



The Richmond Journal of **Philosophy**

Volume One Issue Two Autumn 2002

In this  
**issue** ■■■

**Bill Child**  
on self-knowledge

**Alexander Bird**  
science and paradigms

**Keith Crome**  
on Plato

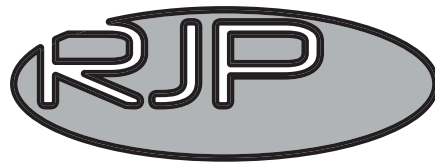
**Arif Ahmed**  
on Quine and meaning

**Adrian Moore**  
on the infinite

**Simon Critchley**  
on humour



Richmond upon Thames College



# **The Richmond Journal of Philosophy**

**Issue two  
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## **Editorial Board**

Stephen Grant

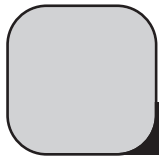
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## Contents

Editorial	p4
About the Editorial Board	p5
Knowing One's Mind <i>William Child</i>	p6
What is in a Paradigm? <i>Alexander Bird</i>	p11
Plato and the Institution of Philosophy <i>Keith Crome</i>	p21
On Quine <i>Arif Ahmed</i>	p29
Trying to Subjugate the Infinite <i>Adrian Moore</i>	p35
Did you Hear the One about the Philosopher Writing a Book on Humour? <i>Simon Critchley</i>	p40
Notes on Contributors	p46
Notes for Contributors	p47
How to Subscribe	p49

# [Editorial]

Welcome to the second issue of the Richmond Journal of Philosophy. Autumn brings Bill Child discussing the notion of self-knowledge, drawing upon insights offered by Wittgenstein. Keith Crome considers the way in which a study of Plato may inform us of the very nature of philosophy. The work of two of the most influential philosophers of the twentieth century forms the focus of two of the papers. Alexander Bird discusses Kuhn and the idea of a paradigm while Arif Ahmed writes on Quine. After Adrian Moore invites us to examine the infinite and we finish with a philosophical reflection on humour by Simon Critchley. We extend our thanks to all of the contributors and Richmond upon Thames College for its continued support.

## **Purpose of the Journal**

The motivation for and ambition of the journal is to provide serious philosophy for students who are at an early stage in their philosophical studies. The style and content of the papers will be accessible to students who have yet to become hardened to the more technical and specialised journals of professional philosophy.

What do we mean by 'serious' philosophy? First, the content of the journal is not constrained by a remit to appeal to or reach the interested general public. Whilst the papers must speak to the needs of students who are relatively inexperienced in philosophy, they presuppose that their audience is actively engaged in philosophy. Second, the content is serious in its focus on the central areas of philosophy.

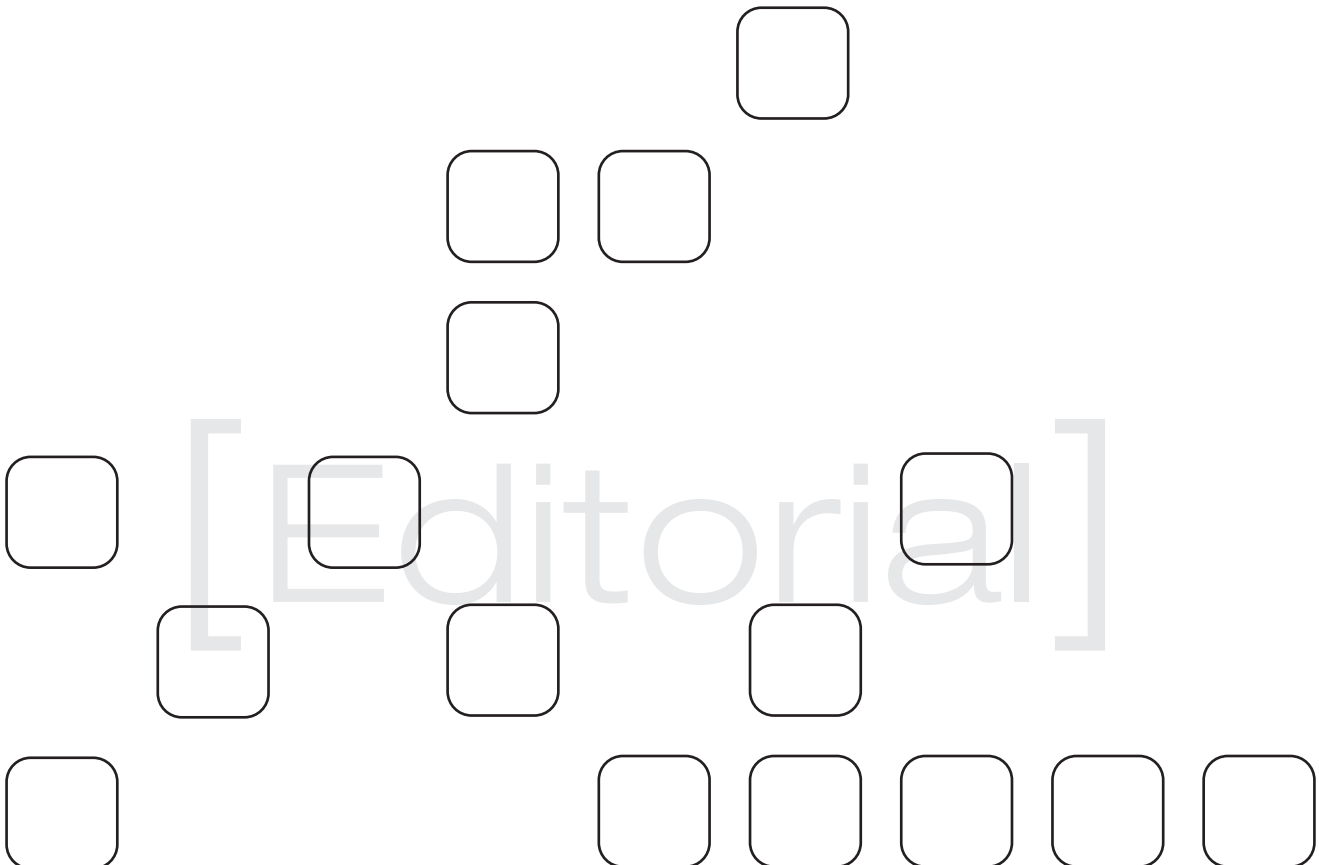
The big or traditional questions of metaphysics, epistemology, and ethics will provide the journal's centre of gravity. The third way in which the philosophy is serious is through the scope, variety and depth of analysis that can be achieved by the accumulation of papers over time. Moreover, each paper is not simply an introduction to one of the main topics on A-level, IB or degree courses. Such papers will indeed have a role in the journal, but they will not be the only kind. Our contributors will be offering original papers based on their own research. The journal will be a forum for the kind of critical engagement and debate that characterise the practice of philosophy. The fourth way in which the philosophy is serious is in the contributors themselves. The vast bulk of the papers will be written by professional philosophers engaged in both research and teaching.

# About the [Editorial] Board

Stephen Grant is a full-time lecturer in philosophy at Richmond upon Thames College. He has also taught at King's College London where he is completing his doctorate on the emotions. His main interests are in the emotions, ethics and political philosophy.

Dr Paul Sheehy teaches philosophy at Richmond upon Thames College and King's College London. His main areas of interest are in metaphysics, political and moral philosophy and the philosophy of the social sciences. His doctoral thesis was on the ontological and moral status of social groups and he has published papers on social groups and voting.

Paul Sperring is head of the philosophy department at Richmond upon Thames College and an A-level examiner in philosophy. He completed his undergraduate and masters studies at Warwick University, studying both analytic and continental philosophy. He has recently become the inaugural teacher fellow at King's College London philosophy department.



## William Child

# [One's Mind] Knowing

### 1. Self-Knowledge and Propositional Attitudes

How do we know the contents of our own minds? That question prompts another; what *are* the contents of our minds?

Philosophers tend to divide mental phenomena into two broad categories. On the one hand, there are *experiences*. This category includes at least perceptual experiences (such as the visual experience one has when one sees a tree) and bodily sensations (pains, toothaches etc.). On the other hand, there are such states as *believing* that Oslo is in Norway, *wanting* Senegal to win the World Cup, *intending* to make a chocolate cake. We can think of these states as *attitudes* towards *propositions*. Believing that Senegal will win is taking the attitude of *believing* towards the proposition *that Senegal will win*; wanting Senegal to win is taking the attitude of *wanting it to be the case that* towards the proposition *that Senegal will win*, and so on. So we can call such states *propositional attitudes*. No doubt the division of mental phenomena into just two categories is too crude. But, provided we treat it with caution, it is a helpful way of carving things up.

My topic is our knowledge of our own propositional attitudes. How do we know what we believe, want, intend, and so on? All of us have many beliefs about ourselves. For example, I believe that I was born in Cambridge and that I am over 5'10" tall. And I not only believe these things about myself; I know them. But notice two features of these cases. First, though I do, in fact, know where I was born and how tall I am, we don't think that every rational person must know where they were born or how tall they are; it is easy to think of reasons why someone might not know such facts about themselves. Second, I do not have any *special way* of knowing these facts about myself. Any way of knowing my birthplace or my height that is available to me is also, in principle, available to other people. The way I know where I was born, for instance, is by looking at my birth certificate and asking my parents. And you can know where I was born in exactly the same way.

Now consider our knowledge of our propositional attitudes. People are generally right about what they currently believe, want and intend. Of course, we can be wrong about our true beliefs, desires and intentions. But such mistakes are the exception, not the rule. Being right about one's attitudes is the normal situation.

This sort of self-knowledge differs in important respects from knowledge of such facts about oneself as one's height or birthplace. First, being right about one's own attitudes is the norm. It is not just that people do, as a matter of fact, tend to be right about their beliefs and desires. It is an *essential truth* that people are by and large right about what they believe, desire and intend, in a way in which it is not an essential truth that people are right about their height or birthplace. While it is easy to see how someone could be wrong about how tall they are or where they were born, it is not at all easy to see how someone could, quite generally, be wrong about what they believe, desire and intend. In fact, you could not be a rational agent at all if you did not by and large know what you believe, what you want, and what you intend to do.

Second, each of us has a special way of knowing about our own propositional attitudes - a way in which no-one else can know about them. If you know that I believe Henman will win Wimbledon, we can always ask *how you know*. And the answer is obvious: your knowledge of what I believe is based on what I say and how I behave. But consider the question, "How do I know that I believe that Henman will win?" In the normal case, my knowledge of what I believe is immediate and effortless; it is not based on anything at all. It seems that I just *do* know what I believe, without even trying. No-one else can know of my beliefs with the same effortlessness and immediacy. The same is true for my desires and intentions.

How are we to understand this knowledge of our own propositional attitudes? I will review three philosophical accounts of self-knowledge, all of them for one reason or another unsatisfactory. Then I will describe a different approach, which looks more promising.

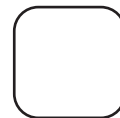
## 2. Three accounts of self-knowledge

There are three popular ways of explaining our knowledge of our own propositional attitudes.

First, there is the idea that all self-knowledge is based on introspected experience - on feelings, sensations and the like. On this view, there is a particular kind of experience associated with each kind of propositional attitude. So there is a particular way it feels like to *believe* that Henman will win Wimbledon, a different way it feels like to *want* him to win, and so on for every different kind of attitude one might have. The source of my knowledge of what I believe and desire, then, is essentially the same as the source of my knowledge that I am in pain or that I have pins and needles. Introspection tells us about our experiences and feelings. And, since belief and desire are correlated with specific kinds of experience, introspecting our experiences and feelings tells us what we believe and desire.



But this account seems hopeless. It is simply not true that there is any distinctive experience involved in believing that such-and-such is true, or wanting it to be the case that so-and-so. Try, for example, to reflect on what it *feels like* to believe that Oslo is the capital of Norway, or that  $e=mc^2$ , or that one's forename is such-and-such. It is hard to give much credence to the idea that there is something *experiential* that captures what is common to all cases of believing. The same goes for the other propositional attitudes too.



[Self Knowledge]

A second suggestion is that ascribing attitudes to ourselves involves a kind of self-interpretation. On this view (contrary to what was claimed in part 1 above) the process of self-ascribing attitudes is no different *in kind* from the process of ascribing attitudes to other people. I observe my behaviour and ascribe to myself the beliefs, intentions and desires that make best sense of that behaviour, just as I ascribe to other people the beliefs and so forth that make best sense of their behaviour. My beliefs about my own attitudes are more likely to be true than my beliefs about other people's (or their beliefs about mine). But the reason for that is just that I have very much more experience of my own behaviour than I have of other people's behaviour. And that is a purely *quantitative* difference; there is no *qualitative* difference at all between ascribing attitudes to oneself and ascribing them to others.

Now such a process of self-interpretation does have a part to play in self-knowledge. We do sometimes take up a third-person attitude to our own behaviour, *working out* what we believe or desire in something like the way we work out what others believe and desire. But that is obviously not what we do in most ordinary cases of self-ascription. In most cases there is no question of observing our own behaviour. I just know, *without any basis at all*, that I believe that Oslo is in Norway, or that I intend to brush my teeth.

A third suggestion is that our self-knowledge is the product of a reliable causal mechanism. On this view, each person's mind contains a mechanism that, given an intention (for example) as input, produces the belief in the subject that she has that intention. We do not have to *think about our*

intentions or behaviour in order to work out what we intend. It is just a feature of the human mind that, when one's mind contains the intention to brush one's teeth (say), that intention automatically causes the belief that one intends to brush one's teeth. So the reason our beliefs about our own attitudes are generally right is that the causal mechanism that produces those beliefs is a very reliable mechanism.



There is something right in the idea that our attitudes reliably cause beliefs that we have those attitudes. When I believe that I intend to brush my teeth, there must be *something* that causally explains my having that belief; it did not come from nowhere. And the fact that I do intend to brush my teeth presumably plays some part in producing my belief that I have that intention. But even if it is *true* that our attitudes cause beliefs about them, it does not follow that the appeal to a reliable causal mechanism is by itself enough to give us a complete account of our knowledge of our own attitudes. In particular, the

causal account itself says nothing about what is actually involved, *from my own point of view*, in forming a belief about what I intend, expect or believe. The account seems to suggest that such beliefs about our own attitudes just pop into our minds - that I simply find myself, for no reason, believing that I intend to brush my teeth, or believing that I believe that Oslo is in Norway. And that is untrue to the actual experience of forming beliefs about our own attitudes. In real life, we do not just *find ourselves* possessed of beliefs about our attitudes - as if from nowhere. We have reasons for holding the beliefs about our attitudes that we do; and there are ways in which we reach those beliefs. Without an account of what self-ascription actually involves from the subject's own perspective, the causal account is incomplete.

### 3. A different account of self-knowledge

I shall describe a different view of the self-ascription of propositional attitudes, an account that is rooted in suggestions made by Wittgenstein and that has been developed by others in recent years.<sup>[1]</sup>

Consider first the case of self-ascribing beliefs. What is a belief? Seen from your point of view, having a belief is not a matter of being in some internal state. As far as you are concerned, what you believe is simply a matter of how the world is. Suppose you believe that Oslo is in Norway. What that means is that, from your point of view, Oslo is in Norway. What follows from this apparently uninteresting truism?



Suppose I make the judgement, "Oslo is in Norway". The topic of that judgement is Oslo and Norway; the judgement is not about me. But the fact that I make that judgement does imply something about me. If you know that I have judged that Oslo is in Norway, you know that, *from my point of view*, Oslo is in Norway. And if you know that, then you know that *I believe that* Oslo is in Norway. So you can learn something about me from the judgements I make about the external world. In Wittgenstein's words:

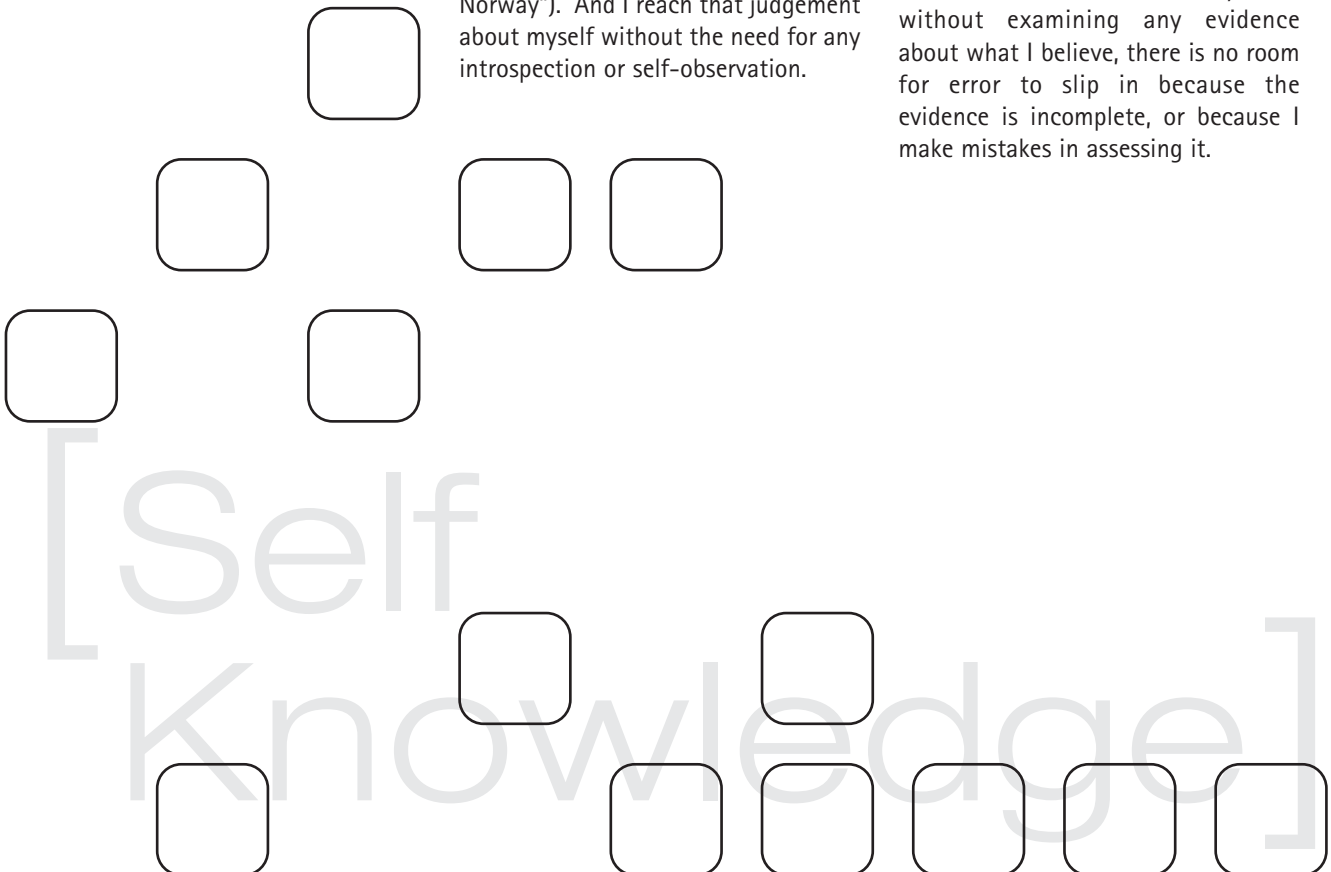
The language-game of reporting can be given such a turn that a report is not meant to inform the hearer about its subject matter but about the person making the report.

It is so when, for instance, a teacher examines a pupil. (PI pp. 190-1.)

But suppose I want to state explicitly that I believe that such-and-such. My judgements about the external world automatically *express* what I believe about the world. But to state that I believe that such-and-such, I must move from a judgement that *expresses* my belief to a judgement that *explicitly* ascribes that belief to me. For example, I must move from the judgement "Oslo is in Norway" (which *expresses* my belief that Oslo is in Norway) to the judgement "I believe that Oslo is in Norway" (which *explicitly states* that I have that belief). How do I do that? Simply by prefixing the judgement I am prepared to make about the external world with the clause, "I believe that . . .". That clause converts my judgement about the external world ("Oslo is in Norway") into a judgement about myself ("I believe that Oslo is in Norway"). And I reach that judgement about myself without the need for any introspection or self-observation.

As long as I understand the words "I believe that . . .", there is a simple procedure for ascribing beliefs to myself. To tell what I believe about where Oslo is, for example, this is what I have to do. First, consider the question, "Where is Oslo?" Second, answer that question - by judging (e.g.) "Oslo is in Norway". Third, prefix that judgement with the clause, "I believe that . . .". That is all I need to do to reach a belief about what I believe.

