

A close-up portrait of Karl Popper, an elderly man with white hair, wearing a dark suit jacket, a white shirt, and a red tie. He is looking slightly to the right with a thoughtful expression. His hands are clasped in front of him, also in a thoughtful pose. The background is a plain, light-colored wall.

KARL POPPER

KNOWLEDGE AND
THE BODY-MIND PROBLEM

IN DEFENCE OF INTERACTION

KNOWLEDGE AND THE
BODY-MIND PROBLEM

*Titles by Karl Popper
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THE OPEN SOCIETY AND ITS ENEMIES VOLUME I

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THE WORLD OF PARMENIDES

ALL LIFE IS PROBLEM SOLVING

KNOWLEDGE AND THE BODY-MIND PROBLEM

In Defence of Interaction

KARL POPPER

Edited by M.A. Notturmo



London and New York

First published 1994
by Routledge
11 New Fetter Lane, London EC4P 4EE
Simultaneously published in the USA and Canada
by Routledge
29 West 35th Street, New York, NY 10001

First published in paperback 1996
Reprinted 2000

Routledge is an imprint of the Taylor & Francis Group
© 1994 Karl Popper, 1996 Estate of Sir Karl Popper

Typeset in Garamond by Solidus (Bristol) Limited
Printed and bound in Great Britain by
T J International Ltd., Padstow, Cornwall

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British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
A catalogue record for this book has been requested

ISBN 0-415-13556-7

To Melitta

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ACKNOWLEDGEMENTS

This volume is the second to have been compiled from my papers deposited with the Hoover Institution at Stanford, California. I am once again greatly indebted to my friend Dr Werner Baumgartner and the Ianus Foundation for enabling Dr Mark Notturmo and his wife Kira to edit and thoroughly revise these lectures. I thank them both for their hard work and tireless application to this difficult task. Raymond Mew and my assistant Melitta Mew have made important suggestions in connection with the text, and have kept me alive while I was trying to oversee its production.

K.R.P.
Kenley, 17 March 1994

AUTHOR'S NOTE, 1993

The following chapters are based upon lectures that I delivered at Emory University in 1969 on the body–mind problem. In them, I suggest a theory of mind–body interaction that I relate to evolutionary emergence, human language, and what I have, since the mid-1960s, called ‘world 3’. In order to present the theory, it is necessary to proceed systematically and to introduce you to some of the ideas that I use in the presentation of the theory itself. These are, notably, the ideas of subjective and objective knowledge; the theory of the ‘three worlds’; and something about evolution, emergence, and the functions of language. A presentation of these will take up the first few chapters. While I have extensively revised the lectures as they were given, I have decided to retain the lecture format in order to make for easy readability. The original lectures were followed by discussion. I have tried to incorporate parts of this in my lectures where appropriate, and have taken the rest of it, where relevant, as appendixes to the lectures.

These lectures, as you will soon see, deviate somewhat from what I had originally planned, and from what I originally announced. This is because I changed my plan for the lectures when it became apparent, during the first discussion, and in the informal discussions afterwards, that my audience was very interested in my world 3. World 3 is, in any event, a crucial part of my approach to the body–mind problem, and my thesis, in a nutshell, can be put as follows: in order to understand the relationship between the body and the mind, we must first recognize the existence of objective knowledge as an objective and autonomous product of the human mind, and, in particular, the ways in which we use such knowledge as a control system for critical problem-solving.

K.R.P.
Kenley, 1993

KNOWLEDGE: OBJECTIVE AND SUBJECTIVE

Ladies and Gentlemen:

It is a great honour to be invited to Emory, and I am very conscious of the fact that this invitation has put a great burden of responsibility on my shoulders. I have called this series of lectures 'Knowledge and the Body-Mind Problem'. I should perhaps have given it a better-sounding title, like: 'Human Knowledge and the Human Mind'. But this sounds a little airy, and I am allergic to hot air – even more than to tobacco smoke.

I have planned these six lectures as follows:

- 1 Knowledge: objective and subjective
- 2 Evolution, language and the third world
- 3 The myth of the framework
- 4 The interaction of the three worlds
- 5 Rationality
- 6 Freedom

But I have no intention of keeping strictly to this plan, and I regard it as a great advantage to have a connected course of six lectures. For this means that I do not need to worry about time: I can stop when the clock shows 3.50, saying that we shall continue next week. This is an advantage I do not want to forgo by tying each lecture to a definite topic. I may also change my mind while going along, especially if you, ladies and gentlemen, are willing to raise questions.

