ENGLISH LANGUAGE BOOK SOCIETY

# THE PSYCHOLOGY OF THINKING

Robert Thomson



W-PRICED TEXTBOOK

#### ADDITIONAL REFERENCES

#### CHAPTER I

'Intelligence' by Pierre Oléron, Jean Piaget, B. Inhelder and P. Gréco. Experimental Psychology, Vol. VII, ed. P. Fraisse and J. Piaget. London (Routledge & Kegan Paul), 1969.

CHAPTER 3 (p. 62)

Gagne, R. M. 'Problem Solving and Thinking'. Annual Review

of Psychology, 10, 1959.

Maier, N. R. F. 'Reasoning in Humans' (I to IV), in Journal of Comparative Psychology, 1930 and 1931; Psychological Review, 1940; and Journal of Experimental Psychology, 1945.

Ruger, H. 'The Psychology of Efficiency'. Archives of Psychology,

1910.

Taylor, D. W., and McNemar, O. W. 'Problem Solving and Thinking'. Annual Review of Psychology, 6, 1955.

CHAPTER 6 (p. 132)

Ruch, F. L. 'Adult Learning'. Psychological Bulletin, 1933. Welford, A. T. Ageing and Human Skill. London (Oxford University Press), 1958.

#### CHAPTER 10

Barron, Frank. Creative Person and Creative Process. New York (Holt, Rinehart & Winston), 1969.



Some other books published by Penguins are described on the following pages.

#### A DICTIONARY OF PSYCHOLOGY

#### James Drever

The technical vocabulary of psychology is not in itself an unduly large one, but the older subjects of anatomy and physiology border upon the psychological field and some knowledge of their terms is also necessary. Thus the technical vocabulary actually used by psychologists tends to be rather extensive.

It is the aim of this dictionary, revised in 1964 by Harvey Wallerstein, to give some help, not merely to the layman, but also to the student, in what has now become an important branch of contemporary science.

'It is commended with confidence as a document relevant not merely to the experimental psychology of former days, but to recent developments in psychometrics, social psychology, psychopathology, and industrial psychology' - Higher Education Journal

#### A Peregrine Book

#### THE CONCEPT OF MIND

#### Gilbert Ryle

Professor Ryle sets out to expose the myth of Descartes' doctrine of the separateness of mental and physical existences, an attitude still fundamental to much philosophical and psychological thinking today and based on an aversion to the mechanistic assumption that 'human nature differs only in degree of complexity from clockwork'. The influence of the idea of a 'ghost in the machine' is traced, explained, and combated in traditional theories of will, feeling, imagination, perception, and thought. The nature of knowledge is carefully analysed and a theory of mind emerges from which the Cartesian myth is dispelled and which does justice to our ordinary commonsense views about the workings of our own, and other people's, minds.

'This is probably one of the two or three most important and original works of general philosophy which have been published in England in the last twenty years... Professor Ryle writes with Aristotelian pregnancy, and almost every paragraph contains observations which require, and will certainly be given, thousands of words of discussion' – Stuart Hampshire in *Mind* 

'The reader will recognize before he is half-way through that this is a piece of philosophical writing in the highest class' – Spectator

Not for sale in the U.S.A.

#### THE PSYCHOLOGY OF STUDY

#### C. A. Mace

#### SECOND REVISED EDITION

Of its kind this little book is a classic. For this Pelican edition the author, a Professor of Psychology, has entirely re-written several sections and revised the remainder.

Briefly The Psychology of Study explains the mental processes by which we 'read, mark, learn, and inwardly digest' information of all kinds. It deals with perception, memorization, original thinking, motivation, and preparation for examinations.

In its earlier editions this is a book which has proved particularly useful to students. But the advice it contains is addressed to all learners – boys and girls at school, students at colleges, and even amateurs who support local literary, historical, or scientific societies.

At heart we all wish to learn. Professor Mace suggests ways in which we can direct this desire, so that it can act as a positive driving-force in our studies.