What does this account explain? First, it explains the reliability of our beliefs about our own beliefs. The judgement I make about where Oslo is already an expression or manifestation of my current belief about where Oslo is. So a modification of that judgement is all that is needed to produce a correct self-ascription of the belief. Crucially, since I form that belief about my belief without examining any evidence about what I believe, there is no room for error to slip in because the evidence is incomplete, or because I make mistakes in assessing it.



[Self Knowledge]

Second, the account addresses the question of how, from the point of view of the subject, beliefs about her own beliefs are reached. (So it fills the gap we noticed in the causal account of self-knowledge.) I do not just find myself possessing beliefs about what I believe; I *reach* those beliefs, by considering how things objectively are, understanding that the way things are from my point of view just is the way I believe them to be, and making the simple manoeuvre that turns a judgement that expresses what I believe into a judgement that explicitly ascribes that belief to me.

#### 4. Some questions about the account

The position I have sketched in section 3 offers a promising account of our self-ascriptions of our current beliefs – an account that describes how we make those self ascriptions and explains their reliability. But even if this account is successful, it is only the beginning of a full understanding of our knowledge of our propositional attitudes. I will conclude by mentioning some issues that need to be faced.

First, there are instances in which the judgements we make about the world do not express what we *really* believe: cases of self-deception, wishful thinking and the like. Suppose that, in my enthusiasm for an African victory, I judge "Senegal will win the World Cup". Prefixing that judgement with the clause "I believe that . . .", I self-ascribe a belief: "I believe that Senegal will win the World Cup". But suppose that, deep down, I do not really believe that they will. In this case, the model I have described has produced a false self-ascription. So the model, however reliable, is not infallible. Does that show that the model

cannot, after all, give me *knowledge* of my own beliefs? And, in cases of self-deception, wishful thinking and the like, how do we know what we *really* believe; what alternative method of self-ascription do we have?

Second, how far can the model I have sketched be generalised? The central idea is that our effortless self-ascription of current beliefs can be explained in terms of the simple conceptual manoeuvre that converts a judgement that expresses a belief into a judgement that self-ascribes that belief. But belief is just one kind of propositional attitude. There are many others. There are attitudes that are quite closely allied to belief: expecting, suspecting, anticipating, etc. And there are others, like desire and intention, that are very different. To give an account of self-knowledge for these cases that parallels the account we have offered for belief, we will need to find, for each case, a kind of judgement that expresses the relevant attitude. And we will have to show that it is possible to convert that judgement, by some simple conceptual manoeuvre, into a judgement that self-ascribes the attitude. But can this be done? Are there kinds of judgement that express our desires, intentions etc.? And if so, can they be easily converted into explicit self-ascriptions?

Third, I have spoken only about our knowledge of our *current* propositional attitudes. But what of our ability to remember what we believed or desired or intended in the past? Are we reliable about our own past propositional attitudes? If so, what is the source of that reliability? And can the model that seems to work for present-tense self-ascriptions of belief be extended to the past-tense case?

It would not be surprising to find that the model I have sketched cannot be extended to all cases, or to all types of propositional attitude. In philosophy, over-generalising a good idea is a common mistake, and there is no reason to expect that our general reliability about our own propositional attitudes will have a single source. But we should not be too pessimistic about the account described in section 3. The fact that a given account is not correct for all cases does not show that it is not correct for any case.

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#### Notes

- 1 See Ludwig Wittgenstein, *Philosophical Investigations*, (Oxford: Basil Blackwell, 1953) part II section x. For the classic modern development of Wittgenstein's suggestion, see Gareth Evans *The Varieties of Reference*, (Oxford: Oxford University Press, 1982) ch. 7, especially pp. 225-6.

## Alexander Bird

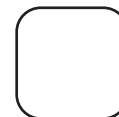
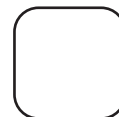
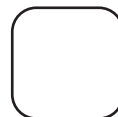
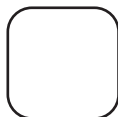
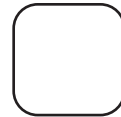
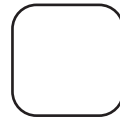
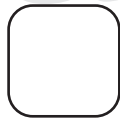
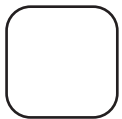
# [Paradigm?] What is in a

The 1960s were a decade of political and intellectual revolution. In 1962 Thomas Kuhn published a book that was not only a revolution in itself but also seemed to describe the very process of intellectual revolution that it exemplified. *The Structure of Scientific Revolutions* was hugely influential in the years that followed, well beyond the field of history and philosophy of science to which it was addressed; it became one of the most widely read academic books of all time. In this article I will explain some of the key ideas of that book: normal science and revolutionary science, paradigms, and incommensurability, before concluding with some remarks about how this all links to some ideas in cognitive neuropsychology.

### History and Philosophy of Science

It would be unusual to find an eminent literary critic, or even poet or dramatist, who is largely ignorant of the works of Shakespeare or Milton. Perhaps it is not even *possible* to be a good literary critic if you are ignorant of the great poets of the past. Contrast this with the historical knowledge of an eminent scientist. Most leading physicists know very little of the detail of the work of Galileo Galilei (Shakespeare's exact contemporary). And it would not matter if they knew none at all. Furthermore, what little they do know comprises a very limited, cleaned up knowledge of Galileo's achievements, presented in modern terminology and formalism. They won't have gained it by reading Galileo's own writing.

Kuhn regarded this relationship between scientists and the history of their fields as significant in two respects. First, the partial and distorted picture of the history of science possessed by scientists has had a negative effect on the historical study of science and even more so on the philosophical study of science. Secondly, this relationship, via its limited role in scientific education, provides an insight into the way scientists learn and think.



Kuhn himself started out as a physicist, gaining his PhD from Harvard in 1949. But he then turned to the history of science and later to the philosophy of science. He experienced first hand the nature of scientific education and the place of history within it. Most scientific textbooks make little mention of history, except perhaps in passing to explain why some law or theorem bears the name that it does. If there is more discussion of history it is likely to be in an introductory chapter in which the various milestones are listed along the road which led to the field's current state. The upshot of this is a certain perspective that scientists are likely to have on the history of their subject. That history will look as if it would inevitably lead to its current state. Science progresses primarily by adding to the truths previously uncovered and also sometimes by correcting earlier errors. Newton's famous remark that he had seen further than others only by standing on the shoulders of giants is quoted by scientists with approval and seems to provide evidence of the cumulative nature of scientific development. Since the purpose of a scientific textbook is to make the logic of scientific reasoning as clear as possible, it is a natural corollary of this limited history that even if it took genius to make some of the greatest past discoveries, the truth of those discoveries, once made known, would have been obvious to those contemporary observers who possessed open minds.

Correspondingly those who held false views in the past either lacked the relevant evidence or must have been stupid, blind, or prejudiced in some way.

As we shall see, Kuhn thought this view of the history of science a mistake in several respects. The mistake matters if it affects the writing of the history of science outside science textbooks, as it might well do in the case of the sort of history of science written by retired scientists (as it once typically was). More importantly, the mistake matters if it affects the philosophy of science. Since many philosophers of science (like Kuhn himself) had themselves been practicing scientists, they would have gained in the course of their studies just the picture of the history of science painted above. And this in turn would affect their conception of the philosophy of science. If the history of science is linear and cumulative (follows a direct path from past to present, adding at each point to the achievements of earlier generations), then it is natural to think of science as aiming at the truth and as succeeding in this aim. In which case, one must ask why is it that science succeeds in this aim. And in answer to this question it is natural to think that there is some logic of scientific discovery or scientific method. In which case one readily thinks that it is the task of the philosophy of science to uncover and articulate this logic or method. Although Kuhn thought that this misleading picture of the development of science is bad for history and philosophy of science, he did not think it bad for science itself. Indeed, he seemed to regard it as entirely appropriate for science students as scientists.

### Kuhn's cyclical view of scientific change

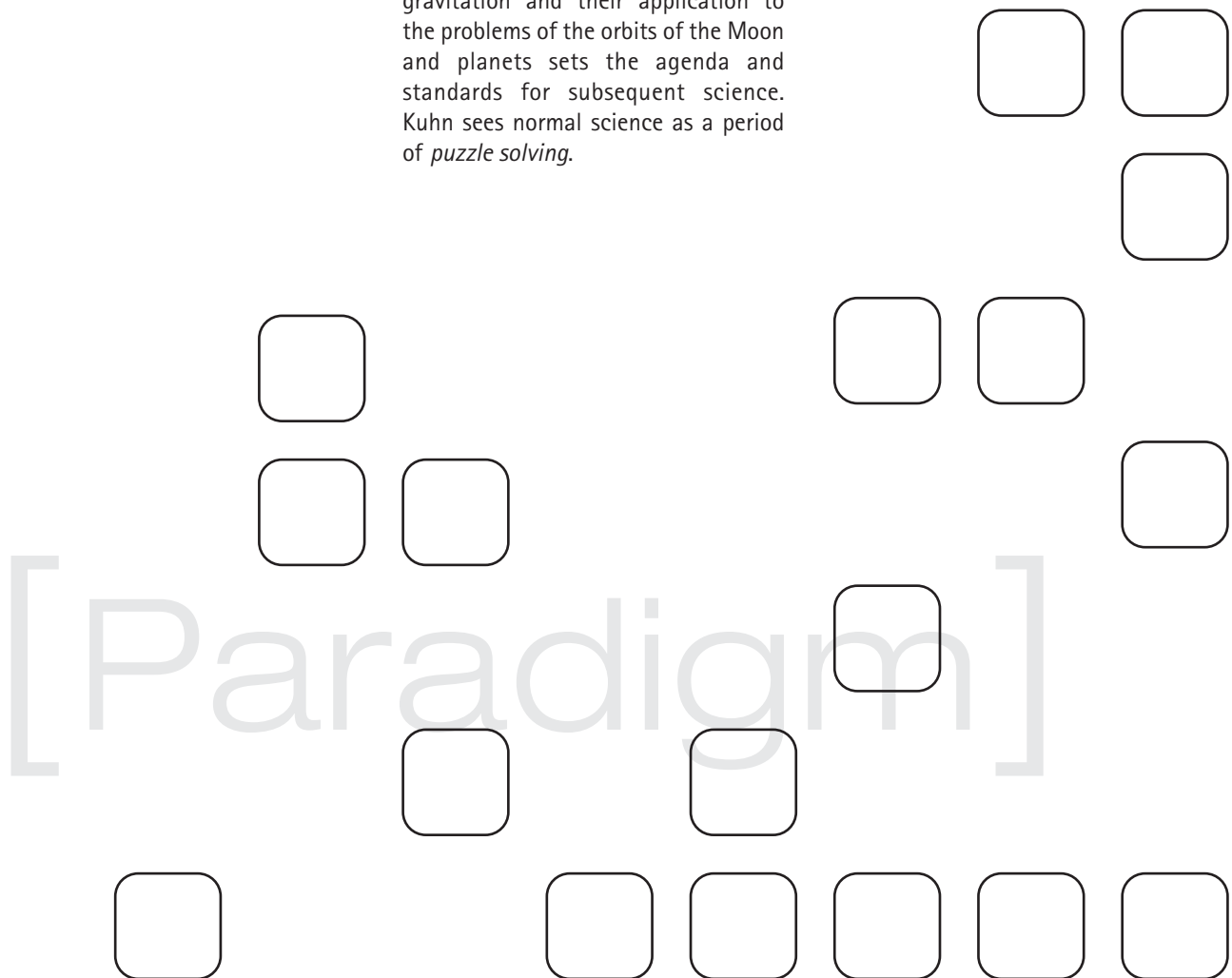
In what ways did Kuhn think that the traditional conception of scientific development is mistaken? In most ways. Science does not possess a logic or fixed method. It does not have a grand overall aim such as truth or knowledge. It therefore does not progress by getting closer to the truth adding to the stock of known truths. The contrast between heroes and villains is too stark, with often each being just as reasonable (or unreasonable) in their context as the other.

If the traditional view is wrong, what then replaces it? In summary Kuhn's answer is this. Scientific development is not smooth and linear; instead it is episodic—that is, different kinds of science occur at different times. The most significant episodes in the development of a science are *normal science* and *revolutionary science*. It is also cyclical with these episodes repeating themselves. Nor is it cumulative, since revolutionary science typically discards some of the achievements of earlier scientists. Science does not itself aim at some grand goal such as the Truth; rather individual scientists seek to solve the puzzles they happen to be faced with. There is no logic of science or fixed scientific method. Instead scientists make discoveries thanks to their training with exemplary solutions to past puzzles, which Kuhn calls *paradigms*. Furthermore, whatever the motive and motor of science, we are not in a position to say that science has advanced towards the truth and that recent scientists got things right where earlier thinkers got them wrong. This is because certain kinds of

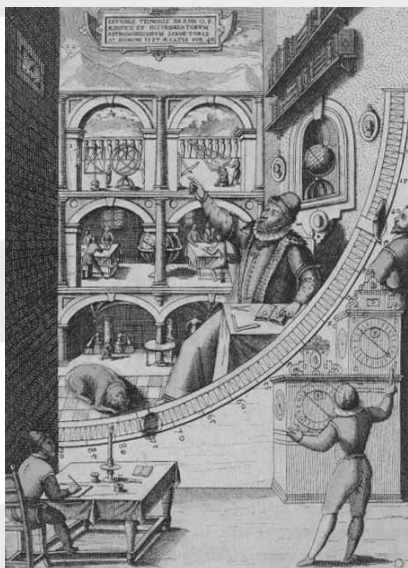
comparison between later and earlier theories are problematic due to what Kuhn calls *incommensurability*, which is the lack of a common measure of theories.

This may sound all very sceptical, and indeed there is a strong sceptical strain in Kuhn's philosophy. However, in his earlier writing, including *The Structure of Scientific Revolutions*, Kuhn took more of a neutral line on questions of knowledge and truth. His view was that a satisfactory explanation of scientific theory change need not consider whether the theories in question are true or false. Let us start with those episodes Kuhn calls normal science. A period of normal science is dominated by an exemplary piece of science, one held up as a model for practicing scientists. An exemplary scientific achievement, such as Newton's laws of motion and gravitation and their application to the problems of the orbits of the Moon and planets sets the agenda and standards for subsequent science. Kuhn sees normal science as a period of *puzzle solving*.

The paradigm—the exemplary scientific achievement—provides examples of worthwhile puzzles, provides a guide for solving those puzzles, and sets the standards for assessing proposed solutions. We shall see later exactly how paradigms—as-exemplars work. How they do work is independent of whether the theory at the core of paradigm is true or not; that theory and the exemplary puzzle solution incorporating it can be a template for future science even if false.



That an exemplary scientific achievement provides a fruitful example upon which subsequent scientific successes are modelled does not guarantee that all subsequent puzzles can be solved by reference to the original paradigm. Some puzzles may resist solution; there may be observations that scientists cannot successfully reconcile with the preferred theory. Such puzzles are known as anomalies. Kuhn emphasises that this is a natural state for normal science. We do not expect to be able to solve all puzzles immediately; perhaps more data needs to be collected or old data needs to be checked; perhaps new techniques need to be developed first; perhaps the scientist who has chosen to work on this puzzle just isn't clever enough to solve it. However, if enough anomalies pile up that resist continued attempts at solving them, then scientists begin to question the paradigm itself. Perhaps the source of the difficulty lies not with the data or the techniques available nor with the competence of the researchers; perhaps instead the paradigm itself is at fault.



If enough scientists think like this then science enters a phase of crisis. Bolder, younger scientists in particular will no longer seek solutions to the anomalies within the model set by the old paradigm. Rather the hunt is on for a new paradigm to solve those outstanding puzzles. Success in this search will come in the form of a new piece of science that differs in important respects from the previous paradigm piece of science. It will solve anomalies because of innovative changes to scientific theory; it may 'dissolve' the anomalies by showing them to be products of parts of the previous paradigm that are now rejected. If that new piece of science is accepted by scientists in place of its predecessor then a scientific revolution has taken place. An example of this is the supplanting of Newtonian mechanics by Einstein's special theory of relativity. The Newtonian paradigm was supplemented by Maxwell's account of electromagnetism which seemed to imply that light must travel through a medium, called the aether, just as sound travels through air. Albert Michelson and Edward Morley set out to detect the aether and to measure the Earth's speed through it. Yet they detected no aether. Hendrik Lorentz and George Fitzgerald sought to explain this anomaly within the existing paradigm, by hypothesising that objects contract while in motion through the aether. Einstein, however, was able more effectively to remove the puzzle in a revolutionary fashion by postulating that the speed of light is constant for all observers, whatever their motion relative to one another. This requires rejecting the geometry and the conception of space and time upon which Newtonian science was based. Although Einstein's ability to resolve this anomaly was not one of

his reasons for believing in his theory, it did play a part in persuading others to accept the revolution he instituted. Once the revolution is accepted the new great scientific achievement (such as Einstein's two theories of relativity) provides a paradigm, an example of how science should be done, upon which other scientists model their own work. A new period of normal science ensues.

Sometimes Kuhn's cyclical account of science is misleadingly presented as if a scientific revolution is a root and branch rejection of the previous paradigm, as if the slate is wiped clean and science starts again from scratch. That is clearly not the case. A revolution will revise *some* of the previous paradigm but not necessarily all of it. To be accepted a proposed new paradigm must retain at least the bulk of the puzzle-solving power of its predecessor. And the scientists trained in the old paradigm, including young and radical scientists, must be able to recognise the new scientific achievement as a new scientific achievement. So it must share some similarity to its predecessor. There is progress then in science, not only in normal science but also through revolutions. A scientific field progresses by increasing in overall puzzle-solving power. Note the contrast between this view and the more traditional one that science progresses by getting ever closer to the truth. Kuhn's view is that scientific progress is not 'teleological'; it is not progress *towards* anything (such as truth). Rather it is progress in a more Darwinian way—just as species evolve by acquiring an improved ability to cope with localised conditions (and not towards some perfect form), scientific theories evolve in response to localised puzzles.

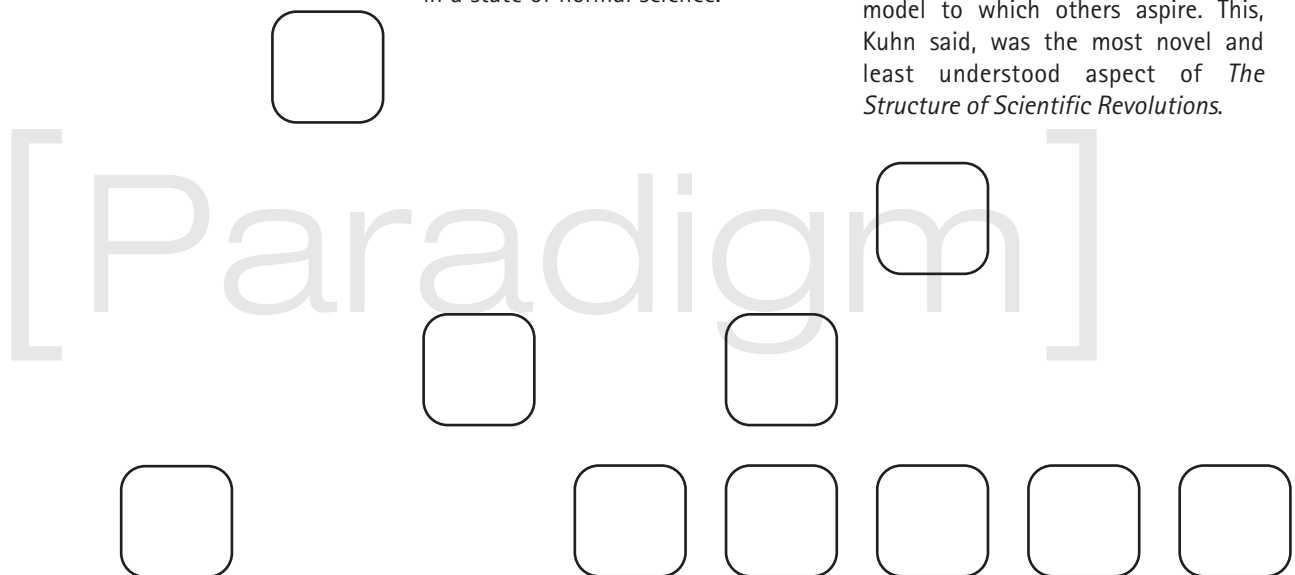
Kuhn's characterisation of normal science as 'puzzle-solving' may seem to devalue it, but that was not his intention. Young scientists may aspire to being the next Einstein; but almost all will spend their entire careers engaging in normal science. Even most Nobel prizes are for normal science (and revolutionary science may find it difficult to attract Nobel prizes—the two theories of relativity did not). The point of the term 'puzzle' is to bring out certain aspects of an analogy with puzzles such as chess or crossword puzzles. First, one gets to understand and to be good at crossword puzzles by practising them. The more one does crossword puzzles the easier one finds it to see the solutions. We'll return to this aspect later. Secondly, solving puzzles takes place within a framework. Certain ways of doing things are taken for granted. In solving a chess puzzle one does not propose a solution that involves an adjustment to the rules of chess. Furthermore, the context makes one confident that there is a solution to the puzzle. One should not need to adjust the rules of chess to solve it.