This brings me to a technical point. I like to be interrupted, and to have questions put to me. And I ask you especially to interrupt my lecture whenever I say anything that is not quite clear. In fact, I prefer discussion to lecturing, and I shall regard myself free to change my plans for these lectures if any topic is raised in the

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discussion here, or perhaps in the seminar, that seems to me to justify a change.

In addition to interruptions, there will be another possibility for you to raise questions. I shall stop at 3:50 for those who want to leave or who have to leave. But anybody who has time and who would like to stay on for discussion is invited to stay on and to ask questions.

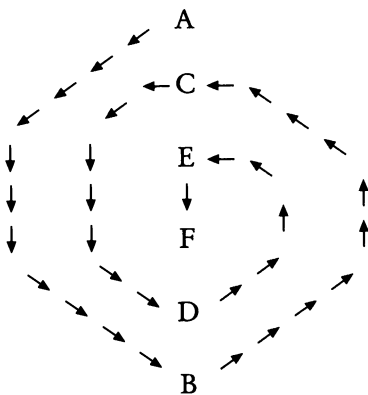
I should like to tell you, especially since I see Professor Paul Kuntz in the audience, that you should not be afraid of me – in spite of what Professor Kuntz has written in the paper. I think I am misinterpreted by him: I am very meek and mild, and I have never in my life called anybody a blockhead – least of all a student. I might call a colleague a blockhead, but I can't remember having done so.

Another point that I wish to make before starting is this. I regard it as my first duty to my audience always to do my best to be easily understandable. I regard it as my second duty to let you always see which way I am going. This will enable you to consider my arguments critically, and especially to check whether I am misleading you.

I try to achieve this by presenting you with my problems, and usually even with my tentative solutions; and only afterwards shall I proceed to develop my arguments. In this way you can see in advance which way I am going, and can all the time look at my arguments *critically*.

It means that my course of lectures will have a kind of spiral structure.

Begin like this:



On the way from A to B, I give a broad outline of the problem in hand. This is then narrowed in stages, until we arrive at the tentative formulation F.

1. KNOWLEDGE: OBJECTIVE AND SUBJECTIVE

Now I will begin by explaining to you the two main sets of problems I intend to discuss. They are:

(A) the problem of two kinds of knowledge and their relationship:

- 1 knowledge in the objective sense,
- 2 knowledge in the subjective sense; and

(B) the body–mind problem or, as it is also called, the mind–body problem.

I will explain the first of these problems with the help of some examples.

1 We may say:

'It is well known that water consists of hydrogen and oxygen'; or *'It is well known that we can explain atomic and nuclear structures in terms of so-called elementary particles, but it is not known whether elementary particles have a structure in their turn: this is still an open problem.'*

These examples explain what I mean by 'knowledge in the objective sense'.

2 The following examples may explain knowledge in the subjective sense:

'He knew he was exceeding the speed limit.'

'He knew that water is composed of hydrogen and oxygen.'

The following examples may also be treated under the heading of subjective knowledge, even though they are somewhat different:

'He thought that elementary particles have an internal structure.'

'He observed that the moon was full.'

'He observed a yellow disk.'

'He saw a yellow flash.'

'He hit his shins.'

'He felt a chill.'

I hope I have made the distinction between the two kinds of knowledge – objective knowledge and subjective knowledge – reasonably clear. It is interesting to note that most philosophers, though not all, discuss only knowledge in the subjective sense or (as I will say for brevity's sake) subjective knowledge. There exist many philosophical books devoted to the theory of knowledge – a theory

which is also called 'epistemology' – which never mention that there is such a thing as objective knowledge. And if they ever discuss objective knowledge, then most of them assume that objective knowledge can be fully explained in terms of subjective knowledge. In other words, it is assumed that objective knowledge consists of many elements of subjective knowledge somehow linked together.

I may tell you from the very start that for at least thirty-five years I have taken precisely the opposite view – without, however, making much impact. So here is a point where you will do well to look critically at what I am going to say.

My position is this: I am mainly interested in objective knowledge and its growth, and I contend that we cannot understand the first thing about subjective knowledge except by studying the growth of objective knowledge and the give and take between the two kinds of knowledge (where subjective knowledge is more taking than giving).

When I have finished my general introduction, the remainder of today's lecture will largely be devoted to this problem.

Why is this problem of knowledge important? Because it raises certain issues which I will here call 'big issues'. It bears on the big issue of rationality, on such big issues as the growth of scientific knowledge and its role in our civilization, on the big issues of the moral responsibility of the scientist and our indebtedness to civilization, and on the big issues of the function of a University and tradition *vs.* criticism. However, the problem of knowledge has a definite advantage over these big issues: it can be discussed in a critical and rational manner, while direct approach to any of the big issues is in danger of degenerating into preaching and of producing that hot air to which I am allergic, as I have said before.

