JOHN PRESTON

FEYERABEND

Philosophy, Science and Society

FEYERÁBEND

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John Preston

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For my parents

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Preface

Paul Feyerabend, whose productive career lasted forty-five years, wrote on a plethora of philosophical issues. He was no narrowly-trained or narrowly-focused academic. His time as a student was divided between the study of singing, stage-management, theatre, Italian, harmony, piano, physics, mathematics, astronomy, history and sociology. He became a student of philosophy only after having received his doctorate in the subject. His career as a philosopher was an accident, and he did not see himself as a philosopher. Rather like his one-time mentor Karl Popper, Feyerabend seemed to hold the interest and opinion of those who are not professional philosophers in higher regard than those of his academic peers.

This book focuses primarily on Feyerabend's philosophy of knowledge. His work in this area is exciting and important not just because it constitutes a running critique of other philosophical approaches to science, but also because of its aim. Feyerabend's philosophy of knowledge suggests the possibility of freeing our intellectual lives from irrelevant constraints. It urges us to use our cognitive resources to the full, to realize the human potential that once drove the 'scientific revolution'. In this respect, Feyerabend's work both drew from and contributed to the heady climate of conceptual radicalism and social permissivism which bathed the 1960s.

Because Feyerabend wrote so much, and because this book is conceived as a critical introduction to his thought, I have concentrated almost entirely on his own writings, rather than the secondary literature, flagging the latter in footnotes where appropriate. Although Feyerabend's philosophical work is founded upon the extensive study of quantum theory which he made in the early 1950s while

he was one of Popper's students, I deal with this material only peripherally because it is impossible to do so in any more depth in an introductory book.

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Professor Feyerabend was very helpful in giving me references to several of his articles. I like to think that his later self might have enjoyed, and perhaps even endorsed, my critical evaluation of his earlier self in this book.

John Preston
Reading

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Note on References

Works cited in the text are listed in the Bibliography (pp. 223–30). Feyerabend's books are referred to by the initials listed there, and his articles are referred to by their original date of publication. Where the reference is to an article reprinted in one of the volumes of his *Philosophical Papers*, the page numbers for the relevant volume (*PP*1 or *PP*2) are given instead of those for the original article. Where the reference is to a passage that appears in an original article but *not* in the version reprinted in the *Philosophical Papers*, page references to the original article are given. '*AM*[1]', '*AM*[2]' and '*AM*[3]' refer to the first, second and third editions of *Against Method*. Unless another author is specified, references of the form '[19**]' are to articles by Feyerabend.

Introduction: Feyerabend's Life and Work

Paul Karl Feyerabend was born in Vienna in 1924. As a young man he attended high school there, got caught up in events that he did not understand, was inducted into the *Arbeitsdienst* (the 'work service' introduced for all citizens by the Nazis), and served in the German army's Pioneer Corps during the second world war. In 1943, he learned of his mother's suicide. The following year he received the Iron Cross for leading his men into a village under enemy fire, and occupying it. After being shot during the retreat from the Russian front, he was left temporarily paralysed at the end of the war.

In 1946 he received a state fellowship to study singing and stage-management for a year at a *Musikhochschule* in Weimar. There he studied theatre, and took classes in Italian, harmony, piano, singing and enunciation. (Singing remained one of his life's major interests.) Soon becoming restless, he returned, still on crutches, to his parents' apartment house in Vienna. Although he had planned to study physics, maths and astronomy, he chose instead to study history and sociology at the University of Vienna's Institut für Österreichische Geschichtsforschung, thinking that history, unlike physics, was concerned with real life. But he became dissatisfied with the study of history, and returned to theoretical physics. Together with a group of science students who considered themselves superior to students of other subjects, Feyerabend infiltrated philosophy lectures and seminars. Although this was not his first contact with philosophy, which he first encountered by accident at high school, it seems to have been the period which cemented his interest. He later recalled that in all interventions he took the radical 'positivist' line that science is the

basis of all knowledge; that it is empirical; and that non-empirical enterprises are either formal logic (which includes mathematics) or nonsense. This is the view associated with the Logical Positivists, a group of philosophers and scientists comprising the 'Vienna Circle', which flourished in Austria from the early 1920s.

In 1948, at the first meeting of the international summer seminar of the Austrian College Society in Alpbach which Feyerabend attended, he met the philosopher Karl Popper, who was to be the largest single influence (first positive, then negative) on his work. Of this he later said:

> I admired [Popper's] freedom of manners, his cheek, his disrespectful attitude towards the German philosophers who gave the proceedings weight in more senses than one, his sense of humour. . . [and] his ability to restate ponderous problems in simple and journalistic language. Here was a free mind, joyfully putting forth his ideas, unconcerned about the reaction of the 'professionals'. (*SFS*, p. 115)

Feyerabend attended the Alpbach symposium many times, first as a student, then as a lecturer, as a seminar chair and, in what he deemed the most decisive step of his life, as the society's 'scientific secretary'. He later traced the origin of his career and of his reputation back to the decision to accept this post.