Similarly, in a period of normal science the paradigm that shapes one's research is not questioned; it is taken for granted and provides the resources for solving the puzzle. I once saw a bumper sticker bearing the words "Subvert the Dominant Paradigm!". While Kuhn popularised the use of the now-clichéd word paradigm, his view was that subverting the dominant paradigm is something that scientists should almost never do. Science could never make progress if scientists typically sought to solve puzzles by changing the rules. Despite being the philosopher of scientific revolutions, Kuhn's thinking is importantly conservative. In a conference dedicated to broadening the minds of scientists, Kuhn pointed out that a certain kind of narrow-mindedness is important for science to progress. For normal science to solve puzzles in the quantity that it does, most scientists must accept the status quo most of the time. It is therefore appropriate that the little history of science that scientists read in their textbooks should show scientific progress as the accumulation of knowledge or the increasing nearness to the truth, since that is a picture of science as *always* in a state of normal science.

A history of science that emphasised revolutions and incommensurability would not encourage the willingness to take paradigms for granted that permits the normal-scientific progress that is characteristic of science to be made. It would be in tension with the very method of scientific education which is the employment of past scientific achievements as paradigm-exemplars that young scientists should seek to emulate.

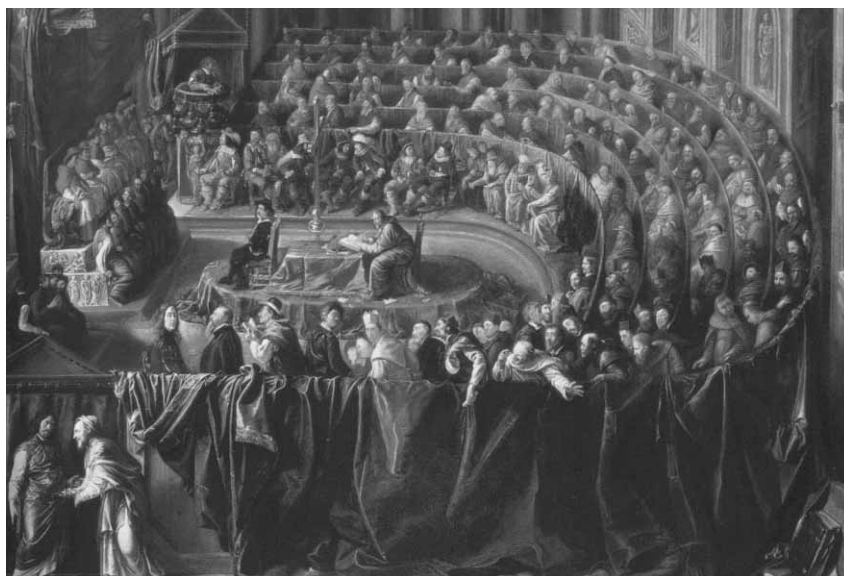
### Paradigms and exemplars

Let us look more closely at Kuhn's notion of a paradigm. Kuhn popularised the use of this term, which has come to mean something like a framework, a dominant way of thinking and doing things, shared expectations and rules. These somewhat vague phrases do reflect something in Kuhn's use of the term; that 'something' he also called the 'disciplinary matrix'. But the central notion of a paradigm for Kuhn, as I have tried to emphasise above, takes us back to the original meaning of 'paradigm' according to which a paradigm is an excellent example, a model to which others aspire. This, Kuhn said, was the most novel and least understood aspect of *The Structure of Scientific Revolutions*.



Kuhn was working against a philosophical tradition that held that the process of scientific discovery, or at least the task of assessing a theory on the basis of the evidence, is a matter of following rules of method or of inductive logic. Although scientists' use of such rules might be to a large extent unreflective or unconscious, it was thought to be the task of the philosophy of science to uncover those rules. The rules would lead towards the truth and would thus promote scientific progress (conceived as getting more of or closer to the truth). Not only did Kuhn reject the picture of science as aiming towards the truth, he also rejected the picture of science as operating according to rules of logic or method. The paradigm notion is intended to explain how science does function without such rules. Instead of following rules, scientists seek to match their work to the paradigm in a way that depends on their seeing similarities between their work and the paradigm. Seeing similarities is an ability that cannot be reduced to rules, just as recognising a face or seeing a family resemblance is not reducible to rules. Kuhn felt that the operation of paradigms could explain the whole process of scientific development, without recourse to truth and rules. Paradigms would set the puzzles for scientists to solve, give them the tools to solve those puzzles, and provide the standards by which those puzzles could be assessed.

Let us see how this idea works as applied to the Newtonian paradigm that was at the core of mechanics and mathematical astronomy and much of the rest of physics until the late nineteenth century. Here the paradigm can be identified with Newton's *Principia Mathematica* and the puzzle-solutions it contained. In that



book Newton provided explanations of the observed motions of the planets as well as solutions to several problems of motion on the Earth. But his work was not the last word on all such questions. In some cases the results were only approximate because of simplifying assumptions used by Newton. In other cases (such as the motion of the Moon) his conclusions seemed to be inaccurate. When new planets were discovered, their orbits needed to be explained also. There remained a host of more sophisticated motions on the Earth that might also be investigated. So Newton's work created a considerable opportunity for his successors—there were a myriad of questions and puzzles raised by *Principia* or by subsequent discoveries that other scientists could work on. Furthermore, *Principia* provided the tools whereby later scientists could solve those puzzles. The basis of any puzzle solution would be Newton's laws of gravitation and motion. Not only did Newton supply the laws to be used in puzzle solutions, he also invented the calculus (differentiation and integration) that was necessary to

analyse continuously changing or accumulating quantities (velocity, momentum, energy and so forth). Newton's *Principia* also provided the tools for subsequent puzzle-solving in a more subtle way. Knowing the laws and mathematics will not allow most people to solve the puzzles in question. What most of us need is training. From A level through to early graduate studies a young scientist learns to solve an ever wider and more sophisticated range of puzzles. He or she acquires this capacity by practice with existing puzzle-solutions. By following worked examples in a textbook or classroom the student gets a feel for how such puzzles are to be tackled, which versions of the equations are appropriate, which transformations of those equations might help get an answer, and so on. This sense of how to 'see' a problem is honed by tackling puzzles to which the answers are already known (but not by the student!).

In these ways the paradigm provides the puzzles and the tools for solving them. It also provides the standards by which attempted puzzle-solutions are



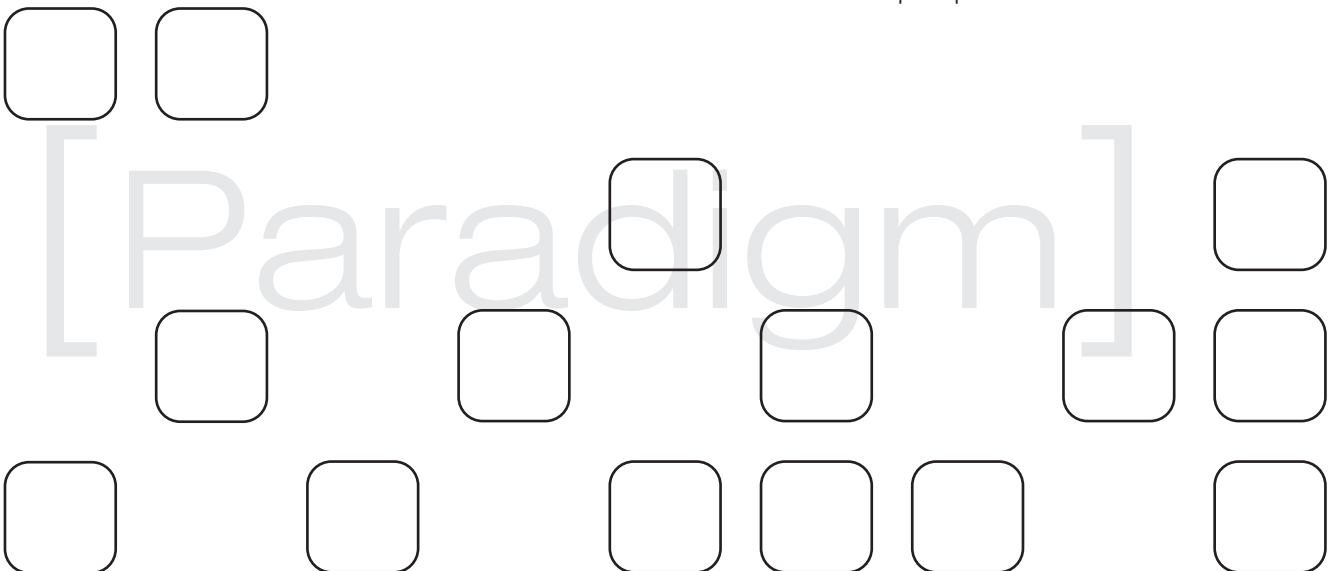
judged. By working with Newton's own puzzle-solutions a follower of Newton acquires not only a sense of what a worthy puzzle should look like and a sense of how to solve such puzzles but also a sense of what a satisfactory solution to such puzzles should be like. A puzzle-solution had better look like one of Newton's own puzzle-solutions to be acceptable. Of course this is not strictly correct. By the nineteenth century few scientists were learning from Newton's own puzzle-solutions. Thanks to changes in symbolism and advances in mathematics, Newton's own puzzle-solutions were presented on a modern form, and it is the modern forms of the solutions that would be the model for young scientists. And thanks to advances in physics they would also be learning by reference to new puzzle-solutions, for example in electrodynamics, which was developed well after Newton. Nonetheless, the modern puzzle-solutions could trace their ancestry back to Newton—Coulomb's law of electrostatic attraction was readily accepted precisely because of its similarity to Newton's law of gravitation.

More importantly the key idea is that whatever the current exemplars are, puzzle-solutions are judged not by the application of rules of method or a logic of induction, but are instead assessed on the basis of a perceived similarity to those exemplars.

### Incommensurability

Despite the importance he attached to the paradigm/exemplar idea in his early work, Kuhn scarcely mentions it in his later writing. Instead he concentrated on different approaches to explicating his notion of incommensurability. Kuhn noted that the scientific work of a past scientist, Aristotle for example, might seem entirely irrational at first. But on further investigation and with familiarity the reasonableness of his thinking becomes apparent. Some of this might be attributed to language problems, especially where apparently familiar words have changed their meaning. For example, King Charles II exclaimed on first seeing the new St Paul's Cathedral that it was 'awful and artificial'. Far from being a derogatory remark, the King was giving the edifice his highest praise.

By 'awful' he meant much what we do by 'awesome'. That is just a case of a simple shift in meaning. The case of 'artificial', however, is more complex. The core of the meaning of that term was not so different for Charles from what it is for us—meaning constructed, designed, not natural. In the seventeenth century the term carried positive connotations: designed with careful intelligence, created with skill, artistic, sensitive, rational. Both for Charles and for us there is an intended contrast with 'natural', but in his day the contrast was a positive one. The aspects of nature with which the artificial is contrasted are the irrational, brutish, unrefined sides of nature. Since the late eighteenth century the dominant conception of nature has changed: nature is supposed to be pure, wholesome, free, intuitive, original. And so for us 'artificial' carries with it the connotations of the impure, unhealthy, imitative. And so even if the core of the meaning of 'artificial' has remained the same (though this could be argued over), the connotations and so the uses of the word have changed. And they have changed because of the changing perception of man's relation to nature:



from a view of nature as something dangerous and to be escaped from or improved to something pure but harmed by humans, to which we should try to return. (Contrast Hobbes' and Rousseau's deeply opposed conceptions of human life in the state of nature: nasty, brutish, and short versus free, healthy, and invigorated.)

The case of 'artificial' may help illustrate the sort of problem that Kuhn was dealing with under the heading 'incommensurability'. Changes of that kind make it difficult to compare theories from different epochs. The dominant philosophy of science before Kuhn denied that there should be such difficulties: as regards evaluating the theories for their truth-content, we need only look at their observational consequences; and the meanings of the theories also depend on the relation of the theory to observation. So as long as what is observable remains the same and the meanings of observation words are unchanged, we can use observation as a basis for comparing theories for truth-content and for establishing a shared basis for explaining meaning. One of Kuhn's most important legacies was to persuade philosophers of science that this assumed invariability of observation is untenable. Kuhn pointed to gestalt images (such as the Necker Cube or duck-rabbit) which present one appearance at one moment and a different appearance at another; he also cited research that shows that how we perceive objects depends on what we expect to see: our perceptual experience does not match the way things actually are, if they are unusual. Kuhn believed that one's perceptual experience and so also one's observations could be influenced by the theory one holds. Hence observation cannot be a shared basis for all theory-comparison.

Although Kuhn's earlier conception of incommensurability is primarily psychological, relating to perception in particular, his later work focussed on linguistic aspects of incommensurability. There has been considerable debate on whether Kuhn succeeded in explaining what incommensurability is and whether it has serious consequences for the philosophy of science (e.g. by showing that theories cannot be compared at all for truth-content). It is probably fair to say that most philosophers of science hold that while there may well be a phenomenon of incommensurability, conceived of as a certain kind of untranslatability, incommensurability nonetheless does not have significant consequences for theory comparison.

### Paradigms and incommensurability revisited

Although Kuhn regarded the paradigm idea as the most innovative and least understood aspect of *The Structure of Scientific Revolutions* it played little part in his later thinking, which was dominated by only partially successful elaborations of the concept of incommensurability. Why did he make this perhaps largely fruitless switch? There are at least two reasons. One is that the move from the psychological idea of a paradigm to the more philosophical notion of incommensurability mirrors his professional switch from being an historian of science to a philosopher of science. Another reason is that the psychological message that Kuhn was propounding fell (as he noted) on deaf or uncomprehending (philosophical) ears. Part of this is just another illustration of a psychological

incommensurability. The audience, the philosophical audience in particular, was unable to see that gestalt switches could be a useful pointer to the sorts of psychological shift involved in switching paradigms. To them this seemed a weak metaphor that introduced a mystery that explains nothing about theory change. As a way of introducing a new and controversial idea, this was not helpful. Does being told that changing paradigms is like seeing a picture one moment as a rabbit, another moment as a duck, really explain much on its own? Part of Kuhn's problem was that he did not know of the mechanism underlying gestalt switches, pattern recognition, and so on. This meant that he was unable to show how that mechanism might extend to the apparently quite different sphere of theoretical belief.

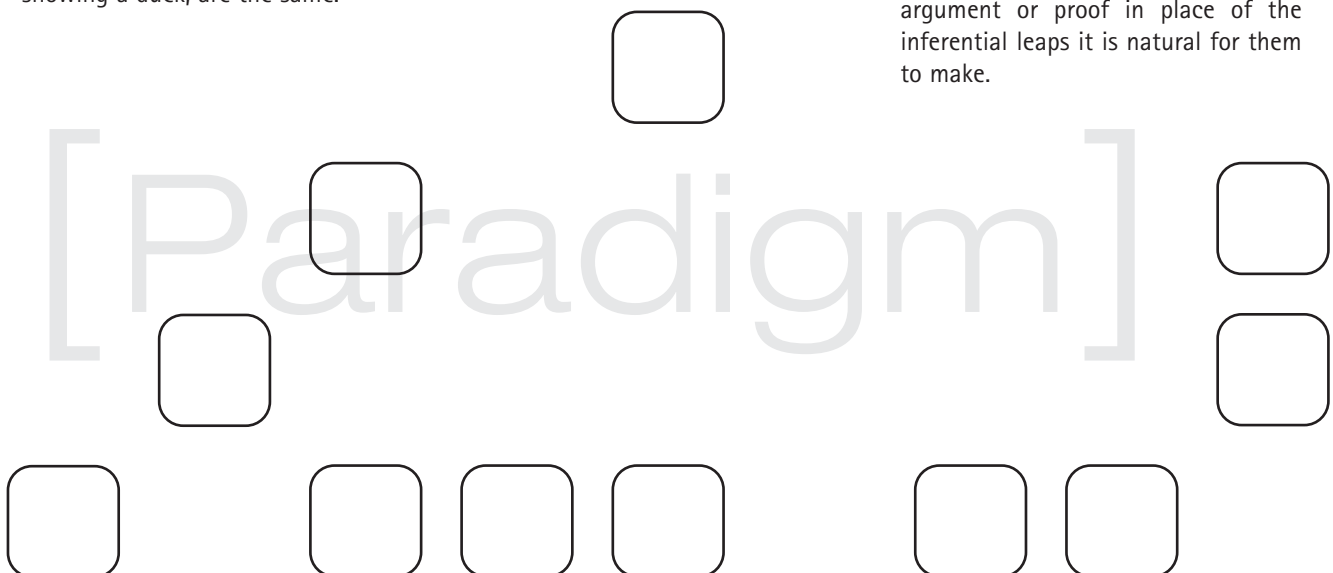
It is unfortunate that the physiological basis of the relevant psychological processes began to be widely discussed only after Kuhn had made his own change from a psychological to a more philosophical approach and had abandoned interest in the exemplar idea. Connectionist or neural-net models of brain function suggest that certain kinds of learning involve a Darwinian-like reinforcement of various connections between neurons. The reinforced arrangements of neural connections are those that output the relevant positive results (such as correct recognition of a face or pattern). In the gestalt cases we may suppose that the same pattern is able to output two different recognitional thoughts: 'duck' and 'rabbit'. Which of these it outputs may be sensitive to small changes (such as orientation or even the observer's direction of attention). This mechanism may be applied to non-visual learning. For example we

may learn our times-tables by rote. Rote learning is a matter of reinforcing a neural pattern that outputs '42' to the input '7 times 6'. This model applies not only to rote learning. One might start by consciously calculating the answer to  $7 \times 6$ . But in due course the answer comes automatically. This is what is meant by 'second nature'. A certain pattern of conscious activity becomes 'natural' with repetition—'natural' in the sense of unprompted, without thinking or reasoning, or following rules, it is akin to a reflex action. Many patterns of thought may become internalised in this way. Scientific learning and inculcation with exemplars is ripe for this sort of treatment. It is the repetition of laboriously worked through examples in the textbook that allows a science student in due course simply to 'see' without further thought how a certain kind of problem should be tackled. Kuhn was right in thinking, though he could not know how, that the neural-net/connectionist mechanism underlying the learning of sophisticated patterns in science and the learning of simple patterns in recognising a gestalt diagram as showing a duck, are the same.

A difference between the gestalt and the scientific cases is that in the former two patterns are available to be recognised, one immediately after the other, whereas science students are taught to react in just one way to a given problem. However, it might be that it is perfectly possible to get people to respond differently to the same problem. So it might have been natural once to respond to a problem in mechanics using purely Newtonian tools whereas today's students will automatically see the same problem as requiring the application of relativistic mechanics. What can be learned in this way can be unlearned and so scientists who accept a scientific revolution will unlearn one way of seeing things and learn a new way. It is perhaps not impossible for them to be in a gestalt-like situation, so that they can see both the Newtonian and the relativistic approaches as natural (remember that all students learn the Newtonian way first before learning the relativistic way—and they need not completely unlearn the Newtonian way). But now consider someone who comes across the writings of a scientist of long ago.

If a scientific inference is second-nature to that ancient scientist and his contemporaries, then they will take that form of inference for granted. They won't spell out the background assumptions or intermediate steps. So that scientist may make a leap of reasoning that will be for him completely natural that for the modern reader, not trained in that tradition, will seem an utter non-sequitur. The problem for the modern reader will not be so much that the ancient author seems to have said something false; rather the modern reader will find it difficult even to see why the ancient writer says what he says; the ancient text will not make sense.

If this is right, connectionism not only explains how paradigms-as-exemplars work but also explains what incommensurability is and how it comes about. Incommensurability comes about when different ways of thinking become second nature due to training in different paradigms. Because the ways of thinking are second nature, and so are fairly deeply embedded in the scientists' psychologies, it is difficult or impossible for them to reconstruct an argument or proof in place of the inferential leaps it is natural for them to make.



