

Cambridge University Press

978-0-521-64129-6 - Paul K. Feyerabend: Knowledge, Science and Relativism - Philosophical Papers, Volume 3

Edited by John Preston

Excerpt

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## Introduction to volume 3

The papers in this volume have been selected with several criteria in mind. Drawn from between 1960 and 1980, they all fall within the period spanned by the two previous volumes of Paul Feyerabend's *Philosophical Papers* (Cambridge: Cambridge University Press, 1981) and therefore do not overlap with the later phases of his work covered in *Farewell to Reason* (London: Verso, 1987) and *The Conquest of Abundance* (Chicago: University of Chicago Press, forthcoming). Some represent major landmarks in Feyerabend's thought, some of which have previously been published but have not before been available in English, others of which are now rendered less than easily accessible by their original place or mode of publication. Yet others are well-known and effective summaries of his views at different times. All of the papers are central to and representative of Feyerabend's work during the nineteen-sixties and seventies. All of them are linked together by overlapping themes, a few of which will be explored here.<sup>1</sup>

### SCIENCE AND MYTH

One of Feyerabend's primary fields of interest was in the relationships between science and other forms of human thought and activity. In the lectures entitled 'Knowledge without Foundations' he argues that science, myths, and religious doctrines share many features, and that this refutes naïve empiricist accounts, according to which science started when people stopped speculating and started observing, or experimenting. General, explanatory theories, he argues, are nothing like the 'respectable' empirical generalizations prized by empiricists. Not only do they not merely summarize observational evidence, the best scientific theories even go *against* unanalysed experience. Only such theories allow us to analyse and criticize observation statements and experience, to strip away misleading appearances and make progress in science.

Empiricists might respond that science is at least *more* firmly rooted in

<sup>1</sup> References to publications of Feyerabend other than the papers reprinted in this volume, in the form '(19\*\*)', are to the list of his works published here as Appendix. References to the two previous volumes of Feyerabend's *Philosophical Papers* appear in the form 'PPI' and 'PP2'. For helpful comments on this introduction, I am grateful to Eric Oberheim.

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## KNOWLEDGE, SCIENCE AND RELATIVISM

experience than alternatives such as myth. But Feyerabend insists that convinced believers can always provide empirical arguments for their theories, and that the best myths are as firmly based in experience as some highly appreciated scientific theories. A myth is not *merely* a subjective phenomenon:

Far from being a figment of the imagination that is clearly opposed to what is known to be the real world, a myth is a system of thought supported by numerous very direct and forceful experiences, by experiences, moreover, which seem to be far more compelling than the sophisticated experimental results on which modern science bases its picture of the world. (p. 58)

So the idea that the distinction between myth and science lies in the amount of experience captured in the latter must be wrong. Partly because of 'the astonishing plasticity of the human mind' (p. 57), it is easy to find empirical support for apparently implausible ideas (such as the belief in witches and demons). But this means that neither the elimination of myths, nor the transition within science from one theory to another (e.g. the transition from Aristotle's theory of motion to Galileo's), can have been based on a return to the facts of observation (Aristotle's theory was itself firmly based upon observations). This became one of Feyerabend's central themes: theories always rig experiences in their favour. The support or 'positive evidence' they are afforded by observations is therefore suspect at best, and worthless at worst. The idea that theories are compared with one another for their ability to account for the results of observation and experiment is an empiricist myth which disguises the role of aesthetic, social, and 'irrational' factors in theory-choice. We might seem forced to admit that the only distinction between science and myth is the timing: science is the myth of today, myths are the scientific theories of ages past.

This conclusion is *not* yet drawn in 'Knowledge without Foundations'. There, as well as in 'Outline of a Pluralistic Theory of Knowledge and Action', Feyerabend followed Popper in supposing that there *are* features which distinguish science from myth, or at least *should* distinguish them, if science is to deserve a reputation for rationality and open-mindedness.