It could be extraordinarily useful to students of all ages' - Observer

'Remains a minor classic' - Times Literary Supplement

#### USES AND ABUSES OF PSYCHOLOGY

#### H. J. Eysenck

Psychology occupies a somewhat ambiguous place in the world today. Its findings are being widely applied in clinics, in industry, in education, and in the armed forces. At the same time, many intelligent people are critical of the alleged laws of human behaviour discovered by psychologists, psychiatrists, and psychoanalysts, and doubtful about the applicability of scientific methods to the study of human beings. In this book, a well-known psychologist has tried to strike a balance, to indicate to what extent the claims made for his science are justified, and to what extent they fail to have any factual basis. The discussion is very fully documented by references to the most important and relevant researches carried out in this country and abroad. Topics dealt with are the testing of intelligence, selection procedures in schools and universities, vocational guidance and occupational selection, psychotherapy and its effects, national differences, racial intolerance, Gallup surveys, industrial productivity, and many others. In each case, psychological findings are submitted to a searching criticism, and a clear distinction made between those uses of psychology where enough is known to support social action, and those abuses where personal opinions rather than experimentally demonstrated fact seem to be involved.

#### Also available

SENSE AND NONSENSE IN PSYCHOLOGY

KNOW YOUR OWN I.Q.

CHECK YOUR OWN I.Q.

FACT AND FICTION IN PSYCHOLOGY

#### THE PSYCHOLOGY OF SUPERSTITION

#### Gustav Jahoda

Is superstition merely a convenient tag for beliefs we do not share? Or is it a manifestation of basic human characteristics

prevailing in every culture including our own?

In this carefully documented book Professor Jahoda shows that superstition is not solely confined to the Dark Ages or to the poor and ignorant, but is an integral part of humanity, intimately tied up with our character and environment. In his own assessment of this complex human phenomenon, Jahoda stresses that superstition involves far more than avoiding ladders and touching wood. It shares with the magical inventions of childhood and the researches of science an attempt to explain and control an ever-changing world.

'His is the sort of straightforward study which parapsychology needs badly' - Scotsman

'What he presents to us is a critical review of the literature on superstition, drawing freely from ethnology, sociology, psychology, folklore, and, not least, the popular press' – The Times Literary Supplement

#### Also by Robert Thomson

#### THE PELICAN HISTORY OF PSYCHOLOGY

The Pelican History of Psychology is probably the most com-

prehensive history of the subject in print.

Too often other histories are anxiously concerned with philosophical concepts, confine themselves to the progress of basic experimental research, and stop short at the 1920s. Dr Thomson, on the other hand, extends his scope outside the main stream of theory, deals with ideas which are specifically psychological, and brings his history far enough forward to discuss the trends which have developed since 1945. His outline of the birth of psychology, in the early nineteenth century, of Darwin's impact, the achievements of the first generation of German, British, French, and American psychologists, and the major theories of Freud, Jung, and the Behaviourists, among others, is clear, logical, and authoritative: but his book extends beyond that.

The development of psychology in the years between 1918 and 1940 is traced by the author of *The Psychology of Thinking* in all its forms. Psychiatry, child psychology, industrial and social psychology, intelligence and personality testing are

among the branches he discusses historically.

With its wide coverage and full bibliography, this introductory history will appeal to students of psychology particularly: but it also provides the general reader with a sound and simple outline of the growth of a science which, in little over a century, has developed from a fringe activity to a central and potent study.

0276

#### PELICAN BOOKS

#### THE PSYCHOLOGY OF THINKING

Robert Thomson was born at Croft Spa, and has spent most of his time in the north-east of England. He was educated at the Royal Grammar School at Newcastle upon Tyne, and at University College, Oxford, where he studied modern history but changed to modern philosophy and psychology after five years' war service. In 1949 he joined the staff of Durham University, at first lecturing in philosophy, but since 1955 he has lectured in psychology both in the Durham Colleges and at King's College, Newcastle, in the University of Durham. He is now Senior Lecturer in psychology at Leicester University.