The problem of knowledge will be one of my two main problems in this course. The other, you will recall, is:

(B) The body-mind problem or, as it is also called, the mind-body problem.

I will now explain this a little. We live in a world of physical bodies, and we ourselves have physical bodies. When I speak to you, however, I am addressing myself not to your bodies but to your minds. So in addition to the *first world*, the world of physical bodies and their physical and physiological states, which I will call 'world 1', there seems to exist a *second world*, the world of mental states, which I will call 'world 2'. And so a question arises concerning the

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relationship between these two worlds, the world 1 of physical states or processes and the world 2 of mental states or processes. This question is the body–mind problem.

When I am talking to you I am, in the first instance, making some noises, which are physical events – physical events you can detect with the help of your ears, which are detectors of pressure waves. But you do not only detect these waves, you *decode* them: you hear meaningful sounds. These physical waves carry a meaning to you (or so I hope): they are significant – they may (and I hope they will) make you think.

According to the famous French philosopher René Descartes, also called ‘Cartesius’, my mind is now acting on my body, which produces physical sounds. These, in turn, are acting on your body, that is, on your ears; and then, your body is acting on your mind, making you think. Descartes and the Cartesians called this the ‘interaction’ between body and mind. And we may replace this by speaking about an *interaction* between *physical* and *mental* states.

I think that it is just common sense to accept, at least tentatively, that there exists indeed this interaction between physical states (or processes) and mental states (or processes), or between the worlds 1 and 2. And since things which interact may be said to be real, we may accept the reality of these two worlds. Thus I can describe myself as a Cartesian *dualist*. In fact I am doing a little better than even Descartes: I am a *pluralist*, for I also accept the reality of a *third world*, which I will call ‘world 3’. I will very briefly explain this at once since it is my policy to put before you, from the very beginning, not only my problems but also my tentative solutions to these problems – and the theory of the reality of world 3 is the most important ingredient within my tentative solutions.

By ‘world 3’ I mean, roughly, the world of the *products* of our human minds. These products are sometimes physical things such as the sculptures, paintings, drawings, and buildings of Michelangelo. These *are* physical things, but they are a very peculiar kind of physical things: in my terminology they belong to both the worlds 1 *and* 3. Some other products of our minds are not precisely physical things. Take a play by Shakespeare. You may say that the written or printed book is a physical thing like, say, a drawing. But the performed play is clearly not a physical thing, though perhaps it may be said to be a highly complex sequence of physical events. But now please remember that no single performance of *Hamlet* can be said to be identical with Shakespeare’s play *Hamlet* itself. Nor is

Shakespeare's play the class or set of all of its performances. The play may be said to be *represented* or *reproduced* by these performances, in a way similar to that in which a building or a sculpture may be said to be represented by one or several photographs, or in which a painting or a drawing may be said to be reproduced by prints of varying quality. But the original painting itself is different from its reproduction. And in a somewhat similar way, Shakespeare's *Hamlet* is, in itself, different from its various reproductions or performances. But while an original painting is, as we've said, a peculiar physical thing, Shakespeare's *Hamlet* clearly is not. Although its *reproductions* may be said to belong both to the world 1 of physical things and to the world 3 of products of the mind, the play, *Hamlet* itself, belongs *only* to the third world.

It is similar with a symphony. The written score of Mozart's Symphony in G Minor is not Mozart's symphony, although it represents Mozart's symphony in a coded form. And the various performances of Mozart's Symphony in G Minor are also not Mozart's symphony: they stand to the symphony in the relation of reproductions. These performances simultaneously belong to both world 1 and world 3. But the symphony itself belongs only to the third world – that third world which comprises architecture, art, literature, music and – perhaps *most* important – science and scholarship.

The idea of world 3 is, I realize, an unusual and a very difficult idea. So please don't think that you are supposed to grasp it fully at this first mention of it. Still, I think it best to put all my cards on the table at once, so that they are open for your inspection, and so that you can know which way I am going.