For Feyerabend, perhaps the primary danger attending the quest for knowledge is what has been called the '*myth predicament*'. This arises when theorists indulge in 'theoretical monism'. In 'The Problem of the Existence of Theoretical Entities' and elsewhere, Feyerabend argued in favour of the Kantian idea that the theories we subscribe to influence our language, our thought, and maybe even our perceptions. From this, he drew the implication that as long as we use only *one* theory in our dealings with reality, however empirically adequate that theory may be, we will be unable to imagine alternative accounts of reality. Just as purely transcendent metaphysical theories are unfalsifiable, so too what began as an all-embracing scientific theory offering certainty will, under these circumstances, have

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become an irrefutable dogma, a myth. The genesis of the predicament, as described in Section 6 of 'How to be a Good Empiricist', is as follows.

Certain theorists, in the grip of a favoured theory, begin to assume its adequacy. They become impatient with less successful alternatives to their theory, and refuse to consider them. Any further successes their theory accumulates reinforce these attitudes. By refusing to consider alternatives, they inadvertently shield themselves from situations which would constitute problems for, or *tests* of, their theory. They will have turned their backs on the only kind of evidence which matters: *negative* evidence, and it will seem to them as if there are no circumstances in which their theory could be refuted. Their determination to explain even recalcitrant facts in its terms will be re-doubled. And these efforts at explanation will apparently pay off. 'More than ever the theory will appear to possess tremendous empirical support' (p. 95).

However, this success will come at a high price. The theorists, by refusing to admit alternatives to their theory, will have diminished its empirical content:

[T]his appearance of success *cannot in the least be regarded as a sign of truth and correspondence with nature*. Quite the contrary, the suspicion arises that the absence of major difficulties is a result of the decrease of empirical content brought about by the elimination of alternatives, and of facts that can be discovered with the help of these alternatives. (p. 95)

Truth, certainty, and hence knowledge, will apparently have been attained. But according to Feyerabend, what has been constructed will be a metaphysical system, a *myth*.<sup>2</sup>

A look at doctrines which we think of as paradigmatic myths will confirm this judgement. A myth, Feyerabend has already argued, is 'a system of thought, possibly false, perhaps very unsatisfactory from an intellectual point of view, which is imposed and preserved by indoctrination, fear, prejudice, deceit' (p. 64). It relates the truth as it sees it in a way which cannot possibly be mistaken; it is infallible. Myths are not incoherent collections of crazy ideas, but 'logical structures of great sophistication which . . . remain intact in the face of almost every difficulty' (p. 64). The elements of a myth are related to each other in such a way that the result is its preservation, and even confirmation, under all possible circumstances. And this is done not just by ignoring difficulties, but by turning them to the theory's own advantage. If trouble arises in the attempt to apply it to reality, its human defenders are blamed. But even if we remove the

<sup>2</sup> Why, one might ask, in view of Feyerabend's repeated arguments that metaphysics has a positive function within science, should it *matter* if theories turn into 'metaphysical systems', or myths? I suspect that his reply at this time would have been that metaphysical systems, however necessary and valuable they may be, are still only *primitive* scientific products (ch. 3, p. 100), and that they only stagnate, but do not progress.

Cambridge University Press

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psychological forces which support the myth, this does not lead believers to realize that they have been the victims of a hoax. The power of a myth is not exhausted by purely psychological factors: it can give explanations, reply to criticism, and account for events which seem to refute it. It can do this, says Feyerabend, '*because it is absolutely true*' (p. 64) (or at least because it has '*the semblance of absolute truth*' (p. 96, emphasis added)). The doctrine becomes '*known for certain*'.

Nevertheless, neither the sense-certainty sought by empiricists nor the rational certainty sought by intellectualists is worth having. We can, if we wish, have 'certainty' in science, but it will be entirely man made and meaningless:

At this point an 'empirical' theory . . . becomes almost indistinguishable from a myth. In order to realize this, we need only consider that on account of its all-pervasive character a myth such as the myth of witchcraft and of demonic possession will possess a high degree of confirmation on the basis of observation. (p. 95)

The use of closed systems of explanation like this is not restricted to 'primitive' societies. According to Feyerabend, there exist today very influential theories (parts of Marxism, psychoanalysis, and the quantum theory) which work according to similar principles. Being built in a way that enables them to take care of almost every difficulty that might arise, they make themselves safe from refutation. Thus, 'assumptions which are possibly true (but also possibly false) are interlocked inside a more comprehensive theory which, because of this particular form of collaboration and mutual support, will be absolutely true' (p. 66). But this 'absolute truth', like certainty, is worthless.