In 1949 Feyerabend set up the 'Kraft Circle', a university philosophy club centred around Viktor Kraft, the last member of the Vienna Circle remaining in Vienna, and Feyerabend's dissertation supervisor. The Kraft Circle's main concern was the question of the existence of the external world, a question which positivists had traditionally rejected as being 'metaphysical'. Modelled on the Vienna Circle, the Kraft Circle 'set itself the task of considering philosophical problems in a non-metaphysical manner and with special reference to the findings of the sciences' ([1966b], pp. 3–4). In 1949, Feyerabend persuaded Ludwig Wittgenstein to speak to them. He later commented that:

> [W]e thought, in accordance with Kraft's ideas, that it was *possible* to interpret science in a positivistic manner and that such an interpretation did not require an external world . . . Not even a brief and quite interesting visit by Wittgenstein himself . . . could advance our discussion. Wittgenstein was very impressive in his way of presenting concrete cases, such as amoebas under a microscope. . ., but when he left we still did not know whether or not there was an external world, or, if there was one, what the arguments were in favour of it. ([1966], p. 4)

Among the Circle's other visiting speakers were the Marxist intellectual Walter Hollitscher, and philosophers such as Bela Juhos, Georg Henrik von Wright and Elizabeth Anscombe. Feyerabend met Anscombe in 1952, at another Alpbach meeting. Anscombe, who was in Vienna to improve her German for the translation of Wittgenstein's work, gave Feyerabend manuscripts of Wittgenstein's work, and discussed them with him. Feyerabend tells us that he himself *rewrote* Wittgenstein's meandering *Philosophical Investigations* 'so that it looked more like a treatise with a continuous argument' (*SFS*, p. 116)! Anscombe subsequently translated part of Feyerabend's treatise, which was published as his review of the book, one of his very first publications.

At the University of Vienna, although he had originally planned to submit a thesis on physics, Feyerabend swapped to philosophy when he got nowhere with the electrodynamics problem he was calculating. He presented almost all of his draft material to meetings of the Kraft Circle, and the resulting thesis (on the topic of 'basic sentences', sentences which simply record sensory impressions), for which he received his doctorate in 1951, was derived from notes taken at these meetings.

Feyerabend had planned to study with Wittgenstein in Cambridge, and applied for a scholarship to do so, but Wittgenstein died before Feyerabend arrived in England. So instead he studied the philosophy of quantum mechanics under Popper at the London School of Economics between 1952 and 1953. Having been convinced by Popper's and Pierre Duhem's critiques of inductivism (the positivist view that science proceeds via generalization from facts recorded in basic sentences), Feyerabend came to consider Popper's view, falsificationism, a real option and, he later said, 'fell for it' (*KT*, p. 89). Along with his new colleague Joseph Agassi, he applied falsificationism, the view that good science is distinguished by the theorist's production of and determination to test highly testable theories, in his papers and lectures. At the end of his stay, Popper applied to extend Feyerabend's scholarship, but failed. He therefore invited Feyerabend to become his assistant. Feyerabend declined, feeling uncomfortable with the arrangement, and Agassi took the post instead. Feyerabend, meanwhile, returned to Vienna in the summer of 1953 as an assistant to Arthur Pap, who was trying to reinvigorate the doctrines of the Vienna Circle. There he met Herbert Feigl, who was a visitor at the University, and who convinced him that the positivism of Kraft and Pap had not solved the traditional problems of philosophy, and that 'there was still room for fundamen-

tal discussion – for speculation (dreaded word); there was still a possibility of overthrowing highly formalised systems with the help of a little common sense!' ([1966b], p. 5).

During this period Feyerabend was very busy, translating Popper's *The Open Society and its Enemies* into German, writing encyclopaedia articles, and conducting a survey of postwar academic life in Austria for the Library of Congress in Washington, DC. But he also felt that he did not know what to do in the long run, so he applied for jobs in various universities.

In 1955, with the help of Popper and the physicist Erwin Schrödinger, he became a lecturer in philosophy at the University of Bristol, an appointment which lasted until 1958. From 1955 onwards he published many articles, mostly on philosophy of quantum mechanics and general philosophy of science. The early ones strongly reflected the influence of Popper, Kraft and Wittgenstein. Feyerabend attempted to combine falsificationism with the 'contextual' theory of meaning which he read into Wittgenstein's *Philosophical Investigations*.