His fields of interest are the psychology of learning, personality study, and philosophical problems, especially those connected with psychology.

In collaboration with his colleagues, and friend, Dr W. Sluckin, he has written articles on cybernetics, and he is the author of *The Pelican History of Psychology* (1968).

He is married to Winifred Smith, a former teacher of English at Sheffield University. They have two daughters and a son.



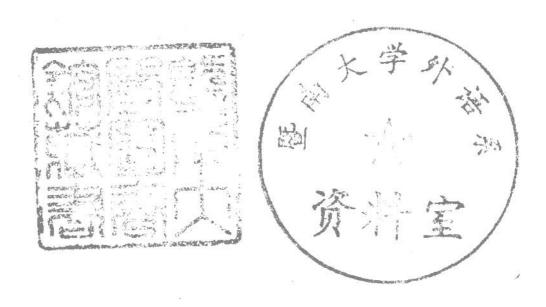
#### Some Other E.L.B.S. Low-priced Editions

NOTE - the abbreviation 'p' used below stands for New Pence

Cohen, J. M. &	The Penguin Dictionary of		
Cohen, M. J.		171P	3s. 6d.
Drever, J.	A Dictionary of Psychology		
	(Penguin)	10b	28. od.
Evans, Lord	A Short History of English		
	Literature (Penguin)	15P	3s. od.
French, F. G.	Teaching English as an		
	International Language		
	(Oxford University Press)	20p	4s. od.
Gowers, Sir E.	The Complete Plain Words		
	(Penguin)	12 1p	2s. 6d.
Halliday, M. A. K.,	The Linguistic Sciences and		
McIntosh, A. &	Language Teaching		
Strevens, P.	(Longman)	70p	14s. od.
Hughes, A. &	Education: Some Fundamenta	l	
Hughes, E. H.	Problems (Longman)	27p	5s. 6d.
Isaacs, A.	Introducing Science (Penguin)	10p	2s. od.
Laybourn, K. &	Teaching Science to the		
Bailey, C. H.	Ordinary Pupil (University	7	
77	of London Press)	45P	9s. od.
Maddox, H.	How to Study (Pan)	71P	13. 6d.
Morris, I.	The Art of Teaching English		
	as a Living Language		
C	(Macmillan)	гор	2s. od.
Orwell, G.	Animal Farm (Penguin)	71P	1s. 6d.
Owen, C. B.	Methods for Science		
7 A	Masters (Macmillan)	20p	4s. od.
Schonell, F. J.	The Psychology and		
	Teaching of Reading		
	(Oliver & Boyd)	25P	5s. od.
Schonell, F. J. &	Diagnostic and Attachment		
Schonell, F. E.	Testing (Oliver & Boyd)	30p	6s. od.
Singer, C.	A Short History of		
	Scientific Ideas to 1900		
	(Oxford University Press)	25p	5s. od.
Smith, W. O. Lester	Education in Great Britain		¥
	(Oxford University Press)	18p	3s. 7d.
Uvarov, E. B.,	A Dictionary of Science		
Chapman, D. R. &	(Penguin)	rop	28. od.
Isaacs, A.		-	
Valentine, C. W.	Psychology and its Bearing		
(A)	on Education (Methuen)	42½p	8s. 6d.
*		SI HINTE	