While the case is clearly worse in the interpretation of ancient texts, this kind of incommensurability can arise for thinkers who are contemporaries but who have acquired different patterns of thought.

## Conclusion

Kuhn's *The Structure of Scientific Revolutions* was highly controversial among philosophers in the 1960s. I have suggested that this is in part due to the psychological nature of some of the key ideas as well as the lack of a theoretical underpinning to those ideas. Kuhn abandoned this work for a more philosophical line of enquiry that I believe was less fruitful, even if more familiar to philosophers. The time is ripe for a reassessment of Kuhn's earlier work in the light of connectionist and neural-net research.

Alexander Bird  
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**Keith Crome**

Plato and the  
[Institution]  
 of Philosophy

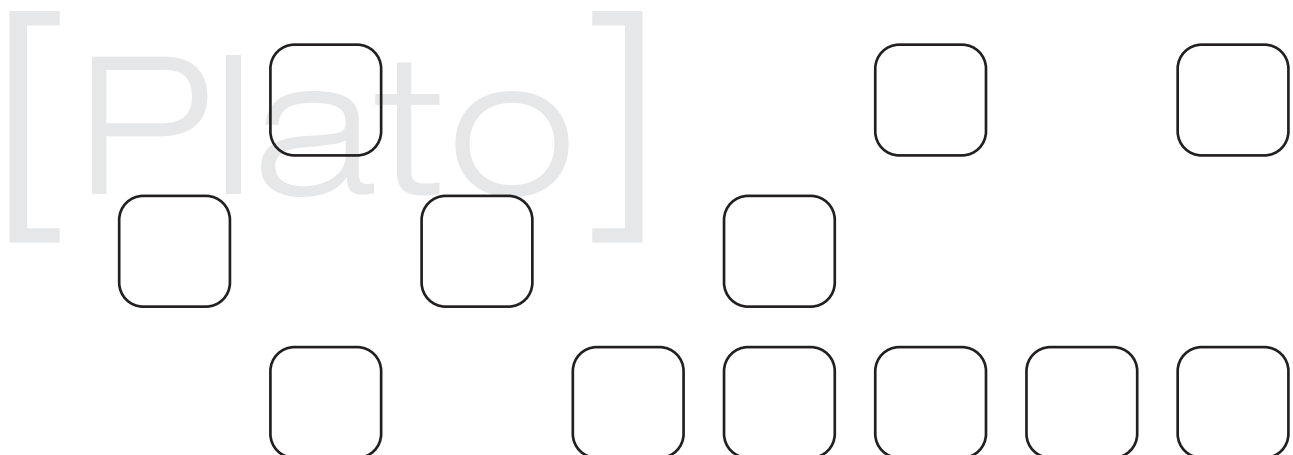
**Introduction**

In this essay I want to make some remarks about how the Ancient Greek philosopher Plato understands the nature of philosophy, and how this understanding informs the way in which he philosophises. I shall begin, however, with what appears a rather simple observation: the word *philosophy* has not always been around. I do not mean that it can only have possibly existed for as long as human beings have themselves been around to utter it, but that it is the creation of a particular culture, created at a particular time within human history. The word *philosophia* that gives us the English word *philosophy* is Greek, and one of the peculiar things about this word is that no other language has its own equivalent for it: all other languages modify the Greek word.

It is possible to say, then, that the Greek term does not translate a term that originates from a different culture, but is originally Greek, and is subsequently translated into other languages and cultures.

If we look to the Greek language itself, we find that the word *philosophy* is historically preceded by the adjective *philosopher* (the Greek word is *philosophos*), and by the verb *philosophise* (the Greek is *philosophhein*), both of which were in use in the fifth century BC. The term *philosophy* only enters into the Greek language with Plato. Plato is estimated to have lived sometime between 428BC and 348BC, and so we can surmise that it is at least a century after speaking of someone as a *philosopher* that the Greeks came to identify and enquire about a specific discipline that was thus said to be *philosophy*.

Plato speaks for the first time of philosophy in the *Phaedrus*, and he presents what he baptises with this name as something distinctive and original. The necessity of coining the word *philosophy* corresponds to the discovery of a particular manner of thinking that itself has not always existed. Now, as something which has not always existed, and which is thus a discovery, this new manner of thinking both deserves and needs to be preserved. This is why Plato commits his philosophising to writing, in contrast to his teacher Socrates who conducted all of his thinking verbally. However, the form in which Plato cast his philosophy, and in which it has come down to us, indicates a difficulty for Plato, an ambiguity in his attitude towards the manner in which he is compelled to preserve the discovery of philosophy.



Employing the dramatic form of a reputedly reported dialogue, Plato writes in a way that disguises that he is writing. It is as if Plato recognises that writing is a necessary evil, and if this evil cannot be avoided, it is necessary to try to ameliorate the dangers that it harbours by techniques that reproduce the form and manner of speech.

Why is it that Plato is reluctant to write while all the time recognising that he must write in order to preserve the discovery of philosophy? What does Plato's ambivalence tell us about philosophy itself? Another way of putting these questions is to ask ourselves how the Dialogue form that Plato uses allows him to negotiate the dangers he sees as inherent in writing, and so open up and sustain – in a word, institute – the institution of philosophy itself.

### What it means to love wisdom

As a first step towards answering this last question, it is necessary to ask what the word *philosophy* actually says. According to its etymology the Greek word *philosophia* means *the love of wisdom*. The word *wisdom* is our way of translating the Greek word *sophia*, which forms the second part of the word *philosophy*. *Sophia* for the Greeks meant *knowledge* in the broadest sense. This tells us how we now understand what we suppose forms the object of philosophy, what is said to be loved by its practitioners. However, substituting one term for another like this does not really say that much; and we could again ask what *wisdom* or *knowledge* are. Nevertheless, one thing is apparent: the word *philosophy* as a whole says

something odd about the discipline that it names. We can see this if we compare it to the names used for other sciences. For example, the names *biology* and *physics*, which are both originally Greek words, tell us what is studied by these disciplines – living things and moving things respectively. But philosophy does not just tell us what is studied, it also names a disposition on the part of its practitioners – they *love* wisdom. In order to get a better idea of what *wisdom* actually means in this context we will have to follow this clue, and consider the disposition towards wisdom that is named love.

The verb *philein*, which comprises the first part of the word *philosophy*, means *to love*. When we speak of love we can mean many things, some more elevated than others. Yet in its most genuine sense we speak of loving something when we are bound to what we love in such a way that we give ourselves over to it, and allow it the possibility of being what it is. A parent's love for a child is such that it always seeks to allow the child to develop to their fullest extent, to flourish, and to realise their true potential. Understood in this way love is always something that is difficult to realise and sustain, for it means overcoming our own particular desires and ambitions in order to let the person that we love be what they are.

Thus, when Plato speaks of philosophy, he is speaking of a genuine inclination towards *sophia*, towards understanding or knowledge, which allows it to be what it is. However, if we follow further what Plato says about this love of *sophia*, we find something that is at first glance puzzling, and which seems to contradict what I have said about the genuine nature of love. In the



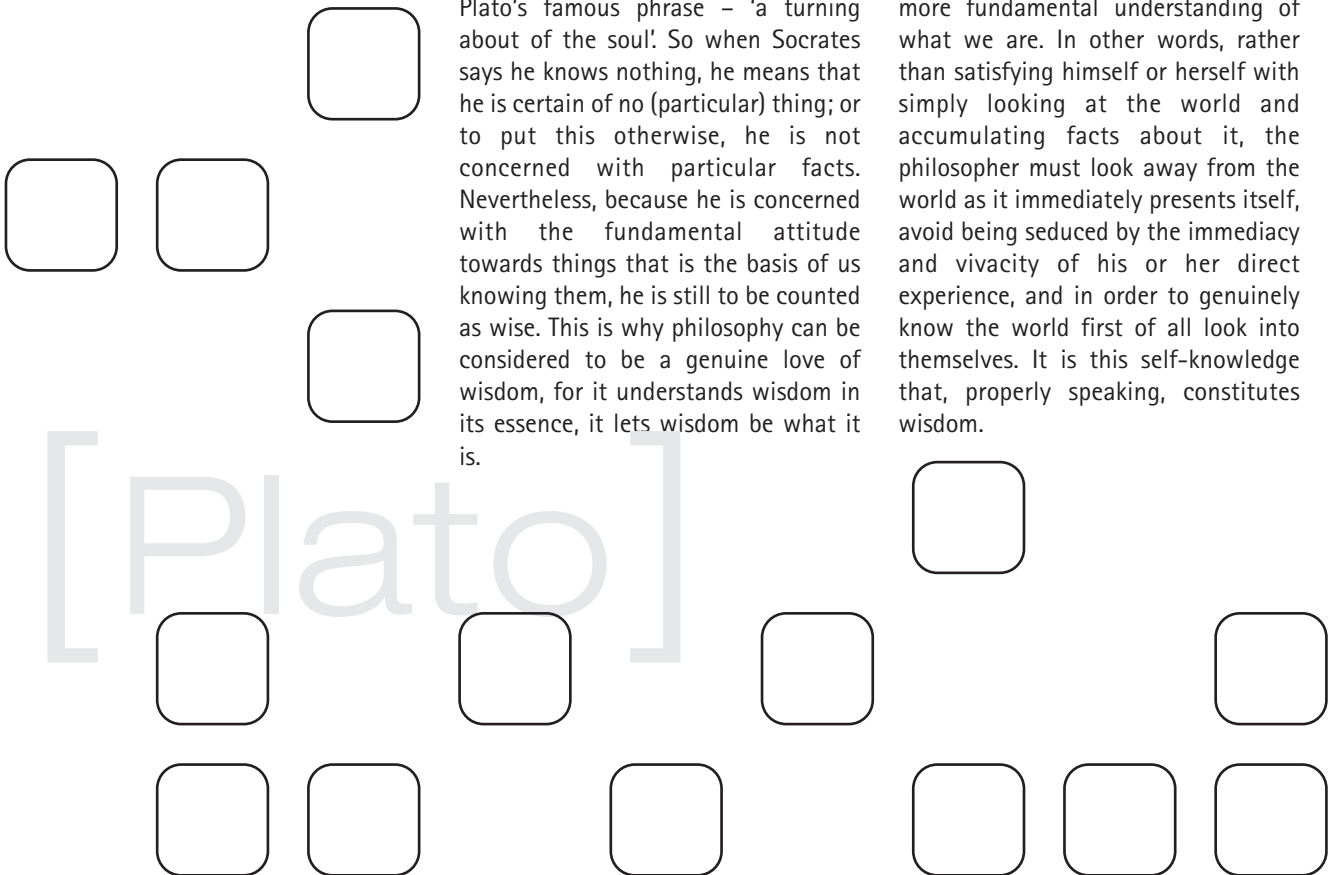
*Phaedrus* Plato has Socrates declare that the *love of sophia* is *erotic*. But, what we should note is that Plato has in mind a fuller understanding of the erotic than something simply sexual. Where we only understand the erotic in a sexual sense we have lost something of the richness of Plato's thought. Socrates goes on to say that eros "is... desire".<sup>1</sup> The term 'desire' translates the Greek word *epithumia*. *Thumos* is Greek for the *heart* or the *soul*; and *epi* means *towards*; thus *epithumia* means a movement of the heart or soul towards something. Although love is a desire, and implies a longing for and movement towards something, it is not simply a longing that comes from the senses, it is a longing and movement of what is essential in the human being, its soul or heart.

Thus, for Plato, philosophy is a movement of the heart or the soul after wisdom. Because the heart or the soul must strive after wisdom it means that it does not possess such wisdom immediately. Certainly the heart or soul must lack wisdom in order to feel the need to strive after it, but this does not necessarily mean that it is entirely

ignorant; it can only undertake to strive after what it does not possess if it knows that it lacks it. For this reason Plato says that the philosopher – whose soul realises what it lacks – stands somewhere “between the wise and the ignorant”.<sup>2</sup> It is for the same reason that he has Socrates accept the declaration of the Delphic Oracle that he, Socrates, is the wisest man in all of Athens with the qualification that if he is wisest it is because, unlike most men, he knows that he knows nothing. In effect what Socrates says is that he is a human, and like all humans he is lacking understanding or genuine knowledge, and yet unlike most other humans he recognises his own ignorance, and so at least is in a position to strive after wisdom.

There is however another reason why Socrates can maintain a claim to wisdom whilst still acknowledging that he knows nothing, a reason that will allow us to draw together all that we have so far said about philosophy. Philosophy is the striving on the part of the human being for what it does not possess. For Plato, as we have seen, what strives towards wisdom is the heart or the soul. The heart or soul is the very essence of the human being. In this sense, the word *philosophy* does not name an object that is studied; it names what genuine study and understanding involves – a movement of the soul, a movement of the human being in its true being. Thus philosophy can never be simply the acquisition and storing up of facts. Rather it is most properly a transformation of the being of the human being, a movement – or in Plato’s famous phrase – ‘a turning about of the soul’. So when Socrates says he knows nothing, he means that he is certain of no (particular) thing; or to put this otherwise, he is not concerned with particular facts. Nevertheless, because he is concerned with the fundamental attitude towards things that is the basis of us knowing them, he is still to be counted as wise. This is why philosophy can be considered to be a genuine love of wisdom, for it understands wisdom in its essence, it lets wisdom be what it is.

Thus, what Plato grasps is that prior to any acquisition of positive facts about things, wisdom is constituted by our attitude towards the world and ourselves. Plato sees that at bottom genuine knowledge of the world can only be attained if we first of all understand what we are, and on that basis the way in which we relate to the world. How we think of ourselves, or just as significantly, what we unreflectively presume about ourselves, is so fundamental that it conditions how we understand our particular experiences, and so what we accept as facts about the world. It is only if we dispose ourselves towards a genuine self-knowledge can we genuinely grasp anything about the world. For Plato, then, it is the case that in order to know the world we must first of all take a step back from it, and underpin all our facts with a more fundamental understanding of what we are. In other words, rather than satisfying himself or herself with simply looking at the world and accumulating facts about it, the philosopher must look away from the world as it immediately presents itself, avoid being seduced by the immediacy and vivacity of his or her direct experience, and in order to genuinely know the world first of all look into themselves. It is this self-knowledge that, properly speaking, constitutes wisdom.



## The Problem of Writing

For Plato to philosophise is to move or displace the soul, to tear it away from its immediate absorption in the world, and turn it around through philosophising itself. Another way of putting this is to say that philosophy changes the way in which the human being looks at the world, and it is therefore able to change effectively and properly the world that is looked at. When the love of wisdom is understood as Plato understands it, it is the highest instance of human activity, what properly allows human beings to change and to realise their own greatest and truest possibilities. Philosophy, for Plato, is the greatest of all activities because it is the most active of all activities, before which and without which all other activities amount to nothing. In other words, philosophy is the highest form that human life can take.

All of this, however, presents Plato with a problem. Because philosophy is the highest of all human activities, it is also the one that is susceptible to the greatest corruption and misunderstanding. In Plato's eyes such corruption and misunderstanding was already exemplified by the ready confusion of philosophy with what was known in the Greek world as *sophistry*. The practitioners of *sophistry* were known as *sophists*, and yet for Plato the name *sophist* is entirely ironic: The sophists were not wise, but only supposedly wise. They relied on rhetorical trickery in place of genuine understanding in order to persuade an audience or interlocutor of their claims, and thus profited by both their own and their audience's or interlocutor's lack of understanding. Plato, and before Plato, Socrates suffered grievously from confusion

with the sophists, and more importantly for Plato, so did philosophy.

The paradox that Plato faces, then, and that the Dialogues negotiate, is that philosophy's susceptibility to corruption and misunderstanding is not lessened but augmented by the attempt to preserve it in and through writing. To make this clearer it is first of all necessary to distinguish the way in which philosophy can be corrupted by the very attempt to preserve it in written form from the way in which factual information can be corrupted in being written down. It would seem that in writing down a factual observation, and thus preserving it, whatever corruption occurs is entirely accidental to the fact itself – that is to say, there is always the possibility that the observed fact is wrongly transcribed. In contrast to this, the corruption that philosophy can always suffer in its written preservation is one that can affect it even when it is accurately transcribed. This is because philosophy is not a factual discipline and is not concerned with the accuracy of facts, but a disciplining of the essential nature of the human being. When philosophy is corrupted, what is subject to corruption is this disciplining of the essential being of the human being that philosophy seeks to effect.



Of course Plato recognised this. In the *Phaedrus* Plato famously has Socrates contrast the virtues of spoken dialogue with the weaknesses of the written word. For all that it promises to extend wisdom and memory the written word really threatens them, for it offers only the appearance of both. Writing, Plato suggests, suffers from a lack of intelligence; it cannot answer to interrogation, nor can it discriminate amongst those who read it. Because of these inherent failings, and in contrast to the spoken word which always presupposes the presence of speakers, it can neither provide intelligence nor provide for it, and thus it always is susceptible to offering the appearance of understanding without its reality. Thus, as Plato says, it is always possible to read many things without instruction, and so appear to know many things whilst remaining inwardly ignorant.<sup>3</sup> The preservation that writing offers is external and mechanical, for it is not based in, and itself does not inform, a genuine understanding. We know this distinction between external memory and genuine knowledge from contemporary educational principles, which are informed by Plato's insights. For example, we recognise that whilst children can be made to memorise their times-tables, it is preferable that they be brought to understand the principles of multiplication and thereby liberated from a reliance on facts that they cannot understand and cannot go beyond. Similarly, and in short, writing can always provide information without that it necessarily disposes anyone who reads it towards genuine knowledge. It threatens to replace an active understanding with a passive memory, and in itself lacks the resources to effect the movement of



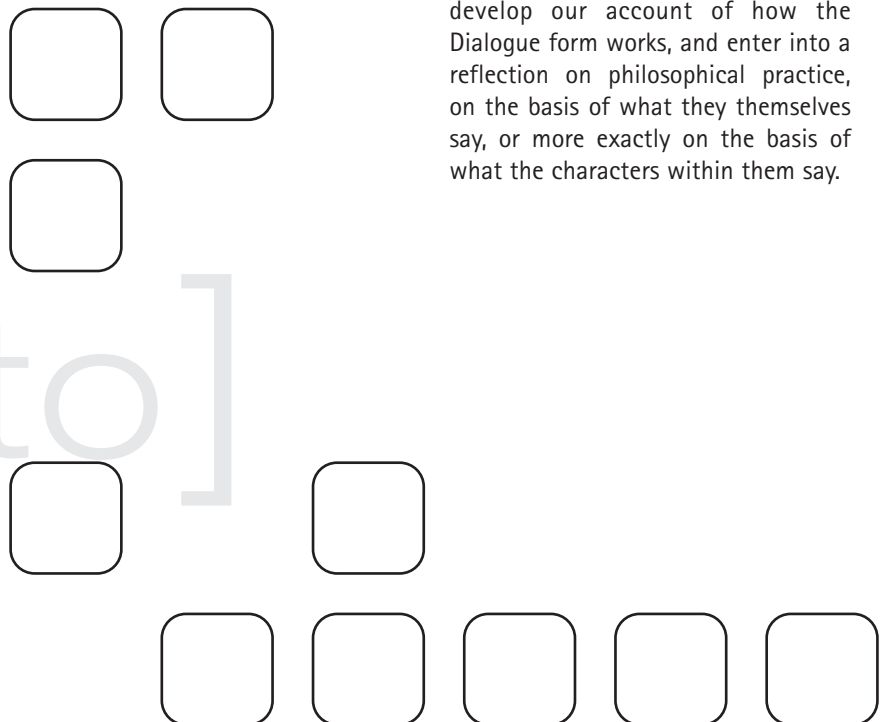
the soul that is essential to all active, genuine philosophical comprehension.

## The Dialogue Form

Having outlined why Plato finds writing a danger to philosophy, we can return to the consideration I brought up at the beginning of this essay. There I said that by adopting what we might call a dramatic form, by simulating dialogue, Plato writes in way that attempts to disguise that he is writing, and thus it is as if he writes without wanting to write. We can now appreciate this reluctance to write as a positive feature of Plato's work that has its own philosophical justification. Wanting to preserve the possibility of philosophy Plato has to write, yet he must write in such a way that he does not betray that possibility by seeking to preserve it: he must write without writing. To push this appreciation further, it is necessary to try to see how the Dialogue form allows Plato to avoid the dangers he sees in writing.

One of the distinctive traits of the Platonic Dialogues is that often they do not just report a conversation, but stage themselves as reported reports, or even as reports of reported reports. For example, whilst in the *Euthyphro* Plato simply reports Socrates' purported discussion with Euthyphro, in the *Phaedo* Plato reports Phaedo's report of Socrates' discussion with his friends on the day of his death. In the *Theaetetus* the successive embedding of report in report is yet more involved. Such sophisticated staging of the Dialogues is an indication that Plato aims at something more than merely recording Socrates' conversations.

