

PERSONAL KNOWLEDGE

Towards a Post-Critical
Philosophy

by

MICHAEL POLANYI



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To
SIR THOMAS AND LADY TAYLOR

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PREFACE TO THE TORCHBOOK EDITION

THE enquiry of which this volume forms part started in 1939 with a review article on J. D. Bernal's *The Social Functions of Science*. I opposed his view, derived from Soviet Marxism, that the pursuit of science should be directed by the public authorities to serve the welfare of society. I held that the power of thought to seek the truth must be accepted as our guide, rather than be curbed to the service of material interests. A defence of intellectual freedom on such metaphysical grounds was no more acceptable to the dominant schools of Western philosophy than to the Marxists. Believing it to be both right and important, I set out in search of its justification.

Upon examining the grounds on which science is pursued, I found that it is determined at every stage by undefinable powers of thought. No rules can account for the way a good idea is produced for starting an enquiry; and there are no rules either for the verification or the refutation of a proposed solution of a problem. Rules widely current may be plausible enough, but scientific enquiry often proceeds and triumphs by contradicting them. For example, theories select facts for their own support and yet arrive at universally valid conclusions; theories start from assumptions which scientists accept on the authority of scientific opinion, yet on such dogmatic grounds discoveries are made that prove revolutionary.

The life of the scientific community consists in enforcing the tradition of science and assuring at the same time its continuous renewal. A dynamic free society lives as a whole in this way. It cultivates a system of traditional ideas which have the power of unlimited self-renewal. This point was reached in *Science, Faith and Society* (1946) and in my other writings of that period. The idea of an autonomous growth of thought in society was taking shape.

In the present volume (first published in 1958), I faced the task of justifying the holding of unproven traditional beliefs. I made an extensive survey of current fiduciary commitments—intrinsic to the intellectual and social life of modern man. Under the entry of "fiduciary program," the Index lists more than forty declarations of belief, scattered throughout the book. Many of these beliefs are not universally

held and all of them could conceivably be false; yet some such set of beliefs is clearly indispensable: the ideal of strict objectivism is absurd.

Any particular commitment can be challenged, but only on the grounds of a rival commitment. The only question is then, how a particular set of beliefs can be justified. Three-quarters of this book serves to introduce my answer, stated within a framework declared to be my own commitment. I claim that no more than such a responsible personal knowledge can be required of us.

Following this declaration, I outline a theory of biology within the logic of personal knowledge and a demonstration that life, thus conceived, offers us the spectacle of man in possession of personal knowledge emerging in the process of organic evolution.

But there is a parallel line of argument in the book which goes deeper and has shown greater potentialities for further development. In surveying the places where human knowledge rests on a belief, I have hit upon the fact that this fiduciary element is intrinsic to the tacit component of knowledge. Two distinctions arise here: the distinction between *tacit* and *explicit knowledge* and between *focal* and *subsidiary awareness*.

When we are relying on our awareness of something (A) for attending to something else (B), we are but subsidiarily aware of A. The thing B to which we are thus focally attending, is then the meaning of A. The focal object B is always identifiable, while things like A, of which we are subsidiarily aware, may be unidentifiable. The two kinds of awareness are mutually exclusive: when we switch our attention to something of which we have hitherto been subsidiarily aware, it loses its previous meaning. Such is briefly, *the structure of tacit knowing*.

Now to the distinction between tacit and explicit knowledge. Things of which we are focally aware can be explicitly identified; but no knowledge can be made *wholly explicit*. For one thing, the meaning of language, when in use, lies in its tacit component; for another, to use language involves actions of our body of which we have only a subsidiary awareness. Hence, tacit knowing is more fundamental than explicit knowing: *we can know more than we can tell and we can tell nothing without relying on our awareness of things we may not be able to tell*.

Things which we can tell, we know by observing them; those that we cannot tell, we know by dwelling in them. All understanding is based on our dwelling in the particulars of that which we comprehend. Such indwelling is a participation of ours in the existence of that which we comprehend; it is Heidegger's *being-in-the-world*. Indwelling is also the instrument by which comprehensive entities are known throughout the world. It is from the logic of indwelling that I have derived in Part IV of this book the conception of a stratified universe and the evolutionary

panorama, leading to the rise of man equipped with the logic of comprehension.