The Psychology of The Rinks

ROBERT THOMSON





THE ENGLISH LANGUAGE BOOK SOCIETY

and

PENGUIN BOOKS

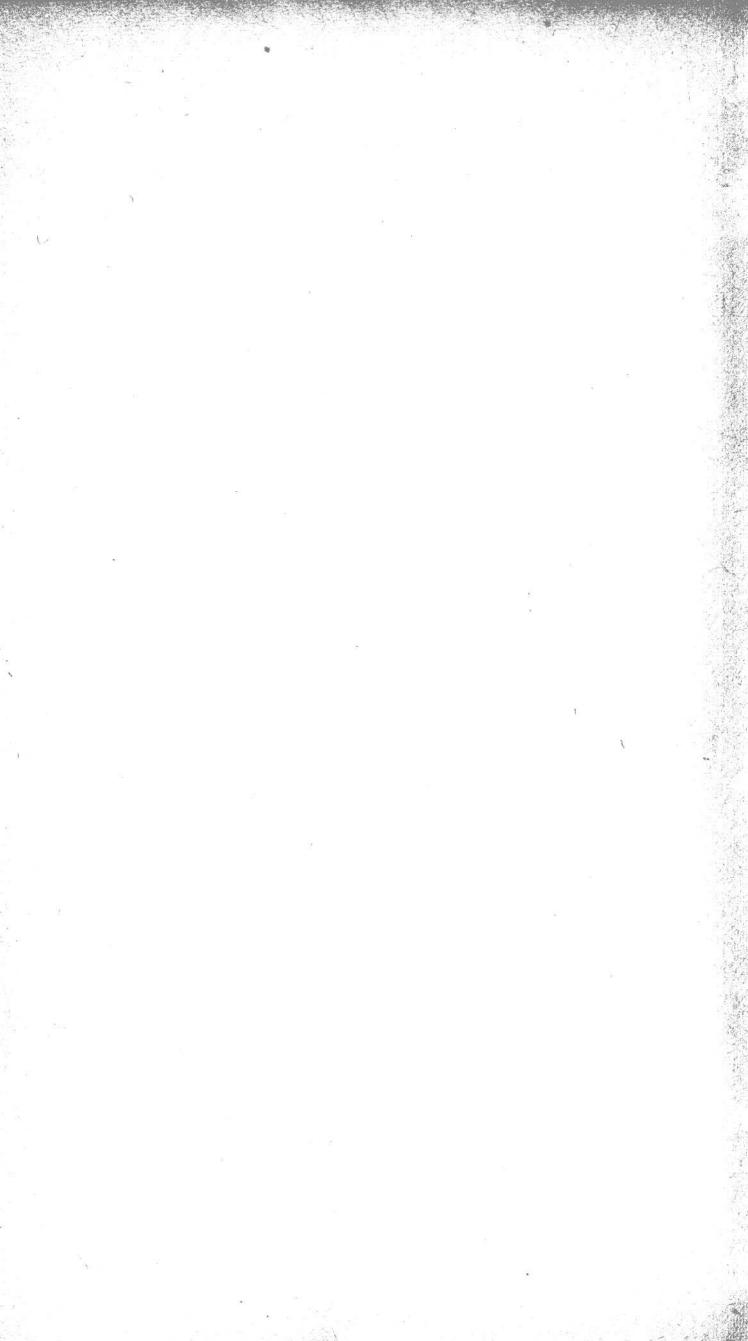
### First published 1939 Reprinted 1961, 1963, 1964, 1966, 1967, 1969, 1971 E.L.B.S. edition first published 1971

Copyright © Robert Thomson, 1959

Made and printed in Great Britain by Hazell Watson & Viney Ltd, Aylesbury, Bucks Set in Monotype Imprint

#### CONTENTS

	EDITORIAL FOREWORD	9
	ACKNOWLEDGEMENTS	10
1	What do we mean by 'Thinking'?	11
2	Problem-Solving Behaviour in Animals	30
3	Problem-Solving Behaviour in Human Beings	47
4	Concepts and their Attainment	63
5	Concept Formation in Children	88
6	Learning Operations	108
7	Transfer and Interference	133
8	The Dynamics of Thinking: Motivation and Thought	148
9	Language and Thought	164
10	Creative Thinking	183
11	What do we know about Thinking?	203
	INDEX	213
	ADDITIONAL REFERENCES	216



## To MY PARENTS my first book