Now one reason why Plato stages the Dialogues in this way is to avoid the dangers he sees as implicit in writing. As we have already noted, for Plato the problem with writing is that it lacks intelligence: it knows not whom to speak to or not to speak to, it has no power to protect or help itself.<sup>4</sup> To discover how this staging helps Plato avoid the dangers of writing we do not have to look very far, for not only do the Dialogues answer to those dangers, the characters themselves sometimes bring up a similar problem and give a response to it themselves. In other words, Plato sometimes dramatises within the Dialogues the problem that the Dialogue form itself answers to. By having his characters reflect on writing, and on the most appropriate form for philosophical discussion and argument, by embedding a sort of implicitly reflexive commentary on his own practice within the Dialogues, Plato invites us, his readers, to think about what he is *doing* as much as about what he is saying. Thus we are able to develop our account of how the Dialogue form works, and enter into a reflection on philosophical practice, on the basis of what they themselves say, or more exactly on the basis of what the characters within them say.



In the *Sophist* Socrates asks the Stranger, who has been called upon to speak, what method of discourse he would prefer. He answers that his decision depends on the disposition of his potential interlocutor. If the interlocutor is unable to appreciate the difficulty of the discussion, or if he is dogmatic or recalcitrant, it would be better, says the Stranger, that he speaks alone. On the other hand, if this is not the case he will engage in dialogue. But even when Socrates proposes a tractable interlocutor to the Stranger, the Stranger still says that because of the inherent difficulty of the subject matter he would prefer speak alone and simulate a discussion. The Stranger then makes a proviso: after he himself has made trial of the matter, his potential interlocutor can be admitted to the discussion. In this way, those characters without philosophical experience or lacking a properly philosophical disposition are excluded from dialogue. But this exclusion is temporary, and operates in such a way that it makes their admittance to the dialogue possible; for at the same time as they are excluded they witness themselves represented in the simulated dialogue. After having witnessed themselves in the simulated dialogue, they can be admitted, or admit themselves to the dialogue by linking on to it with a question.

These characters' expulsion from the dialogue and subsequent re-admittance figures the reader's own relation to the Dialogue. Unlike an essay, for example, the Dialogue form puts off any direct, unmediated address between Plato and the reader. When certain of the Dialogues set their reports within reports, then this mediation is further mediated, and the reader pushed further back from the

direct scene. As one commentator has remarked, like the characters themselves, but more so, the reader's direct philosophical engagement is deferred by these devices.<sup>5</sup>

So far we have seen how the Dialogue form works to protect philosophy from misunderstanding and corruption by mediating its address to the reader. But this is only the negative side of Plato's negotiation of the difficulty that writing presents him with, and we might wonder if it is really sufficient to protect the institution of philosophy from its corruption if there is not also a positive way of inviting the reader into philosophy, of getting them to philosophise themselves in response to what they have read. Our next, and final, question then must be this: how do the Dialogues actually invite and secure an active comprehension by the reader, how do they promote the turning around of the soul that distinguishes the discipline of philosophy?

## The Allegory of the Cave

This final question is one that concentrates every point so far considered. To make this clear it can be put in the following terms: how is the reader, who is potentially outside of philosophy, outside of the dialogue, introduced into philosophy?

In Book VII of *The Republic* Plato has Socrates relate what is known as the *Allegory of the Cave*. This allegory represents the idea of a philosophical education. It pictures people as dwelling in a dark, underground cave, and as fettered by chains. Humans are thus shown to be in a state lacking in enlightenment and as imprisoned.

Moreover, they do not recognise the state they are in: they are ignorant of their condition, and held captive by their own ignorance. Philosophy is shown to offer an escape from this condition, and to have the potential to free humans from their state of captivity, turning them away from the immediate concerns that captivate them, and leading them to an understanding of the truth of their own situation and their own being.

Now, Socrates has first of all to recount the idea of a philosophical education as an allegory so that those he tells the story to in the Dialogue can have some understanding of what he is talking about. But over the characters shoulders, so to speak, and by way of Socrates, Plato is addressing the reader of the Dialogue. Thus the *Allegory* also aims to show us, Plato's readers, in the clearest and most concrete way possible what the essence of a philosophical education consists in.

At first glance it might appear that all we, Plato's readers, need to do is interpret the *Allegory* (which I have just done), substituting for its pictures and images the meaning that they represent. However, if we think this is all that is at issue in the *Allegory*, then we miss its true purpose. If the *Allegory* is to work, it needs to do something more than just picture to us the essence of philosophical education: it needs to educate us. In other words, as philosophical in itself Plato's account of the essence of philosophical education must not only illustrate, but exemplify what such an education consists in. It must effect an introduction to philosophy, it must produce as much as picture the turning about of the soul that is the essence of philosophical education.

Thus the truth of the *Allegory* lies not in its abstract meaning, but in its own ability to effect a movement of the soul.

Perhaps we all have some sense that a simple interpretation of the meaning of the *Allegory* does not suffice to account for its truth and purpose. It is my experience when teaching the *Allegory* that the majority of students are initially unconvinced by the picture it presents. But such resistance and scepticism is precisely what Plato sets out to provoke on the part of his reader, and this resistance and scepticism is first of all found in the characters that listen to Socrates' *Allegory*. Thus Plato actually draws upon the reader's inclination to resist the very picture that Socrates draws, in order to initiate the movement of the soul that philosophy demands.

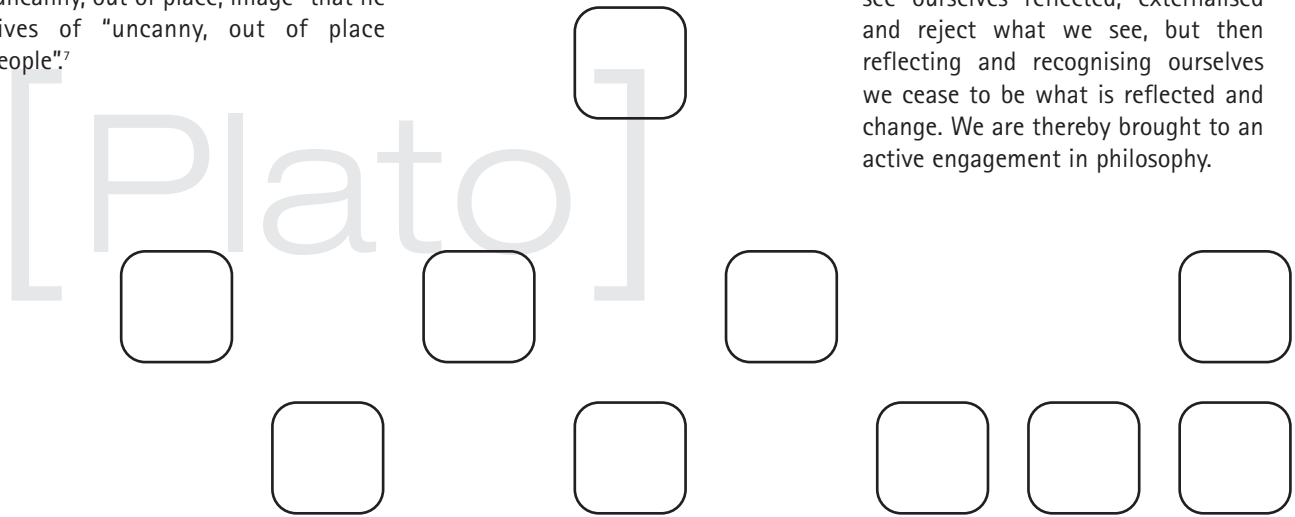
Socrates begins the *Allegory* saying, "Imagine – picture this! Men dwelling in a sort of underground cave..."<sup>6</sup> The imperative, 'Imagine' is, of course, indeterminate in its addressee – it addresses both the characters that Socrates speaks to in the Dialogue, and also the readers of the Dialogue. Glaucon, one of those characters to whom Socrates speaks, responds to Socrates' picture by saying that it is an "uncanny, out of place, image" that he gives of "uncanny, out of place people".<sup>7</sup>

What is it that is so strange about this image? Why is it said to be "uncanny" or "out of place" by Glaucon?

In the first instance Glaucon's reply could be said to anticipate the reader's. The image that Socrates presents is "out of place" because it does not accord with our experience, and so is unbelievable. Socrates' response to Glaucon appears to want to confront his scepticism. The people in the image, Socrates says, are "like us".<sup>8</sup> In other words, the image is 'uncanny' because of its less than obvious proximity to our own situation, because it presents something to us that we initially are wont to overlook. According to Socrates, then, the image portrays us, human beings, as we truly are, and it initially appears uncanny, strange, out of place, unbelievable, because "we" find in it something unfamiliar, something "we" do not recognise in our experience and situation.

How convincing is Socrates' response? In fact it is not necessary that Socrates' response to Glaucon should command our assent; in fact the opposite is the case. Should this counter-claim excite even more resistance and disbelief on the part of the reader, then it has done its work.

The more that "we", Plato's readers, refuse or are unable to see ourselves in the image that Socrates presents of these uncanny people, the more closely we resemble them. Just like them, we refuse the picture that philosophy offers us of our situation. However, as soon as we reflect that our own attitude not only reflects Glaucon's astonishment, but also the hostility of the prisoner's depicted in the *Allegory* towards the philosopher and towards philosophy, then we cease to resemble them. The less that we think we are like the people pictured the more we are, and the moment we see ourselves in them, then we distance ourselves from them. It does not matter so much that we accept everything that Socrates says, in fact that is not the point at all. Rather the point is that we initially refuse it, and then reflecting on that refusal actively begin to question not what Socrates says, but ourselves. If we recognise in ourselves a likeness to the prisoners insofar as we resist what Socrates says, then we actually initiate the philosophical movement of questioning ourselves. We no longer trust the way that we appear to ourselves, and in doing so we cease to be what we were. In the *Allegory of the Cave* Plato intends that we first see ourselves reflected, externalised and reject what we see, but then reflecting and recognising ourselves we cease to be what is reflected and change. We are thereby brought to an active engagement in philosophy.



## Conclusion

The institution of philosophy that Plato institutes is shaped by a mode of address that is in principle open to anyone. The book, the written word, can be taken up and read by anyone, and this throws philosophy open to corruption and distortion. However, the Dialogue form operates to overcome this potential corruption and educate its readers philosophically in the absence of the philosopher. The *Allegory of the Cave*, which for many students stands at the entrance to philosophy, exemplifies this. The *Allegory* works in such a way that "we", its readers, are immediately implicated in it; but if, in the first instance, it speaks about us, then in our reflection upon it, we come to speak with it. It draws for us a picture of philosophical education, and operates in such a way that we are always already caught up in philosophy, and the philosophical disposition towards truth. The *Allegory* does not simply state the truth; it produces the movement towards truth in its readers. It takes hold of those who read it, and above all those who are resistant to what it says, folds them within itself, turns them around, and converts their speech. Henceforth, thanks to the *Allegory*, and the exemplary teacher that Plato is, we are all, each in our own way, philosophers.

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## Notes

- 1 Plato, *Phaedrus*, 237d, (trans. H.N. Fowler, Cambridge Mass: Loeb Classical Library, Harvard University Press, 1995).
- 2 Plato, *Symposium*, 204b, (trans. W.R.M. Lamb, Cambridge: Mass., Loeb Classical Library, Harvard University Press, 1989).
- 3 Phaedrus, 275a ff.
- 4 See Plato, *Phaedrus*, 275e
- 5 cf. Jean-François Lyotard, *The Differend: Phrases in Dispute*, pp 24 – 26, (trans. G. Van Den Abbeele, Manchester: Manchester University Press, 1988). In discussing the implications of the technique of distancing the reader from the matter of the Dialogues I am indebted to Lyotard's account, which despite its density and difficulty I recommend to anyone interested in this aspect of my essay. To any reader more generally interested in the implications of Plato's use of the Dialogue form, I would recommend the chapters on Plato in Martha Nussbaum's *The Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy*, (Cambridge: Cambridge University Press, 2001), in particular the chapter entitled 'Plato's Anti-tragic Theater', pp. 122 - 135
- 6 Plato, *The Republic*, 514a, (trans. P. Shorey, Cambridge Mass., Loeb Classical Library, Harvard University Press, 1994)

7 Plato, *The Republic*, 515a. I have modified the translation here, preferring to render the Greek word *atopon* more literally than does the P. Shorey. Shorey translates it as "strange", whilst I have preferred "out of place", and thus "uncanny". The literal meaning of "atopon", is something like "out of place" or "without place", which we might otherwise translate as "lacking all reality", or "unbelievable".

8 Plato, *The Republic*, 515a.

**Arif Ahmed**

# [On Quine]

Language is the most interesting and complex of all artefacts; it is the task of philosophy to understand its nature. It is an astonishing fact that you can glance at a sequence of ink marks on a page and thereby learn something about Julius Caesar or the Andromeda Galaxy. Our astonishment is naturally dimmed by familiarity. But familiarity is not an explanation. How can marks on a page somehow be connected to objects distant in space and time? Language shares this ironic situation with money: that we humans have invented it, and yet we don't understand how it works.

Quine's article "Two Dogmas of Empiricism" gives us an elaborate, ingenious and surprising solution to the problem. Here I aim to give a brief account of Quine's leading thesis, preceded by an introduction to its philosophical context and followed by an account of some of its consequences. The latter will relate not merely to the nature of language but also to that of man and his place in the world.

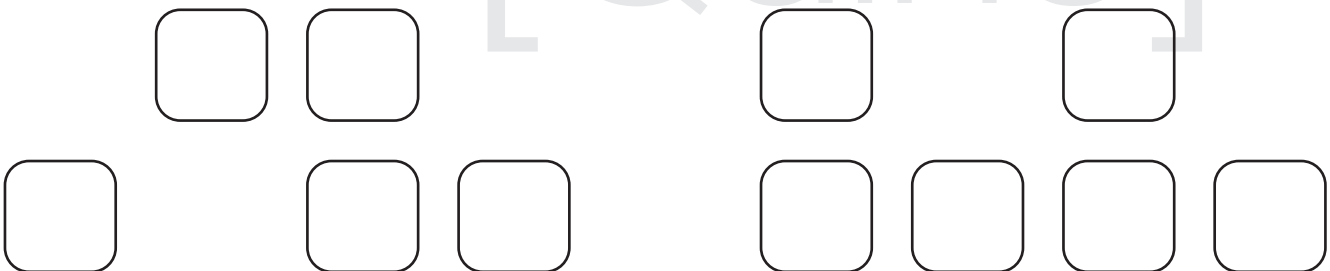
## 1. Words and their meanings

If you asked somebody in the street how language works the answer would run like this. "Language is made up of words. Every word stands for something. When we read or hear a word we think of the thing that the word stands for e.g. when I hear "Julius Caesar" I think of that man. That is how words get their meanings."—But this rather natural account is mistaken on almost every point.

First of all, is it true that every word stands for something? You might be thinking of words like "Julius Caesar"; but language contains more than just proper names. What about words like "if" or "why"—is there anything that they stand for? You can point to Julius Caesar in some sense, I suppose—but you can't in that sense point to if.

Second, it just isn't true that whenever I hear a word I think of the thing, if there is one, that it stands for. If in the everyday flow of conversation I said something like "I'm going to London tomorrow", there is unlikely to be an isolable mental event describable as the having of a thought about London. You might reply that there was, but it went by so quickly that I didn't notice it. But the motivation to make that reply is only this: that the explanation of how "London" means something must have something to do with what I'm thinking about when I say London—what else could explain it? But when an alternative account is available we shall no longer feel a need to say such things.

[Quine]



Third, saying that you "think about" e.g. London doesn't help anyway. What is probably meant is that one forms a mental picture of London. But pictures are a kind of language too, and now the problem arises again: what is the connection between a picture of e.g. Big Ben and the city, London? The problem is the same whether the picture is on paper or "in" the head so saying that the picture is "mental" doesn't help a bit.

## 2. Sentences as the unit of meaning

How are we to replace this rather naïve and, more importantly, false account? Think of the French word "ne". There is no single English word that translates this. For in the context *ne...rien* it translates as "nothing" whereas in *ne...que* it translates as "only". And yet English speakers can still learn the meaning of the word.

**How can this be?**

The answer is obvious. What English speakers learn is primarily a rule for translating whole French sentences containing "ne" into English sentences. It isn't that the word "ne" has meaning on its own but rather that it has meaning in the context of a sentence. Its meaning is exhausted by its contribution to the meaning of sentences containing it.

Suppose we said the same about all words, English and French (or whatever). It isn't that each word stands for its own object: it is rather that words play a role in determining the meanings of sentences, and it is the meaning of sentences that is primary.

This approach solves the first problem; the other two do not yet arise. We are

no longer under any compulsion to say that every word stands for something. But we are faced with a new difficulty: what is it for a *sentence* to mean what it does?

## 3. Meaning and Empiricism

I said at the beginning that language is a human creation. On the one hand this makes it perplexing that there is a general problem about how language works; on the other it provides the wherewithal for its solution. It is we who associate sentences with their meanings, whatever these are; therefore it must be something that we, collectively or individually, *do* with sentences that endows them with the meanings they have. (Just as it is something that we collectively do with pound coins that endows each of them with the value it has.)

Indeed, the naïve account was along these lines, though it spoke of words and not sentences. It said that what we do is associate the words with the objects they denote, the association being effected by one's having thoughts about an object concurrently with hearing a word that stands for it. Historically associated with this account, though detachable from it, was an empiricist theory of mental content which I shall now outline.

Empiricism is essentially the doctrine that the objects of our knowledge and indeed of our thought are simply the objects of our senses. You would never e.g. be able even to think of the colour blue unless you had seen a blue thing. "But surely we can think of things we have never seen e.g. unicorns?" Yes, but you *have* seen the parts of a unicorn: you have seen the horn on a

rhinoceros and the rest of it on a horse. Early empiricists e.g. Locke elaborated this picture with a kind of inverted Platonic imagery: the mind is a darkened chamber and the sense-organs windows through which we receive ideas<sup>1</sup>. The image is a natural one, and, if we accept the naïve account, so is the consequence that the meanings of our words – the thoughts we associate with them – are sensory objects.

There are now three doctrines in play: empiricism, the sentential conception of meaning, and the idea that it is something we do with linguistic items that gives them meaning. Taken together, these lead naturally to the following picture. A sentence, if it expresses a thought, must be about some situation to which we have sensory access. We endow sentences with meaning by associating them with sensory impressions, or sequences of sensory impressions; the sensory sequences associated with a sentence are those that would bring a speaker to assert, or at least be prepared to assert, the sentence in question. For example, the meaning of the sentence "there is a dog in the room" is that sensory sequence which would bring you or me to say "there is a dog in the room": typically, the experience of seeing the right kind of animal, or hearing a bark etc.

This simple empiricist account is an approximation to the "verification principle", for which A.J. Ayer gave no justification, but from which he drew many entertaining consequences, in his famous book *Language, Truth and Logic*. I have indeed not given an argument for the account: but we can at least see the pressures that make it seem plausible. And the consequences are entertaining indeed. Much of what we say has to be ruled devoid of literal

meaning. The statement that God exists, for example, is not false but meaningless, at least if you think that God's existence isn't something we can settle with our sense organs. Statements of mathematics are also meaningless and for the same reason: for we tell that they are true by proof and not by some empirical i.e. sensory method.

Finally, much of traditional metaphysics is meaningless: for what sequence of sensory impressions could tell you e.g. whether the mind was different from the brain, or whether time has a direction? Far from rejecting these consequences Ayer drew them. But they are incredible; so, therefore, is the verificationism from which they follow.

It was Quine who saw that there is something deeply wrong with this picture. In "Two Dogmas of Empiricism" he manages to extricate empiricism, and the empiricist conception of meaning, from all these difficulties.