## THEORETICAL MONISM VS. THEORETICAL PLURALISM

This antipathy toward the myth predicament was one of the main driving-forces behind Feyerabend's attempt to liberalise empiricism further than ever before. He thus devotes considerable time to showing how theoretical monism would retard the growth of knowledge. But what exactly is theoretical monism? Feyerabend's somewhat sweeping characterization raises several issues.

Sometimes, he identifies theoretical monism as a tendency, bolstered by psychological mechanisms, to restrict the number of theories in a given domain, for the purposes of inculcating a fixed belief in a particular theory. This he takes to be a sign that the theorists concerned 'have come to the end of their rope, that they can no longer think of any decisive objection . . . and that they have therefore, for the time being, agreed to accept a single point of view to the exclusion of everything else' (p. 107). Feyerabend rails against this tendency by deploying arguments for theoretical pluralism, the

'method of classes of alternative theories' (p. 99), which implies that knowledge is best attained by working with a plurality of hypotheses. At other times, however, theoretical monism seems only to be the far more innocuous set of ideas that there is such a thing as truth, that some theories are closer to being true than others, and therefore that we can and ought to winnow out inadequate theories.

Feyerabend's rather selective way with some of the views he rejects means that there are many questions that need investigating here. First, he presents the theoretical monist as believing in the existence of a single 'correct picture of the world' or 'correct point of view' (p. 104). Does this mean a single true theory, a 'theory of everything'? One might well believe in truth, or truths, without committing oneself to the existence of such a thing, for although truths must be compatible with one another, they need not comprise parts of a *single* picture or theory. Or is Feyerabend, more radically, denying the existence of *any* truth, about *any* subject-matter? Then it would be hard to see *why* we should bother to be theoretical pluralists, what theoretical pluralism would be a means towards, and we surely would have lost 'touch with reality' (p. 110). One line of thought is that the objections to theoretical monism are ultimately based on humanitarian ethical values. Feyerabend tells us, after all, that 'the most decisive objection' to theoretical monism is that it is a method of deception and conformity:

It enforces an unenlightened conformism, and speaks of truth; it leads to a deterioration of intellectual capabilities, of the power of imagination, and speaks of deep insight; it destroys the most precious gift of the young, their tremendous power of imagination, and speaks of education. (pp. 95–6)

Second, what does Feyerabend *mean* by appealing to 'knowledge' in his argument for theoretical pluralism? Pluralism, he assures us, affords us our best chance of securing knowledge. But are the goods what the customer ordered? In a famous passage, Feyerabend contrasts the monist's conception of knowledge with the kind of knowledge which results from pluralism:

Knowledge so conceived is not a process that converges towards an ideal view; it is an ever-increasing ocean of alternatives, each of them forcing the others into greater articulation, all of them contributing, via this process of competition, to the development of our mental faculties. ('Reply to Criticism', *PPI*, p. 107. See also this volume, p. 184)

Could this be a conception of *knowledge* (as opposed to belief)? Does it, for example, involve relinquishing the ideal of truth, or replacing the usual 'absolute' conception of truth with a relativist conception? (Feyerabend does suggest that there are *different* notions of truth. But could the concept of truth be, as he puts it there, 'a relatively recent product?') p. 200. Or does it take on board the sceptical view that we must continue to believe that there is truth, even though we must also believe that it is never

