone who writes a book dealing with such fundamental themes as this one would be a fraud if he did not feel the need to apologize for his ignorance and temerity. Can it be right for one person to try to cover so many important topics? The result is bound to irritate those who really know about them and could mislead those who don't.

These apologies are made to warn, not to make excuses. I believe that the ideas expressed here are partly new and will be found useful. They are an attempt to show how with recent knowledge we can improve the way we think about ourselves. In particular we can see how the aims and purposes of our own lives are related to the operations of nature of which we are part. Biological facts, from genetics to neuropsychology, show that living things can properly be said to act in pursuit of particular aims. Each tries to achieve certain standards appropriate to its way of life. The result of this continual striving, choosing and deciding, through millions of years, has been a progressive accumulation of information about how best to live. Contrary to what is often said the facts of biology show both purpose and progress in life.

To understand human life we must look for the basis of its standards. We can find it in the operations of the brain by considering how all its millions of cells work together to produce the programs of our actions. This is not yet a very precise conception but it allows us to talk about the contributions of the various parts of the brain to the many human activities listed in the chapters of this book, whether practical, such as eating, or abstract, such as thinking.

Our brains, like those of any other species, allow us to learn those things that are appropriate to our way of life, which is social. A child comes into the world with a constitution pre-programmed to allow it to learn how to get on with other people. A main aim in this book has been to show how various parts of the brain work together to produce a unified operating system, centred on the model or hypothesis that the most important acts of human life are responses to other people. The concept of programs directed to this end can be useful to human biologists at all levels from physiology to sociology. It may seem at first to be too simple for detailed technical use, but it forces attention to the combined actions of millions of nerve cells. Its

simplicity is an advantage for the layman, who can understand something about how this mysterious organ his brain operates during his perceptions and actions and the varying moods of his inner life.

The way the concept of programs can be used is illustrated in the Glossary. Here I have re-defined familiar words such as 'knowledge' or 'thinking' in terms of *Programs of the brain*. The ideas behind the definitions may seem strange at first, as will other parts of the book. I believe they will prove useful.

This book is based on the Gifford Lectures given in 1975-7 in the University of Aberdeen. I am most grateful to the Vice-Chancellor and members of that University for the invitation, for the welcome that I found there, and for the stimulus from the audience and their questions. I am especially grateful to Professors George Dunnet, Fred Holliday and Vero Wynne-Edwards and to the Staff of the Department of Zoology, where the lectures were given.

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J.Z.Y.

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