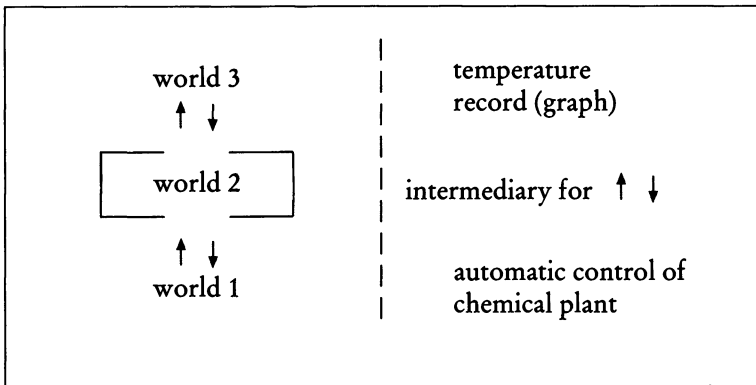
Incidentally, this reminds me of an anecdote. Many years ago, when I lived in New Zealand, I had a friend, old Dr Farr, an emeritus professor of physics, a famous student of geomagnetism, and known for his ready wit. When he was almost 80 years old he was still interested in the students of his old physics department and often talked to them in the street. One day a student was clearly embarrassed and, when asked 'What's wrong with you?', stammered: 'Excuse me, Dr Farr, but your hat is on the wrong way round!' Like a shot came back the reply: 'How do you know which way I am going?'

Now I do want you to know which way I am going, so that you can find out more easily what is wrong with me. Therefore I will now give you what, in a way, may be described as the main thesis of my course. It is this:

1. KNOWLEDGE: OBJECTIVE AND SUBJECTIVE

We cannot understand world 2, that is, the world inhabited by our own mental states, without understanding that its main function is to *produce* world 3 objects, and to be *acted upon* by world 3 objects. For world 2 interacts not only with world 1, as Descartes thought, but also with world 3; and world 3 objects can act upon world 1 only through world 2, which functions as an intermediary.

We can put this by way of a simple diagram:



World 3 consists, among many other things, of records, and may consist of temperature records. In the case of temperature records, it may look as if here world 1, through a graph and an automatic recording instrument, acts directly upon something in world 3. But this is not so. It is we who arrange and are the intermediaries and make this temperature record and regulate the whole thing so that it really becomes a temperature recording, a graph, which belongs to both world 1 and world 3. It is only through our intermediary action that world 1 can act upon world 3.

A similar example in reverse would be the automatic control system of a chemical plant. Here again, world 3 – that is to say, certain objective plans and objective aims which exist in world 3 – somehow regulates what happens in the world 1 chemical plant through automatic machines. But these automatic machines must be installed by us, and it is only through us that the actual aims will have an effect upon world 1.

If my thesis is correct then we cannot expect to get anywhere near a solution of the body–mind problem unless we take world 3 into

account. For the body-mind problem was the problem of the relationship between worlds 1 and 2. And if it is an important element in this relationship that world 2 functions as an intermediary between worlds 1 and 3, then the body-mind problem must remain incomplete, as it were, until we extend it to cover the interrelationships between all three worlds.

You may now understand why I said that I am not only a dualist but a pluralist. In this I am decidedly unfashionable. The prevailing fashion in philosophy is decidedly monistic, and it has been so for a long time. There have been quite different kinds of monism. Until not very long ago a school was fashionable which tried to interpret physical things as bundles of phenomena, or as observation possibilities, or as *constructs* of observations, or of sense data. That is to say, it was fashionable to try to reduce the first world to the second. This form of monism was called by various names, by 'phenomenalism' for example. At the present time another form of monism is more fashionable. It is called 'physicalism', or sometimes 'behaviourism', or 'materialism'. And it says that to accept what I call 'world 2' is to introduce unnecessary complications, since it is simpler and more convenient to say that only physical things and physical states exist. It is admitted that if I am talking to you I am making physical noises, and that my physiology has to be in an appropriate state for my doing so. It is also admitted that your self, or rather your physiology, may be incited to make some appropriate response to my noises. But it is held to be quite unnecessary to assume that we, you or I, are doing anything like paying attention or thinking.

Three of the outstanding physicalists are my friends Rudolf Carnap, Herbert Feigl, and Willard Van Orman Quine. The question is very concisely discussed by Quine, who acknowledges his indebtedness to Carnap and Feigl. Speaking about human behaviour, Quine questions whether anything can be gained by positing mental states behind behaviour. And Quine puts the matter in a nutshell by saying (I am quoting), 'The bodily states exist anyway; why add the others?' This is in his *Word and Object*, on page 264. It is interesting that very similar questions were asked by philosophers like Berkeley and Mach, who said: 'Sensations exist anyway; why add material things?'

I admit that the denial of mental states simplifies matters. For example, the difficult body-mind problem simply disappears, which no doubt is very convenient: it saves us the trouble of solving it. But I do not think that Quine is consistent when he asks 'Why add the