Cambridge University Press

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knowable? Are developing our mental faculties, raising our theories to a higher level of articulation, and attaining a higher level of consciousness (along with the retention of our childhood dreams, and the other pleasing phenomena to which Feyerabend refers) supposed to be aims in themselves? Could we attain these things *without* yet affording us a better grasp on the truth? More generally, when Feyerabend talks of 'the improvement of our knowledge' (p. 106), and 'the progress of science' (p. 189) does he have in mind progress with respect to truth (or probability, reliability, etc.), or does he refer simply to the refinement of our affective sensibilities? There is a temptation to think that he might contest the opposition implied here, by insisting that we simply cannot separate cognitive virtues from affective ones. But this does not fit well with those passages where, at his most voluntaristic, he does explicitly oppose truth to other ideals which guide human life, and insists that we have to *choose* between them:

My criticism of modern science is that it inhibits freedom of thought. If the reason is that it has found the truth and now follows it then I would say that there are better things than first finding, and then following such a monster. (p. 183)

To prevent or remedy the myth predicament Feyerabend first proposed his own 'positive methodology for the empirical sciences' (p. 80), suggesting that we ought to use a plurality of mutually inconsistent theories, playing them off against one another in an attempt to reveal their faults and limitations. This, he suggested, is the 'theoretical pluralism' the pre-Socratic thinkers (and subsequent successful scientists) used: they recognized the *human* origins of explanatory systems (and societies), and thus treated their own theories as eminently fallible *guesses*, guesses which would be improved as a result of a critical comparison with other guesses. One thing Feyerabend *always* opposed was 'demythologization', the attempt to weaken the literal content of theories by taking their claims as merely metaphorical (p. 143, note 15). The fruitful pluralism which generates progress, or just genuine plurality, simply doesn't work if we 'reinterpret' away the factual content of what we believe.

Sometimes Feyerabend mentions the idea, fostered within 'evolutionary epistemology', that the development of knowledge bears a strong analogy to the evolutionary development of species. He points out that 'the development of animal species is the result of a process of proliferation that goes on even if the existing species happen to be well adapted to their surroundings' (p. 106). But the evolutionary model does not fit well with Feyerabend's 'principle of tenacity', which urges us to retain theories, no matter how comprehensively they have been refuted: 'natural selection', after all, does require that some organisms reproduce less successfully than others, and therefore that their lineage goes to the wall.

## PHILOSOPHY OF SCIENCE AS MYTH

Feyerabend also recognized that science and myth are related in another way: science, in virtue of being a complex set of human activities, inevitably generates and sustains its own myths. He came to see the very idea that there is a distinction between science and myth as itself one of the myths of science. However long he took to get there, it is clear that he did ultimately conclude that science is just the myth of today: '*Science is just one of the many ideologies that propel society and it should be treated as such*' (p. 187). In other papers, he pursued variations on this theme: science is just 'one of the many pastimes humans have invented to entertain themselves' (1967m, p. 413) or, much later, one of several 'supermarkets', just like art or religion, from which we select what we want (1994p, p. 146). One of the ultimate results of this assimilation is that the term 'myth' loses all its pejorative connotations: in 'Let's Make More Movies' (p. 198) Feyerabend calls for a revival of mythical ways of presenting theories.

'Outline of a Pluralistic Theory of Knowledge and Action' is one of Feyerabend's earlier presentations of the idea that science and philosophy could *learn* from the contemporary arts, which have managed to resist the vociferous demands of 'reason', and in which conformity to a single point of view is 'no longer demanded' (p. 105).<sup>3</sup> This paper should be read together with the slightly earlier 'On the Improvement of the Sciences and the Arts, and the Possible Identity of the Two' (1967m), where Feyerabend argues that, for the sake of our culture, the gulf between the arts and the sciences should *never* be closed. What excites him about modern art is precisely its pluralism: its use of 'the method of multiple representation' (1967m, p. 411). Freedom of artistic creation, he believes, could go hand-in-hand with 'the improvement of our knowledge' (p. 106). The real difference between sciences and arts, for Feyerabend, is not so much in their actual operations, for although science is now dominated by experts, instead of opportunistic dilettantes, pluralism 'played and still plays an important role in science' (p. 217). Rather, it is the received *ideology* of science, which is wholeheartedly monistic, that lets it down.