My later writings, including a new book on press, are less occupied with the justification of our ultimate commitments and concentrate instead on working out precisely the operations of tacit knowing. Once knowing by indwelling is seen to work everywhere and we see ancient problems resolved by understanding its peculiar logic; and once the logic of tacit knowing expands into a theory of creative thought which is in turn identified with the logic of evolutionary emergence; our growing familiarity with ubiquitous indwelling brings about the unquestioning acceptance of the paradox that all knowledge is ultimately personal.

The power of science to grow by the originality of individual thought is thus established within a cosmic perspective of steadily emergent meaning. Science, conceived as understanding nature, seamlessly joins with the humanities, bent on the understanding of man and human greatness. Man's ideals, unfolding in action, come into view. (I have first set out this view in *The Study of Man*.)

Indwelling is being-in-the-world. Every act of tacit knowing shifts our existence, re-directing, contracting our participation in the world. Existentialism and phenomenology have studied such processes under other names. We must re-interpret such observations now in terms of the more concrete structure of tacit knowing.

Oxford

June 22, 1964

M.P.

PREFACE

THIS is primarily an enquiry into the nature and justification of scientific knowledge. But my reconsideration of scientific knowledge leads on to a wide range of questions outside science.

I start by rejecting the ideal of scientific detachment. In the exact sciences, this false ideal is perhaps harmless, for it is in fact disregarded there by scientists. But we shall see that it exercises a destructive influence in biology, psychology and sociology, and falsifies our whole outlook far beyond the domain of science. I want to establish an alternative ideal of knowledge, quite generally.

Hence the wide scope of this book and hence also the coining of the new term I have used for my title: Personal Knowledge. The two words may seem to contradict each other: for true knowledge is deemed impersonal, universally established, objective. But the seeming contradiction is resolved by modifying the conception of knowing.

I have used the findings of Gestalt psychology as my first clues to this conceptual reform. Scientists have run away from the philosophic implications of gestalt; I want to countenance them uncompromisingly. I regard knowing as an active comprehension of the things known, an action that requires skill. Skilful knowing and doing is performed by subordinating a set of particulars, as clues or tools, to the shaping of a skilful achievement, whether practical or theoretical. We may then be said to become 'subsidiarily aware' of these particulars within our 'focal awareness' of the coherent entity that we achieve. Clues and tools are things used as such and not observed in themselves. They are made to function as extensions of our bodily equipment and this involves a certain change of our own being. Acts of comprehension are to this extent irreversible, and also non-critical. For we cannot possess any fixed framework within which the re-shaping of our hitherto fixed framework could be critically tested.

Such is the *personal participation* of the knower in all acts of understanding. But this does not make our understanding *subjective*. Comprehension is neither an arbitrary act nor a passive experience, but a responsible act claiming universal validity. Such knowing is indeed *objective* in the sense of establishing contact with a hidden reality; a

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contact that is defined as the condition for anticipating an indeterminate range of yet unknown (and perhaps yet inconceivable) true implications. It seems reasonable to describe this fusion of the personal and the objective as Personal Knowledge.

Personal knowledge is an intellectual commitment, and as such inherently hazardous. Only affirmations that could be false can be said to convey objective knowledge of this kind. All affirmations published in this book are my own personal commitments; they claim this, and no more than this, for themselves.

Throughout this book I have tried to make this situation apparent. I have shown that into every act of knowing there enters a passionate contribution of the person knowing what is being known, and that this coefficient is no mere imperfection but a vital component of his knowledge. And around this central fact I have tried to construct a system of correlative beliefs which I can sincerely hold, and to which I can see no acceptable alternatives. But ultimately, it is my own allegiance that upholds these convictions, and it is on such warrant alone that they can lay claim to the reader's attention.