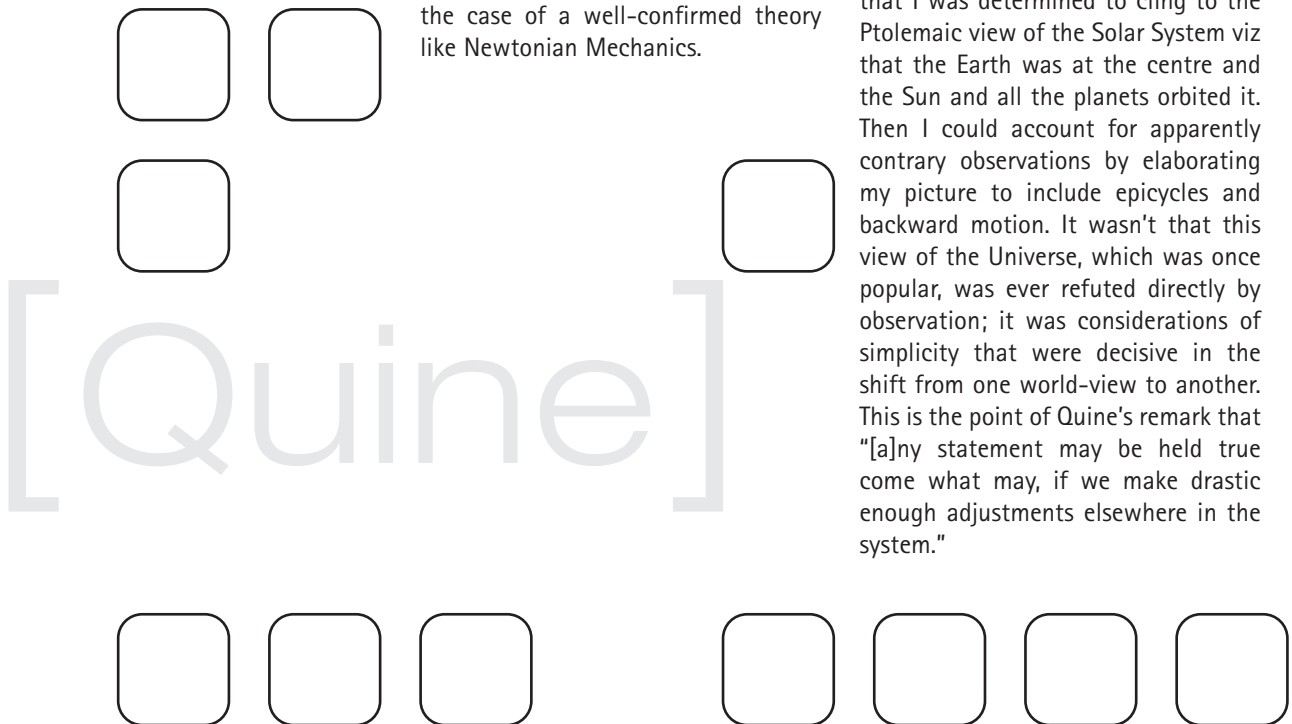
#### 4. The Quine-Duhem Thesis

Suppose you are doing an experiment to test a certain theory. Suppose e.g. that the theory predicts the following: whenever you drop a ball from a height of 60ft it will hit the ground at a speed of about 40mph. You drop the ball and measure the speed; you find that it is about 25mph. Should you conclude that the theory is mistaken?

It is unlikely that you will. What is more likely is that you will think that your measuring instruments were faulty or that you made an error in setting up the experiment or in taking the readings. This is especially so in the case of a well-confirmed theory like Newtonian Mechanics.

We modify our beliefs about the world in response to our observations. But the point I want to make is that for any given observation there is no unique way to modify our beliefs. We are always in the position of having to choose which belief to modify in the face of any given observation. And nothing in the observation itself tells us what modification to make. For example in the case above, nothing in the observation you made tells you whether to reject Newtonian mechanics or the hypothesis that your measuring instruments were working correctly.

You might say that in the example given, we could decide what modifications to make by making further experimental observations e.g. by testing the measuring apparatus in a variety of other situations. But these observations too will yield no unique verdict: for in each case, and whatever the observation, we could retain any hypothesis simply by dropping others. Suppose, to give another example, that I was determined to cling to the Ptolemaic view of the Solar System viz that the Earth was at the centre and the Sun and all the planets orbited it. Then I could account for apparently contrary observations by elaborating my picture to include epicycles and backward motion. It wasn't that this view of the Universe, which was once popular, was ever refuted directly by observation; it was considerations of simplicity that were decisive in the shift from one world-view to another. This is the point of Quine's remark that "[a]ny statement may be held true come what may, if we make drastic enough adjustments elsewhere in the system."



This point, that we can modify our beliefs in any number of ways in the face of any given sensory input, is known as the Quine-Duhem thesis. In the next section we shall consider its relevance to the problem at hand, namely, the difficulty with the verificationist account considered above.

## 5. Holism

According to the account in section 3, the meaning of a sentence is that sensory experience or possible sequence of sensory experiences that confirm it. But what the Quine-Duhem thesis tells us is that there is no way to assign such sequences to any particular sentence. For it all depends on what *other* sentences you believe at the time. We said e.g. that the sentence "there is a dog in the room" was to be associated with certain canine appearances and sounds, because those are the experiences that lead me to assent to the sentence "there is a dog in the room". But suppose I also believed that there was a very good dog impersonator in the room. In that case, the sensory experience of hearing a bark would *not* lead me to believe that there was a dog in the room. More generally, for any given experience or sequence of experiences, there is no answer to the question: what sentence will this lead me to assent to? It all depends on what else you believe at the time.

It follows that what was wrong with the verificationist account was its assumption that each sentence has its own sensory meaning, independently of what other sentences are accepted at the time. Instead, we should say that meaning attaches, not to individual sentences, but to the entire

body of one's beliefs at any given time ("belief" meaning a sentence that you are disposed to accept.). Saying "What sentence corresponds to such and such sensory experience?" is like saying "In what part of a man's body is he happy?" Meaning is a holistic feature of language, just as happiness is a holistic feature of a man's body.

Thus we have moved beyond the position advocated in section 2. There, it was urged that sentences are the units of meaning: a word has meaning only in the context of a sentence. In the light of the Quine-Duhem we must go one step further. The unit of meaning is the totality of sentences one accepts: only in this context do any individual sentence have meaning. This position is known as semantic holism and it represents the refined empiricist conception of meaning that we find at the end of "Two Dogmas of Empiricism" (ssV-VI).



The position can be expressed using Quine's metaphor of the web. A web is secured at its periphery; strain at some point on its edge will lead to an adjustment of tensions within the web, but it isn't a simple matter to say what that distribution is. The edge of the web corresponds to those sentences that have the most direct confrontation with experience; that is, sentences whose method of experiential verification has the smallest dependence on the other beliefs you hold at the time. "There is a dog in the room" is not peripheral, for its method of verification depends on what other beliefs you hold (e.g. that there is no dog-impersonator in the room). "There is a barking noise nearby" is peripheral: its method of sensory verification will be pretty much uniform whatever other beliefs you hold at the time. As we travel deeper and deeper into the web, we find statements that have a more and more tenuous connection with any particular sensory impression. They do, nevertheless, have some empirical meaning; it is just that this meaning is highly sensitive to whatever other beliefs you hold at the time.

Deep within that web are those statements that Ayer thought had no literal meaning: logic, mathematics and philosophy. Statements like "2+2=4" have no direct connection with experience; Quine differs from Ayer, however, by saying that they do have an indirect connection. For in combination with other sentences they will yield empirically testable consequences. For example: if we take the sentences "There are two coins in my left pocket", "There are two coins in my right pocket" and "2+2=4" we get the empirically testable prediction that there are 4 coins in my trousers. If I find that there are in fact three coins,



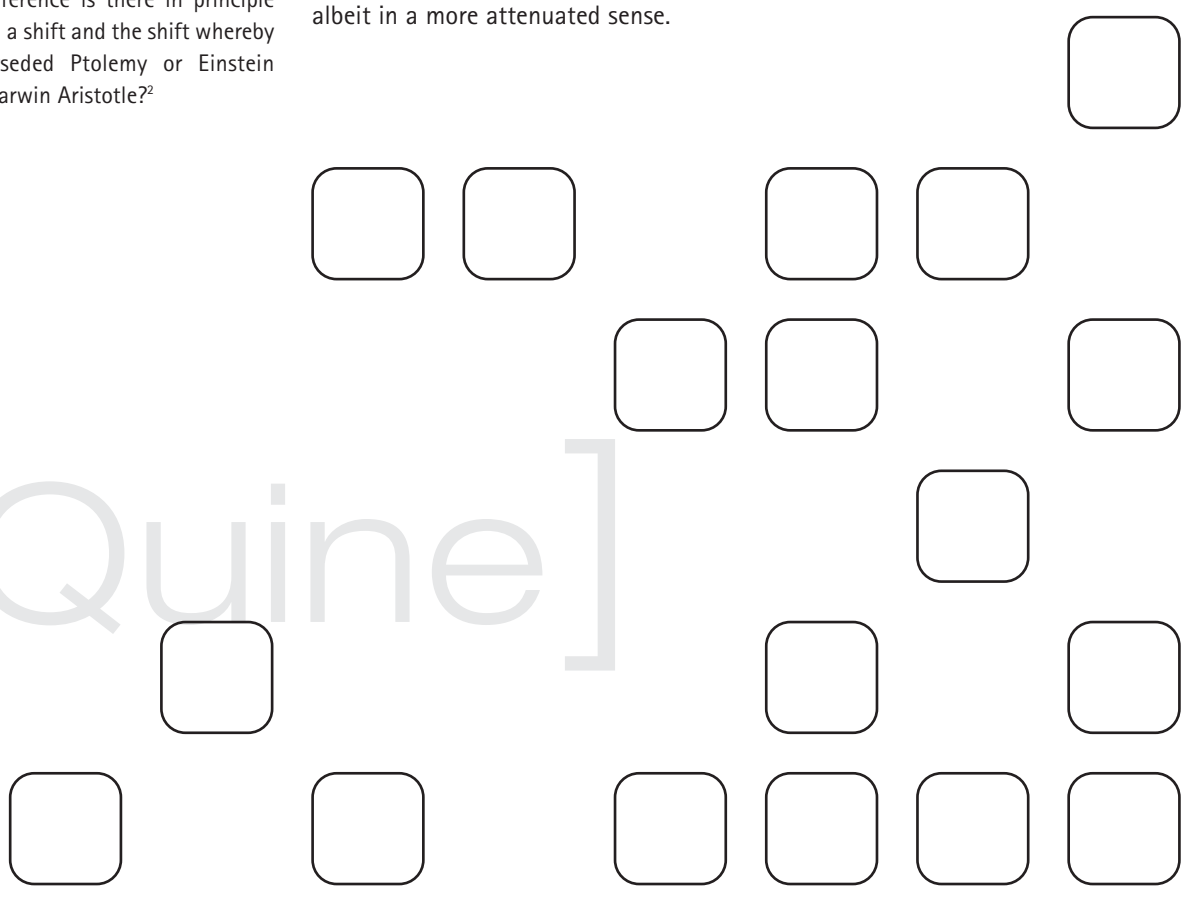
I shall have to drop one of those statements: but nothing in the observation tells me which to drop: it might even be "2+2=4". Thus Quine summarises his position like this:

If this view is right, it is misleading to speak of the empirical content of an individual statement – especially if it be a statement at all remote from the experiential periphery of the field... Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. Conversely, by the same token, no statement is immune to revision. Revision even of the logical law of the excluded middle has been proposed as a means of simplifying quantum mechanics, and what difference is there in principle between such a shift and the shift whereby Kepler superseded Ptolemy or Einstein Newton, or Darwin Aristotle?<sup>2</sup>

We can now see that Quine has extirpated the weakness of verificationism. Remember that the difficulty, as we saw at the end of section 3, was that a large swathe of language would have to be declared literally meaningless, on the grounds that the sentences involved had no sensory meaning. But on Quine's view, *no* sentence has its own sensory meaning: it is only a large body of sentences taken together that we can test empirically. If so, then even "metaphysical" sentences like "God exists" or "Time flows" stand a chance of having sensory meaning: and they will be true if they form part of a body of sentences which, taken together, yield a sufficiently simple and empirically correct account of things. Thus Quine's view is rather more tolerant than Ayer's is, for it admits meaning to many more sentences, albeit in a more attenuated sense.

By the same token, even those sentences that we hold most dear, such as laws of logic and mathematics, might be given up in the face of sufficiently disturbing sensory inputs. We find this difficult to accept on the grounds that we cannot imagine experiences that would lead us to say e.g. "2+2=5". But those grounds rely on the assumption that the sensory conditions that would lead us to drop a statement are fixed and independent of what else we believe; and, as we have seen from the Quine-Duhem thesis, this simply isn't so. The disturbing idea that logic itself (sentences like "Either the particle has gone through the left slit or it hasn't") might be amended has indeed been borne out in the light of the sensory experiences of scientists investigating the quantum world.<sup>3</sup>

[Quine]



## 6. An Objection

This view of language raises a rather interesting difficulty. I said that according to the Quine-Duhem thesis there is no single way to adjust our beliefs in the light of any given experience: how then do we choose among the options? One desideratum, as illustrated by the Ptolemy-Copernicus example in section 4, is that we choose the adjustments that yield the simplest account. Another is that we choose the adjustments that yield the fewest changes in our beliefs. To illustrate this: suppose I count five coins in my left pocket and five coins in my right pocket, but on emptying my trousers discover that I have only nine coins altogether. You *might* draw the conclusion that  $5+5=9$ ; and it is part of Quine's position that there is nothing in principle wrong about this. Why then do we not draw that conclusion, why do we instead infer that I must have miscounted? The reason is essentially one of conservativeness: if I were to believe that  $5+7=11$  that would require revisions among many of my other beliefs e.g. that I have 5 fingers on each hand and ten altogether. Instead, I make the adjustment in my beliefs that involve no drastic revision elsewhere in the system. This, Quine says, is what contributes to the air of necessity in logic and mathematics: we are reluctant to give them up because to do so would change a huge number of our other beliefs. And that is the only reason. It isn't that they are somehow sewn into the fabric of the universe.

So we have two considerations: simplicity and conservativeness. They are however stated in a rather imprecise way: how are we to measure the "simplicity" of a theory; how are

we to determine the number and relative importance of belief changes attendant upon a given belief change? The difficulty is that, on Quine's own principles, it appears that we cannot precisely state, in any given language, the rules for reassigning one's beliefs among the sentences of that language.

For suppose that we could. In that case, the principles would themselves be in the form of sentences, forming part of the total web of our beliefs: these sentences could also, in principle, be given up—in response to the very considerations of simplicity and conservativeness that they themselves codify. But if we can give them up, then they cannot describe our belief changing behaviour, for to give them up would be no longer to adhere to them. Thus it seems that on the Quinean picture, humans are incapable of stating the most basic laws governing their own policies of belief change. As Dummett says—we are part of the mechanism and cannot have a clear understanding of it as workings. The metaphor of the web ought to be replaced with something like that of a black hole, for your own web of beliefs is dark at the centre.

That Quine's views have this consequence might be thought to constitute an objection to them, for together with his holism it completes a rather depressing view of humanity. Science, far from providing an insightful depiction of the world, is a mere calculus for the prediction and manipulation of experience, and we who operate the calculus are in principle unable to achieve a full understanding of how we do so.

But that a view is depressing is in no way an objection to it. And even if Quine's views ultimately prove

mistaken, this conception of language, and of ourselves, at least serves the dialectical purpose of showing an alternative to another more ancient picture. —That according to which we men are created in the image of God, and like God, can achieve insight into the operation of reality through the operation of reason. For it is salutary to be reminded that we are more like animals than was once thought. And it is liberating to think that scientific "insight" into the essence of the world is not just wholly unachieved but in fact chimerical.

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### Notes

- 1 Locke, *Essay Concerning Human Understanding* II, xi, 17; the cave image appears in Plato, *Republic* vii
- 2 "Two Dogmas of Empiricism", in Hart, ed., *The Philosophy of Mathematics, Oxford*: Oxford University Press 1996: p. 48.
- 3 For an interesting but rather technical discussion of this point see M. A. E. Dummett, "Is Logic Empirical?" in his *Truth and Other Enigmas, London*: Duckworth 1978: pp. 269-289.

**Adrian Moore**

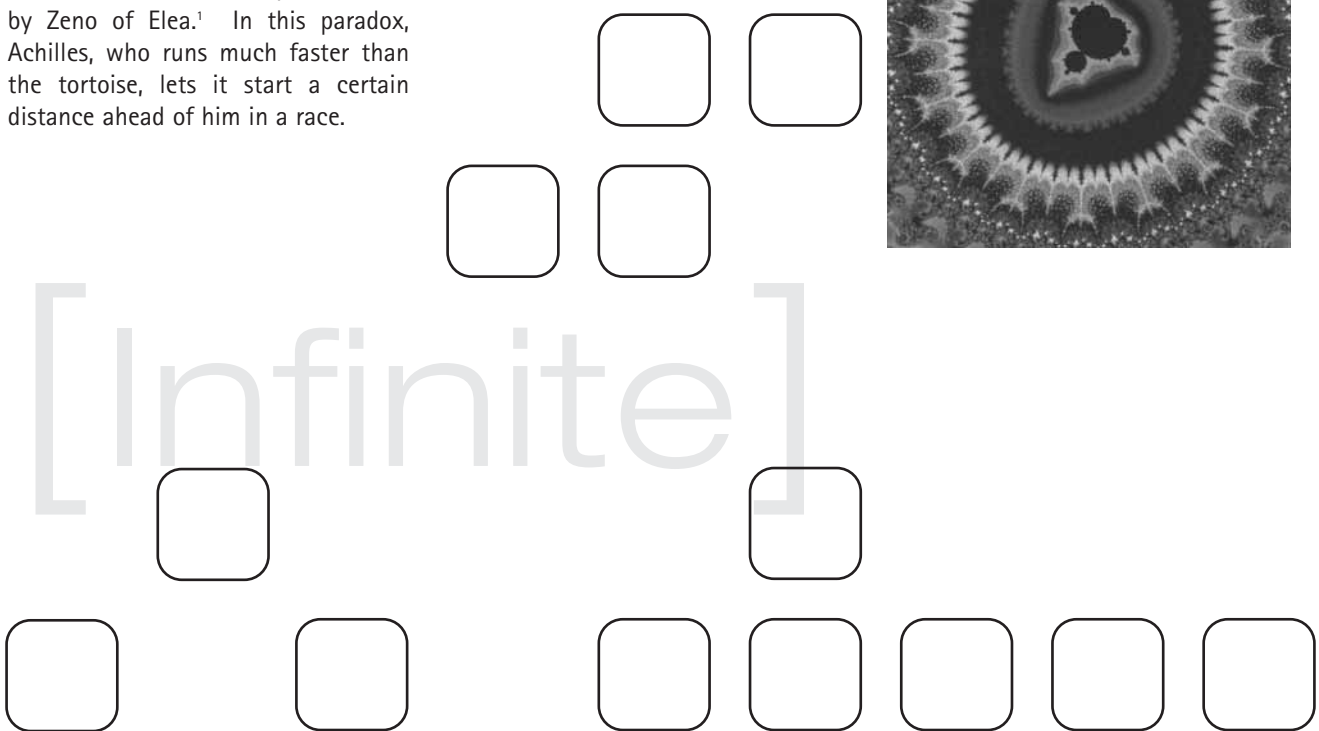
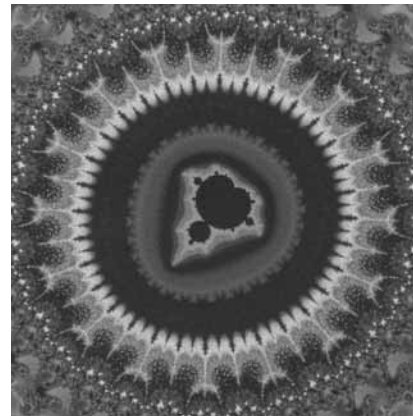
Trying to  
**[Subjugate]**  
 the Infinite

The infinite is standardly conceived as that which is endless, unlimited, unsurveyable, immeasurable. There are alternative conceptions. But let us, for the purposes of this essay, confine attention to this standard conception.

From the time of the early Greeks, the infinite, so conceived, has aroused suspicion. This suspicion has been due partly to the fact that we can never encounter the infinite in experience, and partly to the fact that the concept seems to be riddled with paradoxes. Thus there is the famous paradox of Achilles and the tortoise, formulated by Zeno of Elea.<sup>1</sup> In this paradox, Achilles, who runs much faster than the tortoise, lets it start a certain distance ahead of him in a race.

The paradox is that Achilles seems never to be able to overtake the tortoise, no matter how great the difference between their speeds. For in order to do so, he must first reach the point at which the tortoise starts, by which time the tortoise will have advanced a fraction of the distance initially separating them; he must then make up this new distance, by which time the tortoise will have advanced again; he must then make up *this* new distance, by which time the tortoise will have advanced yet again; and so on *ad infinitum*.