Feyerabend emigrated to the USA in 1959, becoming Associate Professor of Philosophy at the University of California, Berkeley, and then a full Professor in 1962. No longer under the direct influence of Popper, he began to extend, and eventually to slough off, the falsificationist philosophy. A gradual but fundamental reorientation in his attitude towards philosophy of science saw him align himself increasingly with the outwardly historical approach of T. S. Kuhn, and against what he came to think of as 'rationalism', the tendency to find within or impose upon all worthwhile scientific activity a single 'scientific rationality'. Undoubtedly, student radicalism and the Free Speech movement, both centred on the Berkeley campus, were among his other influences at the time. Of this period he recalled:

> In the years 1964ff. Mexicans, Blacks, Indians entered the university as a result of new educational policies. There they sat, partly curious, partly disdainful, partly simply confused, hoping to get an 'education'. What an opportunity for a prophet in search of a following! What an opportunity, my rationalist friends told me, to contribute to the spreading of reason and the improvement of mankind! What a marvellous opportunity for a new wave of enlightenment! I felt very differently. For it dawned on me that the intricate arguments and the wonderful stories I had so far told to my more or less sophisticated audience might be just dreams, reflections of the conceit of a small group who had succeeded in enslaving everyone else with their ideas. Who was I to tell these people what and how to think? (*SFS*, p. 118)

Feyerabend took his academic duties and responsibilities increasingly less seriously, and came into conflict with colleagues and university authorities as a result. But his reputation as a provocative and combative philosopher of science was such that even this did not prevent him from holding several appointments, some of them simultaneous. He lectured at University College London (1966–9); the Free University of Berlin (1968–70); Yale University (1969–70); the University of Auckland (1972 and 1974); the University of Sussex at Brighton (1974–5); the University of Kassel, and the Federal Institute of Technology, Zurich (1970–90). During his time at University College London, he met and befriended another major influence on his work, Imre Lakatos. Lakatos genuinely admired Popper and sought to liberalize the falsificationist philosophy of science. Feyerabend and Lakatos corresponded at length, until the latter's death in 1974, which depressed Feyerabend greatly. Only Feyerabend's part of the joint project they were working on, *For and Against Method*, was published at the time.

The liberalization that Lakatos had in mind was pushed to its extreme by Feyerabend. Like many of his contemporaries, he came to embrace the relativist views that there is no single rationality, no unique way of attaining knowledge, and no single body of truth to be thereby attained. He became intensely sceptical about the ambitions and achievements of 'Western rationalism', suspecting it to be the willing tool of Western imperialism. His sympathies came to lie firmly with people marginalized by this intellectual tradition, and he sought to show that many of its greatest intellectual heroes did not play by the standards which the tradition's self-appointed ambassadors advertise. He also sought to downgrade the importance of empirical arguments by suggesting that aesthetic criteria, personal whims and social factors have a far more decisive role in the history of science than rationalist or empiricist historiography would indicate. His 1975 and 1978 books *Against Method* and *Science in a Free Society* famously gave expression to these anti-rationalist themes, and garnered an audience far wider than books in philosophy of science usually have. Feyerabend saw himself as having undermined the arguments for science's privileged position within contemporary culture, and much of his later work was a critique of the position of science within Western societies. But this is not to be confused with a critique of science itself: in his later work Feyerabend usually took the side of scientists, whom he considered to be opportunists, against the prescriptions of 'rationalist' philosophers. He came to be seen as a leading cultural relativist, not just because he stressed that some

theories are incommensurable, but also because he defended relativism in politics as well as in epistemology. His denunciations of aggressive Western imperialism, his critique of science itself, his conclusion that 'objectively' there may be nothing to choose between the claims of science and those of astrology, voodoo and alternative medicine, as well as his concern for environmental issues, ensured that he was a hero of the anti-technological counter-culture. He continued producing philosophical papers right up until his death, at his home in Switzerland, on 11 February 1994.

Feyerabend is nowadays thought of as one of a new school of historical philosophers of science which flourished after the demise of Logical Positivism. The usual story is as follows. In the period between the two world wars, the Vienna Circle, together with Karl Popper (their 'official opposition'), sought a 'logical analysis' of science, an analysis which would make sense of the intellectual products of scientific activity in terms of the formal logic recently reinvigorated by Gottlob Frege's *Basic Laws of Arithmetic* (1893–1903) and by Whitehead and Russell's *Principia Mathematica* (1910–13). The (less well-defined) group of 'logical empiricists' who continued this work after the second world war relaxed the discredited dogmas of positivism, but they too used logic in an attempt to give a 'rational reconstruction' of science. These groups dominated Anglo-American philosophy of science until the late 1950s. During the same period, members of a new school of historians (founded somewhat earlier by Duhem, and developed by Alexandre Koyré, Sir Herbert Butterfield, Vasco Ronchi, Anneliese Maier and others) renewed the *historical* study of science. But their work had little impact on the dominant stream in philosophy of science. Not until the late 1950s, when there emerged a new breed of philosopher of science influenced by the later work of Wittgenstein, did philosophy go to history for a more accurate picture of science. The new breed included N. R. Hanson, Stephen Toulmin, Michael Polanyi, Thomas Kuhn, and Feyerabend.