Feyerabend added something distinctive and important to this thought that science exudes its own mythological 'prose': he insisted that the myth that science is something other than myth arises as a result of the *philosophical* activity which parasitically attaches itself to science, rather than

<sup>3</sup> Feyerabend's fondness for expressionist theories of art can usefully be contrasted with Popper's vigorous critique of them (in his autobiography, for example: *Unended Quest: An Intellectual Autobiography* (Glasgow: Collins, 1976), esp. section 13). And Popper's view that it is in science where progress is most marked stands opposed to Feyerabend's idea that modern art supplies a better and more humane paradigm of intellectual activity, which can be used to generate a 'humanitarian science' (ch. 4, p. 110).

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directly from the loins of science itself. Throughout his work, he refers to methodological ‘schizophrenia’, the split between actual scientific method and its philosophical reflection, which masks from us the true nature of science. I suspect that Feyerabend came to see himself not as an ‘enemy of science’, but primarily as an opponent of its contemporary *image*, as well as of the kind of science-dominated philosophy prevalent in the Anglo-Saxon intellectual world. He always reserved his most scathing comments for his own ‘bastard subject’, the philosophy of science, realizing, more vividly than certain other thinkers influenced by Ludwig Wittgenstein’s later work, that science and scientists can be affected by philosophical rhetoric, that what started as an adventure of the human spirit could degenerate into ‘big science’, driven entirely by experts. Asked what he thought should be the task of the philosopher of science in a society in which scientific standards are treated like myths, Feyerabend replied, ‘Not to add myths of his own to the myths of the scientists’.<sup>4</sup>

## THE ROLE OF SCIENCE IN SOCIETY

According to ‘How to Defend Society Against Science’, the potential for liberation which science once possessed derived entirely from the fact that it overthrew existing belief-systems, and not at all from any supposed hold on or approach to the truth it may have had. (Feyerabend sometimes treated the possibility of a change in belief as an absolute value.) Like Popper, Feyerabend cannot tolerate the existence of what Kuhn calls ‘normal science’, that is, periods during which fundamental metaphysical and theoretical assumptions are taken for granted, in order to concentrate on the job of ‘fitting’ the paradigm to nature. Feyerabend’s estimation of contemporary science sometimes seems even more negative than Popper’s. The science of today, he tells us, is accorded a special status both by intellectuals, and by society. Intellectuals exempt it from criticism mainly because they think, wrongly, that it embodies a superior *method* for acquiring knowledge. And society lets it off lightly mainly because it is perceived, wrongly, to have a virtual monopoly on the production of desirable *results*. But these criticisms have to be set alongside the fact that it was usually the image of science, and the willingness of scientists to play up to it, rather than science itself, which fundamentally irked Feyerabend.

An English translation of the 1973 paper ‘On the Limited Validity of Methodological Rules’ is included here not least because, in his correspondence with Imre Lakatos, Feyerabend recommended it as ‘the last good

<sup>4</sup> From an interview conducted by Teresa Orduña in Berkeley, California, March 1981.



Cambridge University Press

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thing I wrote'.<sup>5</sup> It also serves as an excellent summary of the line of argument in *Against Method*. Having reached that book's most famous conclusion, that there is no such thing as the scientific method, Feyerabend devoted a considerable part of his time to working out its political implications. He is one of a number of thinkers who seek to argue that democracy should not be confined to institutionalized politics, but should be massively extended to permeate the operations of everyday life. His favourite positive idea, in this connection, is that in a free society the activities and proposals of scientists should be evaluated by lay people and controlled by 'democratic councils' (chs. 5, 8, 11).