A closely related paradox, likewise formulated by Zeno, is that Achilles can never get from one end of the racecourse to the other. For in order to do so, he must first reach the mid-way point; he must then reach the three-quarters point; he must then reach the seven-eighths point; he must then reach the fifteen-sixteenths point; and so on *ad infinitum*.



There is also a family of paradoxes, known since medieval times, based on the principle that if it is possible to pair off all the members of one set with all the members of another, then the two sets must have exactly the same number of members. (For instance, in a non-polygamous society, there must be just as many husbands as there are wives.) This principle looks incontestable. But when it is applied to infinite sets, it seems to flout Euclid's notion that the whole is greater than the part. For example, it is possible to pair off all the positive integers with all those that are even. We can pair off 1 with 2, 2 with 4, 3 with 6, 4 with 8, and so on.

(The mathematician Hilbert, who used to lecture on the infinite, gave vivid expression to such paradoxes by inviting his audience to imagine a hotel with infinitely many rooms. He supposed that one night, when the hotel was fully occupied, a traveller turned up, seeking a room for the night. Despite the fact that the hotel was fully occupied, a room could be found for this traveller. For the person in Room #1 could move into Room #2, the person in Room #2 could move into Room #3, the person in Room #3 could move into Room #4, the person in Room #4 could move into Room #5, and so on. This would release Room #1 for the traveller, without depriving anyone else of a room. Indeed, even if infinitely many travellers turned up, each seeking a room for the night, rooms could be found for them. For the person in Room #1 could move into Room #2, the person in Room #2 could move into Room #4, the person in Room #3 could move into Room #6, the person in Room #4 could move into Room #8, and so on. This would release the infinitely many odd-numbered rooms for all the

newcomers, without depriving anyone else of a room.)

Aristotle, well aware of the problems that afflict the concept of the infinite, and yet reluctant to eschew the concept completely, famously responded to this dilemma by drawing a distinction between what he called 'the actual infinite' and 'the potential infinite'. The actual infinite is that whose infinitude exists, or is given, at some point *in time*. The potential infinite is that whose infinitude exists, or is given, *over time*. Thus imagine a clock endlessly ticking. Its ticking is potentially, but never actually, infinite. Now, all the objections to the infinite, Aristotle insisted, are objections to the actual infinite. They are objections to the idea of an infinitude which is given all at once. The potential infinite, by contrast, is a fundamental feature of reality. It is there to be acknowledged in any process that can never end: for example, in the process of counting; or in various processes of division; or in the passage of time

itself. Paradoxes such as Zeno's arise because we fail to pay due heed to this distinction. Having seen, for instance, that there can be no end to the process of dividing the racecourse, we somehow imagine that all those possible future divisions are somehow already in effect there. We come to view the racecourse as already divided into infinitely many parts, and it is easy then for such paradoxes to take hold.<sup>2</sup>

Aristotle's view proved enormously influential: its importance, for subsequent discussion of the infinite, is hard to exaggerate. For well over two thousand years it more or less had the status of orthodoxy. But later thinkers, unlike Aristotle himself, tended to take the references to time in the actual/potential distinction as a metaphor for something more abstract. Existing 'in time', or existing 'all at once', came to assume broader meanings than they had for Aristotle. Eventually, exception to the actual infinite became exception to the very idea that the infinite could be a legitimate object of mathematical study.

The received wisdom nowadays is that this orthodoxy was finally overturned in the nineteenth century, when Cantor presented a coherent, rigorous, systematic mathematical theory of the infinite. Cantor took the paradoxes in his stride, formulated precisely what is going on in them, and then incorporated these formulations into his theory. No longer, it seemed, did the (actual) infinite have to be treated with mistrust and hostility.

In due course I shall query whether the situation is as simple as this standard account suggests. But first I want to sketch some of the most notable features of Cantor's theory.



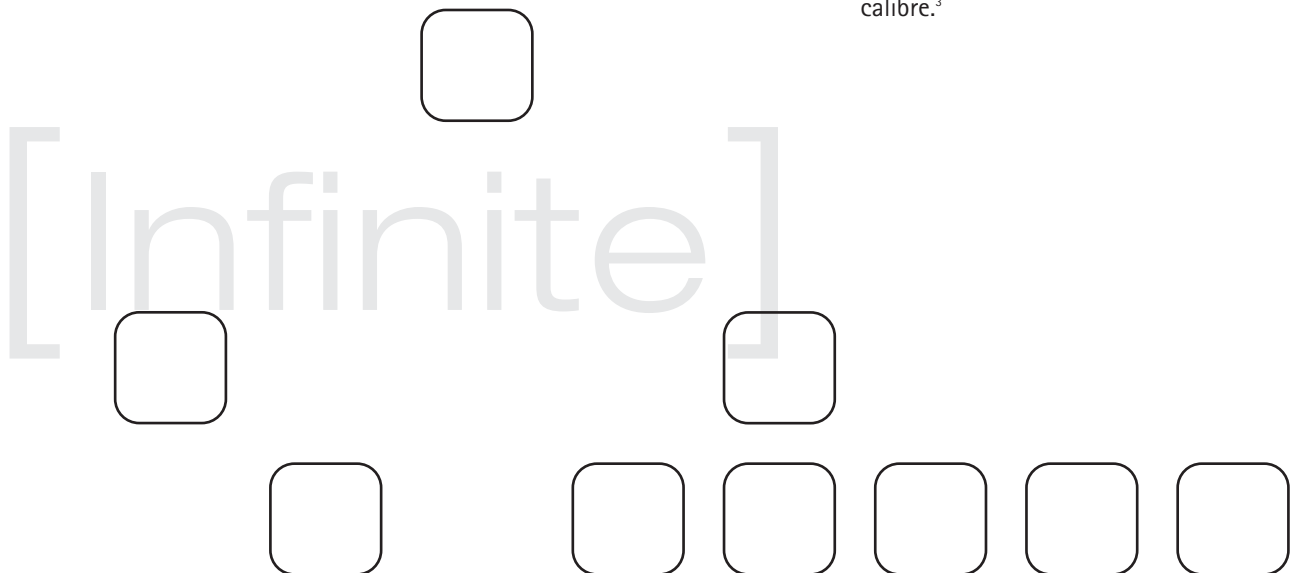
Cantor accepted that there are as many even positive integers as there are positive integers altogether. He did not flinch at the idea that the part can be as great as the whole. (Indeed we can use this idea to define the infinite, at least in its applications to sets. A set is infinite if it is no greater than one of its parts. More precisely, a set is infinite if it has just as many members as one of its proper subsets.)

Cantor did not, however, go to the other extreme of urging that all infinite sets are the same size (a conclusion which, in its own way, would not have been all that repugnant to commonsense). On the contrary, much of the revolutionary impact of his work came in his demonstration that, even when conceived in these terms, not all infinite sets are the same size. This is a consequence of what is known as Cantor's theorem: no set, and in particular no infinite set, has as many members as it has subsets. In other words, no set is as big as the set of its subsets. To see why Cantor's theorem holds, let us consider its application to the set of positive integers. Suppose we pair off individual positive integers with sets of positive integers.

For instance, we might begin by pairing off 1 with the set of odd positive integers  $\{1, 3, 5, 7, \dots\}$ , 2 with the set of even positive integers  $\{2, 4, 6, 8, \dots\}$ , 3 with the set of square positive integers  $\{1, 4, 9, 16, \dots\}$ , and 4 with the set of prime positive integers  $\{2, 3, 5, 7, \dots\}$ . The point is: however we begin, and however we proceed, there is guaranteed to be at least one set of positive integers that is left out. That is, there is guaranteed to be at least one set of positive integers that is not paired off with any individual positive integer. Why? Well, consider the fact that some individual positive integers will belong to the sets with which they are paired off and others will not. Call positive integers of the latter kind *diagonal*. (I have used this term because the proof technique at work here is often called 'diagonalisation'.) In the example above, neither 1 nor 2 is diagonal, for each of them *does* belong to the set with which it is paired off; but both 3 and 4 *are* diagonal, for each of them *does not* belong to the set with which it is paired off. Now consider the set of diagonal positive integers. Call this set  $D$ . *Question:* With which positive integer, if any, is  $D$  paired off?

*Answer:* None. For let us suppose that it *is* paired off with some positive integer—call it  $d$ —and let us consider whether  $d$  is diagonal or not. By definition,  $d$  (like any other positive integer) is diagonal if and only if it does not belong to the set with which it is paired off. But since the set with which  $d$  is paired off is  $D$ —the set of diagonal positive integers—this is tantamount to saying that  $d$  is diagonal if and only if it is not diagonal, which is a blatant contradiction. So however we pair off individual positive integers with sets of positive integers, the set of diagonal positive integers that we thereby create is guaranteed to be left out. Hence there are more sets of positive integers than there are individual positive integers.

Cantor went on to devise infinite cardinals: numbers that can be used to measure the sizes of infinite sets. He invented a kind of arithmetic for them as well. Having first suitably defined his terms, he explored what happens when one infinite cardinal is added to another, or multiplied by another, or raised to the power of another. His work showed mathematical craftsmanship of the very highest calibre.<sup>3</sup>



But he needed to proceed cautiously. His work made indispensable use of the idea of a set (as glimpsed above). But what is a set? On one very natural conception of what a set is, often referred to as the 'naïve' conception, a set is something that collects together all those things that have a given property. And for *any* given property, there is, on the naïve conception, a set corresponding to it. Thus corresponding to the property of being a planet, there is the set of planets; corresponding to the property of being a person, there is the set of people; corresponding to the property of being a set, there is the set of sets; corresponding to the property of being a square positive integer, there is the set of square positive integers; and so forth. However, the naïve conception can be shown to be incoherent. For suppose there is a set corresponding to any given property. And consider the fact—here I am still presupposing the naïve conception—that some sets belong to themselves, and some do not. Thus the set of sets is of the former kind, because it is itself a set. But the set of planets is of the latter kind, because it is not itself a planet. Now consider the set corresponding to the property of being a set that does *not* belong to itself. In other words, consider the sets of sets that do not belong to themselves. Call this set *R*. *Question*: Does *R* belong to itself or not? *Answer*: By definition, *R* (like any other set) belongs to *R* if and only if it does not belong to itself. But this is a blatant contradiction. So the naïve conception is incoherent.

(This, incidentally, is Russell's famous paradox. There is a striking resemblance between the reasoning involved in this paradox and the reasoning involved in Cantor's theorem. The connections between

the two are very deep. Indeed it was by reflecting on Cantor's theorem that Russell first stumbled across his paradox.<sup>4</sup>)

In order to safeguard his theory from this kind of incoherence, Cantor needed to operate with a somewhat more sophisticated conception of a set. The conception with which he operated is often referred to as the 'iterative' conception. On the iterative conception, a set is something whose existence is parasitic on that of its members: the members exist 'first'. Thus there are, to begin with, all those things which are not sets (planets, people, positive integers, and so forth). Then there are sets of these things. Then there are sets of *these* things. And so on, without end. Each thing, and in particular each set, belongs to countless further sets. But there never comes a set to which every set belongs. There is no set of all sets. How does this escape the incoherence in the naïve conception? Well, on the iterative conception, no set belongs to itself. Hence *R*, if it existed, would be the set of all sets. But, to repeat, there is no set of all sets. There is no such thing as *R*.

I described the naïve conception above as 'very natural'. But there is something quite natural about the iterative conception too. The iterative conception has great intuitive appeal.

But is it not also strikingly Aristotelian? Notice the temporal metaphor that sustains it. Sets are depicted as coming into being 'after' their members, in such a way that there are always more to come. Their collective infinitude, as opposed to the infinitude of any one of them, is potential, not actual. Moreover, it is this collective infinitude that has best claim to the title. For the properties



that I listed at the outset as characterising the standard conception of the infinite—endlessness, unlimitedness, unsurveyability, immeasurability—more properly apply to the entire hierarchy than to anything in it. This is partly because of the very success that Cantor enjoyed in subjecting the sets *in* the hierarchy to careful mathematical scrutiny. For example, he showed that the set of positive integers is limited in size. (The set of sets of positive integers has more members.) He also showed that we can give a precise mathematical measure to how big it is. There is a sense, then, given that limitedness, measurability, and the like are part of the standard conception of the finite, in which he established that the set of positive integers is 'really' finite, and that what is 'really' infinite is something of an altogether kind. (He was not himself averse to talking in these terms.) In a curious and ironical kind of way, his work served, in the end, to corroborate the Aristotelian orthodoxy that 'real' infinitude can never be actual.

This is a view that I have defended elsewhere.<sup>5</sup> A number of mathematicians and philosophers have objected to my idea that, on Cantor's showing, the set of positive integers is 'really' finite. They

complain that this idea is not only at variance with standard mathematical terminology, but also, contrary to what I seem to be suggesting, with what most people would say.

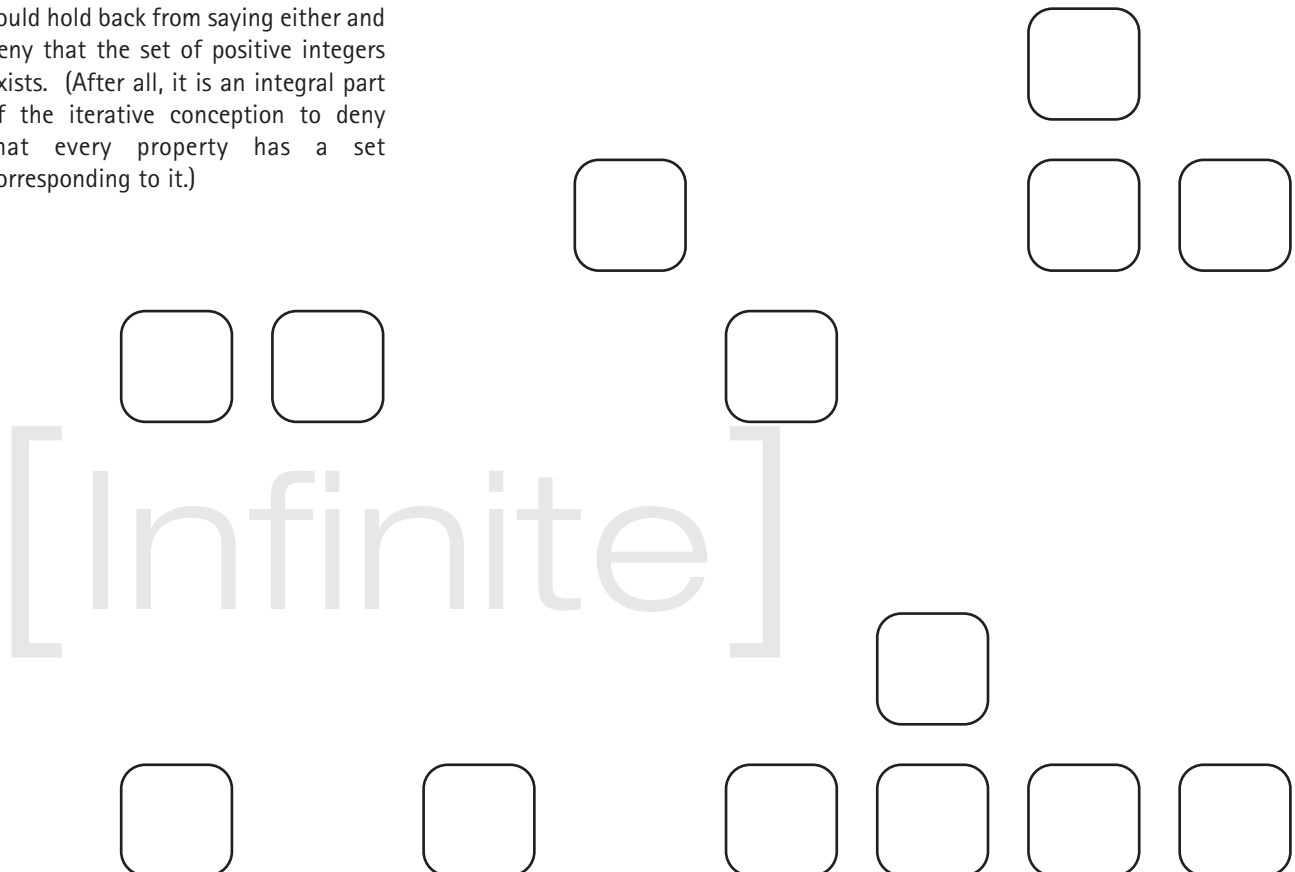
Well, certainly most people would say that the set of positive integers is 'really' infinite. But then again, most people are unaware of Cantor's achievements. They would also deny that the set of positive integers has a precise infinite size, strictly smaller than that of the set of sets of positive integers. My point is not about what most people would say. It is about how they understand their terms; and about how that understanding is best able, for any given purpose, to absorb the shock of Cantor's results. Nothing here is forced on us. We could say that some infinite sets are bigger than others. We could say that the set of positive integers is only finite. We could hold back from saying either and deny that the set of positive integers exists. (After all, it is an integral part of the iterative conception to deny that every property has a set corresponding to it.)

If the task at hand is to articulate certain standard mathematical results, then I would not advocate using anything other than standard mathematical terminology. But I would urge mathematicians and philosophers to exercise more caution than usual when it comes to interpreting these results, and in particular when it comes to saying how they bear on traditional conceptions of the infinite. The truly infinite, I suggest, cannot be subjugated.

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Notes

- 1 See Aristotle, *Physics*, Bk VI, Ch. 9, in his *The Complete Works*, ed. Jonathan Barnes (Princeton: Princeton University Press, 1984).
- 2 See e.g. Aristotle, *Physics*, Bk III, Chs 6 – 7, Bk VI, Ch. 9, and Bk VIII, Ch. 8, in *ibid.*
- 3 See e.g. Georg Cantor, *Contributions to the Founding of the Theory of Transfinite Numbers*, trans. Philip E.B. Jourdain (New York: Dover, 1955).
- 4 See Bertrand Russell, *Introduction to Mathematical Philosophy* (London: Allen & Unwin Ltd, 1919), pp. 135 – 136.
- 5 A.W. Moore, *The Infinite*, 2nd edn (London: Routledge, 2001).



**Simon Critchley**

Did you hear the one about the  
 [Philosopher]  
 writing a book on humour?