Manchester
August 1957

M. P.

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THIS book is based on my Gifford Lectures 1951-2, delivered in the University of Aberdeen. I wish to thank the University for this opportunity to develop my thoughts. Since subsequent work has not essentially changed my views, large parts of the lectures could be retained unchanged; other parts have been reconsidered, some cut out and others amplified.

Manchester University has made it possible for me to accept the invitation of Aberdeen and to spend nine years almost exclusively on the preparation of this book. The generosity of Senate and Council in allowing me to exchange my Chair of Physical Chemistry for a Professorial appointment without lecturing duties, has placed me deeply in their debt. I want to thank particularly Sir John S. B. Stopford, then Vice-Chancellor, and Lord Simon of Wythenshawe, then Chairman of the Council.

Many of my colleagues at the University have helped me in my enquiries; I have never ceased to admire their patience. May I thank them here once more. I recall also with gratitude the weeks spent on two occasions with the Committee on Social Thought in Chicago, where I lectured on these subjects.

This work owes much to Dr. Marjorie Grene. The moment we first talked about it in Chicago in 1950 she seemed to have guessed my whole purpose, and ever since she has never ceased to help its pursuit. Setting aside her own work as a philosopher, she has devoted herself for years to the service of the present enquiry. Our discussions have catalysed its progress at every stage and there is hardly a page that has not benefited from her criticism. She has a share in anything that I may have achieved here. Dr. J. H. Oldham, Mr. Irving Kristol, Miss Elizabeth Sewell and Professor Edward Shils have read the whole manuscript; Mr. W. Haas, Dr. W. Mays, Professor M. S. Bartlett and Dr. C. Lejewski have read parts of it. They have all suggested improvements, for which I thank them. Miss Olive Davies has carried the burden of secretarial work connected with this book for ten years. Her skill and hard work have given me invaluable assistance. Expenses of books, travel and assistance in the service of this enquiry were covered by grants received from the Rockefeller Foundation, the Volker Fund and the Congress for Cultural Freedom.

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Finally, I want to express my admiration for a person who unhesitatingly shared with me the risks of this unusual enterprise and sustained year after year the stresses radiating from me as the centre of this unaccustomed activity; I mean my wife.

I have published the following papers in the period of 1952-8 on the subject of this book. The corresponding pages of the book are given in brackets.

- 'The Hypothesis of Cybernetics', *The British Journal for the Philosophy of Science*, 2, (1951-2). (Chapter 8, pp. 261-3.)
- 'Stability of Beliefs', *The British Journal for the Philosophy of Science*, November, 1952. (Chapter 9, pp. 286-94.)
- 'Skills and Connoisseurship', *Atti del Congresso di Metodologia*, Torino, December 17-20th, 1952. (Chapter 4, pp. 49-57.)
- 'On the Introduction of Science into Moral Subjects', *The Cambridge Journal*, No. 4, January, 1954. (Survey of one aspect of the argument.)
- 'Words, Conceptions and Science', *The Twentieth Century*, September, 1955. (Chapter 5, *passim*.)
- 'From Copernicus to Einstein', *Encounter*, September, 1955. (Chapter 1, pp. 3-18.)
- 'Pure and Applied Science and their appropriate forms of Organization', *Dialectica*, 10, No. 3, 1956. (Chapter 6, pp. 174-84.)
- 'Passion and Controversy in Science', *The Lancet*, June 16th, 1956. (Chapter 6, pp. 134-60.)
- 'The Magic of Marxism', *Encounter*, December, 1956. (Chapter 7, pp. 226-48.)
- 'Scientific Outlook: its Sickness and Cure', *Science*, 125, March 15th, 1957. (A brief survey of the main argument.)
- 'Beauty, Elegance and Reality in Science', *Symposium on Observation and Interpretation*, Bristol, April 1st, 1957. (Survey of Chapters 5 and 6.)
- 'Problem Solving', *The British Journal for the Philosophy of Science*, August, 1957. (Chapter 5, pp. 120-31.)
- 'On Biassed Coins and Related Problems', *Zs. f. Phys. Chem.*, 1958. (Chapter 3, pp. 37-40; Chapter 13, pp. 390-402.)

PART ONE

THE ART OF KNOWING