In the case of Feyerabend, this is at least partly a myth. Although he began his career with an extensive case-study of the quantum theory, this was conducted within a set of assumptions about good scientific methodology derived largely from the work of Popper. In this phase of his work it can be said that, like Popper, his disagreement with the Logical Positivists and logical empiricists is not over whether the methodologies they 'propose' for science should be answerable to the realities of scientific practice (all are agreed that they need not), but only over the methodology proposed. Feyerabend acquired the reputation of being one of the new breed of philosopher of science because

some observations he made in early papers were originally drawn from or inspired by historians who really *were* members of the new school. In fact, he should have been regarded, at that time, as something of a fifth-columnist. The reality is that only gradually, partially, and rather late in his active career, did Feyerabend become a genuine 'historical' philosopher of science.

Feyerabend now has a curiously double-sided reputation. Within philosophy of science, the material he wrote during his earlier phase is the better-known. During the 1960s he was perceived to be at the forefront of a new wave in philosophy of science, and his writings received a great deal of critical attention. But philosophers of science turned off when, in the mid-1970s, he produced *Against Method*, whose main theme was the non-existence of scientific method, and whose final chapter suggested both that science was continuous with myth, and that it ought to be separated from the modern democratic state in the way that religion already had been: Feyerabend was then perceived to have isolated himself, by his views (and his behaviour, about which gossip abounded) from the community of philosophers of science.

From that point onwards, Feyerabend's work had a rather different audience. Within philosophy it was studied mainly by those interested in pursuing, or destroying, relativism. But, more importantly, his name also became known to people in all sorts of walks of life because of his critique of the claims of science, his defence of cultural relativism, and the support that these views lent to the anti-technological counter-culture that emerged from the 1960s. Critical study of this later work is still in its infancy, mainly because few philosophers take its premises seriously.

This book aims to give a critical introduction to the central themes in Feyerabend's philosophy, in chronological order.[1] His work can be (roughly) divided into two phases, the first stretching from the early 1950s until about 1970, the second from 1970 onwards. Feyerabend often accused critics of finding weaknesses in his work by juxtaposing views he held at different times, and he glamorized what he thought of as his own tendency to move swiftly from one view to another. Because of this, I have sought within each chapter to evaluate views as a package only if they appear in publications produced at about the same time.

The first eight chapters in this book lay the groundwork of Feyerabend's earlier epistemology of science, picking out the themes in his 'model for the acquisition of knowledge'. I try to show how Feyerabend's version of scientific realism, his theory of meaning, his

argument for theoretical pluralism and his radical materialist philosophy of mind hang together within this model, underpinned by his conception of methodology. His later work can only be fully understood on the basis of an acquaintance with these earlier articles.

The onset of the second phase in Feyerabend's work is marked by his losing interest in the ambitions of this earlier project. In chapters 9 and 10 of this book the presumption that he defended a unified (albeit developing) model for the acquisition of knowledge is dropped. Whereas the previous chapters cover the central themes in the first phase of his philosophy, in these later chapters I have had to be more selective. I try to set out the basis of his political philosophy, and to explain why relativism, which appeals so much to Feyerabend's later audience, is regarded by many philosophers as untenable.

1

Philosophy and the Aim of Science

1.1 Scientific and Analytical Philosophy

It has not gone unnoticed that philosophy has a deeply self-reflexive quality which sets it apart from other activities, for the nature of philosophy itself has often been an important philosophical issue. In this century the self-conception of Anglo-American philosophy has been shaped mainly by the notions of scientific philosophy, and analytical philosophy.

Paul Feyerabend set out one conception of the subject in one of his earliest papers, where he argued as follows. Philosophy cannot be both scientific and analytical at the same time. If a discipline is to be scientific it must have a certain subject matter, and it must be progressive, in that it will involve coming to know more about the objects which comprise this subject matter. But if we assume that philosophy is scientific in this sense *and* that it consists of analyses (of language, for example), none of its propositions could express discoveries. This is because of the 'paradox of analysis',[1] that any correct philosophical analysis of a concept must be uninformative, and any informative one must be incorrect. Feyerabend concluded that *'philosophy cannot be analytic and scientific,* i.e. interesting, progressive, about a certain subject matter, informative *at the same time'* ([1956a], p. 95). Philosophers must choose between analytical and scientific philosophy.

This conclusion he compared with Wittgenstein's dictum that 'If one tried to advance *theses* in philosophy, it would never be possible to debate them, because everyone would agree to them' (Wittgenstein [1953], § 128), and he criticized philosophers who want a purely