Philosophy is a funny business and some philosophers are funny people. The philosopher asks you to look at the world awry, to place in question your usual habits, assumptions, prejudices and expectations. The philosopher asks you to be sceptical about all sorts of things you would ordinarily take for granted, like the reality of things in the world or whether the people around you are actually human or really robots. In this regard, the philosopher has, I think, a family resemblance with the comedian, who also asks us to look at the world askance, to imagine a topsy-turvy universe where horses and dogs talk and where lifeless objects become miraculously animated. Both the philosopher and the comedian ask you to view the world from a Martian perspective, to look at things as if you had just landed from another planet. With this rough resemblance in mind, I became interested in jokes, humour and the comic and I have just finished writing a short book on the topic.<sup>1</sup>

Let's begin by considering what takes place in a joke? The first thing we can say is that joking is a specific and meaningful practice that the audience and the joke-teller recognise as such. There is what we might call a tacit social contract at work here, namely some agreement about the social



world in which we find ourselves as the implicit background to the joke. There has to be a sort of consensus or implicit shared understanding as to what constitutes joking 'for us', as to which linguistic or visual routines are recognised as joking and which ones are not. Most jokes work through the experience of a felt incongruity between what we expect to be the case and what actually takes place in the joke: 'did you see me at Princess Diana's funeral? I was the one that started the Mexican wave!' But in order for the incongruity of the joke to

be seen as such, there has to be a congruence between joke structure and social structure. It is necessary that we all know that a Mexican wave certainly did *not* take place on the occasion of Diana's funeral in order to appreciate the incongruity of the above joke. When this implicit congruence or tacit contract is missing, then laughter will probably not result, which can be the experience of trying - and failing - to tell a joke in a foreign language. In his classic book, *Laughter*, published in 1900, the French philosopher Henri Bergson explains what he calls 'the leading idea in all our investigations',

To understand laughter, we must put it back into its natural environment, which is society, and above all we must determine the utility of its function, which is a social one. (...) Laughter must answer to certain requirements of life in common. It must have a *social* signification.<sup>2</sup>

So, in listening to a joke, I am presupposing a social world that is shared, the forms of which the practice of joke-telling is going to play with. Joking is a game that players only play successfully when they both understand and follow the rules. Ludwig Wittgenstein puts the point perspicuously in one of his posthumously published remarks,



What is it like for people not to have the same sense of humour? They do not react properly to each other. It's as though there were a custom amongst certain people for one person to throw another a ball which he is supposed to catch and throw back; but some people, instead of throwing it back, put it in their pocket<sup>3</sup>

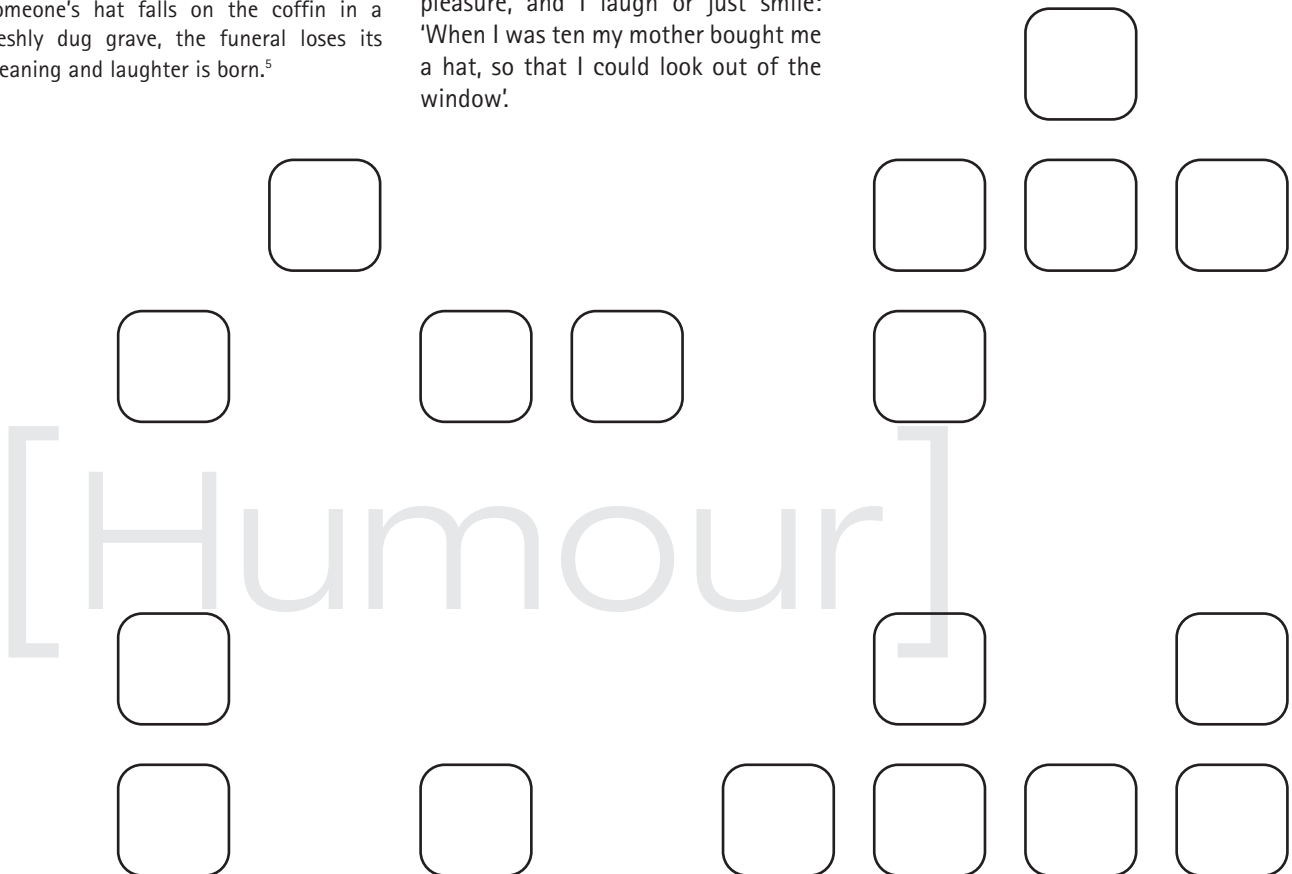
With this in mind, some anthropologists have compared jokes with rites.<sup>4</sup> A rite is here understood as a symbolic act that derives its meaning from a cluster of socially legitimated symbols, such as a funeral. But insofar as the joke plays with the symbolic forms of society - the bishop gets stuck in a lift, I spread margarine on the communion wafer - jokes might be thought of as *anti-rites*. They mock, parody or deride the ritual practices of a given society, as the Czech novelist Milan Kundera, remarks,

Someone's hat falls on the coffin in a freshly dug grave, the funeral loses its meaning and laughter is born.<sup>5</sup>

Suppose that someone starts to tell you a joke: 'I never left the house as a child. My family were so poor that my mother couldn't afford to buy us clothes.' Firstly, I recognise that a joke is being told and I assent to having my attention caught in this way. Assenting to having my attention caught is very important and if someone interrupts the joke-teller or simply walks away in the middle of the joke, then the tacit social contract of humour has been broken. This is bad form or simply bad manners. Instead of throwing the ball back, I put it in my pocket. In thus assenting and going along with the joke, a certain tension is created in the listener and I follow along willingly with the story that is being recounted. When the punch-line kicks in, and the little bubble of tension pops, I experience an affect that can be described as pleasure, and I laugh or just smile: 'When I was ten my mother bought me a hat, so that I could look out of the window!'

What happens here is, as Immanuel Kant puts it in a brilliant short discussion of laughter from *The Critique of Judgement*, a sudden evaporation of expectation to nothing.<sup>6</sup> In hearing the punch-line, the tension disappears and we experience comic relief. Rather than the tiresome and indeed racist examples of jokes that Kant recounts, involving Indians and bottles of beer, witness the poet Philip Larkin in a characteristic flourish,

When I drop four cubes of ice  
Chimingly in a glass, and add  
Three goes of gin, a lemon slice,  
And let a ten-ounce tonic void  
In foaming gulps until it smothers  
Everything else up to the edge,  
I lift the lot in silent pledge:  
*He devoted his life to others.*



The admittedly rather dry humour here is found in a combination of two features: conceptual and rhetorical. On the one hand, there is the conceptual disjunction between the wanton hedonism involved in preparing the gin and tonic, and the avowed altruism of the final line. But also – more importantly – there is the rhetorical effect generated by the sudden bathos of the final line in comparison to the cumulative overkill of what precedes it. It is important to emphasise the necessary suddenness of the conceptual and rhetorical shift. Both brevity and speed are the soul of wit.

### Changing the Situation

But is that an end to the matter? Is that it? Hopefully not. I want to claim that humour is not just comic relief, a transient corporeal affect induced by the raising and extinguishing of tension, of as little social consequence as masturbation, although slightly more acceptable to perform in public. I rather want to claim that what goes on in humour is a form of *liberation* or *elevation* that expresses something essential to the humanity of the human being. The shape of the thought I am after is expressed by Eddie Waters, the philosopher-comedian from Trevor Griffiths's brilliant 1976 drama *Comedians*,

'A real comedian – that's a daring man. He *dares* to see what his listeners shy away from, fear to express. And what he sees is a sort of truth about people, about their situation, about what hurts or terrifies them, about what's hard, above all, about what they *want*. A joke releases the tension, says the unsayable, any joke pretty well. But a true joke, a comedian's joke, has to do more than release tension, it has to

*liberate* the will and the desire, it has to *change the situation*!'<sup>8</sup>

The claim here is that any joke releases tension, but a *true* joke, a comedian's joke, suddenly and explosively lets us see the familiar defamiliarised, the ordinary made extraordinary and the real rendered surreal, and we laugh in a physiological squeal of transient delight, like an infant playing peek-a-boo. In my view, the best humour brings about a change of situation, a transient but significant shift in the way we view reality.

This idea of a change of situation can be caught in Mary Douglas's claim that, 'A joke is a play upon form that affords an opportunity for realising that an accepted pattern has no necessity'.<sup>9</sup> Thus, jokes are a play upon form, where what is played with are the accepted practices of a given society. The incongruities of humour both speak out of a massive congruence between joke structure and social structure, and speak against those structures by showing that they have no necessity. The anti-rite of the joke shows the sheer contingency or arbitrariness of the social rites in which we engage. By producing a consciousness of contingency, humour can change the situation in which we find ourselves, and can even have a *critical* function with respect to society. Hence the great importance that humour has played in social movements that have set out to criticise the established order, such as radical feminist humour, 'How many men does it take to tile a bathroom?', 'I don't know', 'It depends how thinly you slice them'. As the Italian street slogan has it, *Una risata vi seppellirà*, it will be a laugh that buries you, where the 'you' refers to those in power. By laughing at power, we expose its contingency, we realise that what

appeared to be fixed and oppressive is in fact the emperor's new clothes, and just the sort of thing that should be mocked and ridiculed.

### Reactionary humour

But before we get carried away, it is important to recognise that not all humour is of this type, and most of the best jokes are fairly reactionary or, at best, simply serve to reinforce social consensus. You will have noticed a couple of paragraphs back that, following Eddie Waters, I introduced the adjective 'true' into our discussion of humour. 'True' humour changes the situation, tells us something about who we are and the sort of place we live in, and perhaps indicates to us how it might be changed. This sounds very nice, but it presupposes a great deal. A number of items cry out for recognition here.

Most humour, in particular the comedy of recognition – and most humour *is* comedy of recognition – simply seeks to reinforce consensus and in no way seeks to criticise the established order or change the situation in which we find ourselves. Such humour does not seek to change the situation, but simply toys with existing social hierarchies in a charming but quite benign fashion, as in P.G. Wodehouse's *The World of Jeeves*. This is the comic as sheer pleasing diversion, and it has an important place in any taxonomy of humour. More egregiously, much humour seeks to confirm the status quo either by denigrating a certain sector of society, as in sexist humour, or by laughing at the alleged stupidity of a social outsider. Thus, the British laugh at the Irish, the Canadians laugh at the Newfies, the Americans laugh at the Poles, the Swedes laugh at the

Finns, the Germans laugh at the Ostfrieslanders, the Greeks laugh at the Pontians, the Czechs laugh at the Slovaks, the Russians laugh at the Ukrainians, the French laugh at the Belgians, the Dutch also laugh at the Belgians, and so on and so forth. Such comic scapegoating corresponds to what Hobbes means in suggesting that laughter is a feeling of sudden glory where I find another person ridiculous and laugh at their expense. Such humour is not laughter at power, but the powerful laughing at the powerless.

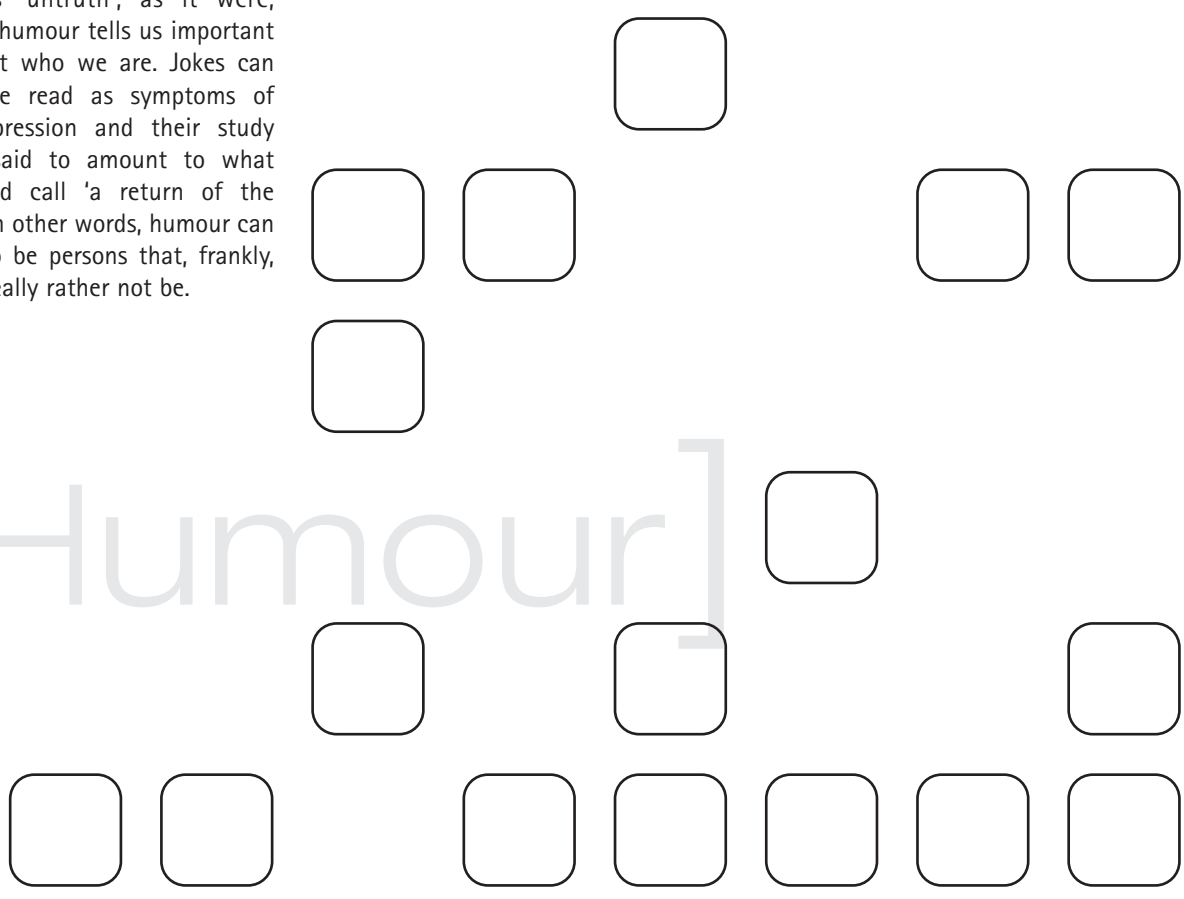
The reactionary quality of much humour, in particular ethnic humour, must be analysed, which I cannot do fully here, but my claim is that such humour lets us reflect upon the anxious nature of our thrownness in the world. What I mean by the latter is that in its 'untruth', as it were, reactionary humour tells us important truths about who we are. Jokes can therefore be read as symptoms of societal repression and their study might be said to amount to what Freud would call 'a return of the repressed'. In other words, humour can reveal us to be persons that, frankly, we would really rather not be.

### Structured fun

Humour is being employed as a management tool by consultants – imagine, if you will, a company called 'Humour Solutions International' – who endeavour to show how it can produce greater cohesion amongst the workforce and thereby increase efficiency and productivity. This is beautifully caught in the slogan: 'laughter loves company and companies love laughter'. Some management consultants refer to such activity as 'structured fun', which includes innovations like 'inside out day', where all employees are asked to wear their clothes inside out, or 'silly hat day', which rather speaks for itself.

Despite the backslapping bonhomie that such fun must inspire, it is difficult not to feel a little cynical about these endeavours, and the question that one wants to pose to the idea of 'structured fun' is: who is structuring the fun and for what end? Such enforced fun is a form of compulsory happiness, and it is tempting to see it as one further sign of the ways in which employees' private lives are being increasingly regulated by the interests of their employers.

[Humour]



I was recently in Atlanta, staying at a huge hotel, and had occasion to observe some structured fun from my breakfast table one morning. In one of the vast, anonymous, carpeted, windowless suites that pepper every large hotel in the USA, about fifty people from the same company were engaged in collective hopscotch, frisbee and kickball. It was quite a sight and much yelping and clapping was to be heard – the very soundtrack to happiness, I pondered. But looking at the sweating, slightly desperate faces of these mostly overweight grown-ups, one almost felt moved to tears. After breakfast, I found a huddle of employees standing outside, resolutely smoking in the Georgian January drizzle and we exchanged a few words. I was enormously reassured that they felt just as cynical about the whole business as I did, but one of them said that they didn't want to appear to be a bad sport or a party pooper at work and that was why they went along with it. Also, he concluded, they weren't really offered a choice. I think this incident is interesting for it reveals a vitally subversive feature of humour in the workplace. Namely, that as much as management consultants might try and formalise fun for the benefit of the company, where the comic punch-line and the economic bottom line might be seen to blend, such fun is always capable of being ridiculed by informal, unofficial relations amongst employees, by backchat and salacious gossip. Anyone who has worked in a factory or office knows how the most scurrilous and usually obscene stories, songs and cartoons about the management are the very bread and butter of survival. Humour might well be a management tool but it is also a tool against the management.

## Common and uncommon sense

Laughter is contagious – think about the phenomenon of giggling, particularly when it concerns something obscene in a context where one should be serious, such as listening to a formal academic paper. In such cases, and I am sure (or hope) that we all know them, the laughter can really hurt. One might say that the simple telling of a joke recalls us to what is shared in our everyday practices. It makes explicit the enormous commonality that is implicit in our social life. This is what the philosopher and aesthete Shaftesbury had in mind in the early 18th Century when he spoke of humour as a form of *sensus communis*, common sense.<sup>10</sup> So, humour reveals the depth of what we share. But, crucially, it does this not through the clumsiness of a theoretical description, but more quietly, practically and discreetly. Laughter suddenly breaks out in a bus queue, watching a party political broadcast in a pub, or when someone farts in a lift. Humour is an exemplary practice because it is a universal human activity that invites us to become philosophical spectators upon our lives. It is practically enacted theory. I think this is why Wittgenstein once said that he could imagine a book of philosophy that would be written entirely in the form of jokes.

The extraordinary thing about humour is that it returns us to common sense by distancing us from it; humour familiarises us with a common world through its miniature strategies of defamiliarisation. If humour recalls us to *sensus communis*, then it does this by momentarily pulling us out of

common sense, where jokes function as moments of what we might call *dissensus communis*, uncommon sense. At its most powerful, say in those insanely punning dialogues between Chico and Groucho Marx, humour is a paradoxical form of speech and action that defeats our expectations, producing laughter with its unexpected verbal inversions, contortions and explosions.

Let me close this all-too theoretical essay with six practical examples,

'Do you believe in the life to come?', 'Mine was always that.'

'Have you lived in Blackpool all your life?', 'Not yet.'

'Do me a favour and close the window, it's cold outside.' 'And if I close it, will that make it warm outside?'

'Do you want to use a pen?', 'I can't write', 'That's OK, there wasn't any ink in it anyway'

'Which of the following is the odd one out? Greed, envy, malice, anger and kindness'. (Pause) 'And'.

'What'll I say?', 'Tell them you're not here', 'Suppose they don't believe me?', 'They'll believe you when you start talking!'<sup>11</sup>

Simon Critchley  
University of Essex

Notes

- 1 On *Humour* (London and New York: Routledge, 2002)
- 2 Henri Bergson, *Laughter* (Baltimore: The Johns Hopkins University Press, 1980), p.65.
- 3 Ludwig Wittgenstein, *Culture and Value*, ed. G.H. Von Wright (Oxford: Blackwell, 1980), p.83.
- 4 See Mary Douglas, 'Do Dogs Laugh?' and 'Jokes' from *Implicit Meanings. Essays in Anthropology* (London: Routledge, 1975)
- 5 Milan Kundera, *The Book of Laughter and Forgetting* (London: Penguin, 1983), p.232-33.
- 6 Immanuel Kant, *The Critique of Judgement*, trans. J.C. Meredith (Oxford: Oxford University Press, 1952), pp.196-203.
- 7 Philip Larkin, *High Windows* (London: Faber, 1974), p.11.
- 8 Trevor Griffiths, *Comedians* (London: Faber, 1976), p.20.
- 9 Douglas, *Implicit Meanings*, op.cit. p.96.
- 10 Shaftesbury, *Sensus Communis. An Essay on the Freedom of Wit and Humour*, in *Characteristics of Men, Manners, Opinions, Times*, Vol.1-2 (New York: Bobbs-Merrill, 1964), p.49.
- 11 From various Marx Brothers' scripts, Peter Chelsom's wonderful 1994 film *Funny Bones*, and Samuel Beckett's *Endgame* (London: Faber, 1958).



[Humour]

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# Notes On [Contributors]

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## Simon Critchley

is Professor of Philosophy and head of department at the University of Essex. In addition to teaching at Essex and the University of Wales, he has also been a Research Fellow at the University of Frankfurt, he is a Programme Director of the Collège Internationale de Philosophie in Paris, and is Visiting Professor at Notre Dame University in the US this year. He is an expert in continental philosophy, having written on Derrida, Levinas and Heidegger amongst others. This year saw the publication of his *On Humour* (London: Routledge, 2002).

## Adrian Moore

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# Notes For [Contributors]

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The Richmond Journal of **Philosophy**

Knowing One's Mind **William Child** 6

What is in a Paradigm? **Alexander Bird** 11

Plato and Philosophy **Keith Crome** 21

On Quine **Arif Ahmed** 29

Subjugating the Infinite **Adrian Moore** 35

On Humour **Simon Critchley** 40

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