This 'Democratic relativism', presented here at most length in 'Democracy, Elitism, and Scientific Method', makes lively contact with the hopes and perceptions of many people who nowadays identify themselves primarily as members of one or another social movement, or grouping (or collection of such). The perceived pluralism of contemporary societies is a powerful temptation to follow Democratic relativism in protecting (by assigning basic rights to) traditions, *rather than* individuals. But, on reflection, this still seems deeply problematic. Do people who, by choice or otherwise, fail to identify with any tradition, simply fall between the cracks of this collectivist morality, becoming non-persons, devoid of rights? What of reformers and other misfits who try to *change* their tradition(s), from within: are they to be judged misguided as a matter of course? Or do they become 'the community of those who have nothing in common'? Or are there circumstances in which individuals count *as* traditions? And from where comes the confidence that democratic councils '*will* choose a democratic relativism as the basis on which their exceptions are imposed' (p. 223, emphasis added)? It is a serious question, surely not to be silenced by accusations of emotional blackmail or slander (p. 222), how such councils would differ from the workers' committees, soviets, kangaroo courts and, ultimately, show trials with which the recent history of 'democratic' socialist societies was blighted. Those who worry, legitimately, about the coercion exercised by the state upon science, or *vice versa*, certainly ought to consider whether there might not be a less potentially harmful way of de-coupling the two.

Feyerabend, to his great credit, certainly came to recognize that some of these problems had not been adequately dealt with here. In later work, he

<sup>5</sup> In an undated letter from the Feyerabend/Lakatos correspondence, now part of the Lakatos Collection in the Archive Division of the British Library of Political and Economic Science, at the London School of Economics. The article surely represents the zenith of Feyerabend's attempts to empower footnotes and to allow them to wrest control from the body of the text itself!

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retreated from relativism specifically because he felt that it wrongly portrayed customs and traditions as fixed and autonomous entities.<sup>6</sup>

## HISTORY OF THE PHILOSOPHY OF SCIENCE

In one of the papers reprinted here, 'Let's Make More Movies', Feyerabend compares philosophical accounts of the history of science with the possibilities for presenting that same history in a theatrical context. Not only did he have a lifelong interest in the theatre, he was once offered the job of production-assistant to Bertolt Brecht, and later wrote an important article on Eugene Ionesco (Feyerabend 1967b, 1967c). Here, he is keen to insist that an argument is far more than an abstractly representable train of reasoning, for it involves the behaviour, strategies and appearances of the disputants and onlookers. A theatrical presentation will not allow us to use only 'rational' criteria for evaluating an argument, it will force us to attend to the argument's 'physiognomy', and 'to *judge reason* rather than using it as a basis for judging everything else' (p. 192). Among the advantages of the stage presentation are that it provides concrete examples which 'guide the application' of terms like 'reason', and give content to the corresponding concepts (p. 195). Brecht's presentation of Galileo brings out the latter's use of tricks, as well as his insight. It emphasizes that when scientific thought leaves the monastery, turning from being something purely contemplative into being part of everyday life (pp. 193), the process involved goes *beyond* liberation, to the stimulation of insatiable appetites.

Feyerabend concludes that philosophical problems can be dealt with in better ways than by 'verbal exchange, written discourse, and, *a fortiori*, scholarly research' (p. 195).<sup>7</sup> He thus regrets philosophy's decision to restrict itself to the word, arguing that the degeneration of philosophy is manifest in the history of the philosophy of science.

Feyerabend rarely had kind things to say about the philosophy of science, or its professional practitioners. Consistently highest in his estimation came the pre-Socratic thinkers, the heroic figures of the original 'scientific revolution', the philosopher-scientists of the late nineteenth and early twentieth century, such as Hermann von Helmholtz, Ludwig Boltzmann, Heinrich Hertz, Ernst Mach, and Pierre Duhem, and those who followed in their footsteps, such as Max Planck, Albert Einstein and Niels Bohr. What are the grounds of these particular basic value-judgements? The scientific revolution, Feyerabend assures us,

<sup>6</sup> See the essays collected in *The Conquest of Abundance*.

<sup>7</sup> Who can say whether his call for thinking film-directors had any effect? It might have been interesting, though, to know his opinion of 'Badlands' (1974), directed by Terrence Malick, a philosopher trained in the phenomenological tradition, and translator of Martin Heidegger's *The Essence of Reasons* (Evanston, IL: Northwestern University Press, 1969).