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# Introduction: Reappraising Paul Feyerabend

ABSTRACT

This volume is devoted to a reappraisal of the philosophy of Paul Feyerabend. It has four aims. The first is to reassess his already well-known work from the 1960s and 1970s in light of contemporary developments in the history and philosophy of science. The second is to explore themes in his neglected later work, including recently published and previously unavailable writings. The third is to assess the contributions that Feyerabend can make to contemporary debate, on topics such as perspectivism, realism, and political philosophy of science. The fourth and final aim is to reconsider Feyerabend's place within the history of philosophy of science in the light of new scholarship.

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'Feyerabend's philosophy of science has little to recommend itself and is losing whatever importance and significance it once had within philosophy of science'—Frederick Suppe (1977), p. 643

## 1. Introduction

This special issue is devoted to a critical reappraisal of the significance of the philosophy of Paul Feyerabend to current and longstanding debates, and to the place and significance of his work the history of the philosophy of science. It is the first collection dedicated to his work in almost fifteen years, being preceded by an edited volume, *The Worst Enemy of Science*, in 2000, and a *festschrift* published in 1991, to mark Feyerabend's retirement, entitled *Beyond Reason.*<sup>1</sup> There are also now three book-length studies of his philosophy, authored by John Preston (1997), Eric Oberheim (2006a, 2006b), and Robert Farrell (2003), and a steady stream of papers on various aspects of his work, and increasingly from philosophers working in Eastern Europe, Asia, and South America.<sup>2</sup>

Such continuing interest has been encouraged by the appearance of new pieces of Feyerabendiana, including several works previously unknown, including a complete monograph. These include *Conquest of Abundance*, edited by Bert Terpstra and published in 1999, consisting of an uncompleted manuscript and a series of contemporaneous published articles on closely related themes. This 'tale of abstraction versus the richness of Being' was intended, by Feyerabend, to be his last book—or in his preferred terms—a 'collage ... on the topic of *reality*', and especially of the ways in which scientific and philosophical 'abstractions' can dissolve our sense of its richness and complexity.

Another closely related work is Naturphilosophie, edited by Helmut Heit and Eric Oberheim, published in 2009 and awaiting translation into English. This was a long-slumbering project of Feyerabend's, for one can find references to it in his correspondence with Imré Lakatos in the early-to-mid 1970s. It offers a grand history of 'philosophies of nature' in the Western tradition, beginning with the Stone Age, and continuing via the ancient Greeks through early modern science to twentieth century physics. A final piece of recent Feyerabendiana, again edited by Eric Oberheim, is a set of four lectures published under the title The Tyranny of Science. Though the title fits popular images of Feyerabend's ideas and character, the original title of the lectures, originally delivered at the University of Trent in May 1992, was far more sober: 'What is Knowledge? What is Science?'. These public lectures range across a variety of topics, but their guiding theme is that science can be a force for good in the world, just as long as it is protected from false, distorting 'myths', such as its isolation from social and political values and concerns.

Another useful source is the edited correspondence between Feyerabend and Lakatos during the late 1960s and early 1970s, covering the period during which they were working on the volume that was to be *For and Against Method* (*Lakatos & Feyerabend*,



Keywords:

Feyerabend

Thomas Kuhn

Scientific realism

Scientific pluralism

Political philosophy of science

History of philosophy of science



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<sup>&</sup>lt;sup>1</sup> See Preston, Munévar, and Lamb (2000) and Munévar (1991a, 1991b), respectively.

<sup>&</sup>lt;sup>2</sup> The new work on Eastern European, Asian, and South American scholars' work on Feyerabend is referenced and discussed in Kidd (2010), p. 168.

1999). Unfortunately Lakatos' untimely death prevented completion of his brief 'for' method, and so Feyerabend went ahead with the book that we now know as *Against Method*—though, of course, there are a number of his works with that title. This volume also includes several other pieces by Lakatos and Feyerabend on philosophical and educational themes, and it gives a lively account of their life, ideas, politics, and characters.

Several other pieces of Feverabendiana are also currently in progress. The fourth volume of Feyerabend's philosophical papers, gathering together his writings on the history and philosophy of physics, appeared while this volume was in press (Feyerabend, 2015). Other forthcoming works include correspondence with Thomas Kuhn, Karl Popper, and Paul Hoyningen-Heune. Anglophones might also hope for the translation, into English, of other writings by Feyerabend, including Der wissenschaftstheoretische Realismus und die Autorität der Wissenschaften, Erkenntnis für freie Menschen-a variant of Science in a Free Society-and a short work entitled Wissenschaft als Kunst.<sup>3</sup> With this point about language, it is important that Anglophone monoglots—like the editors of this volume-record their thanks to the editors and translators of Feyerabend's works, the staff at the Feyerabend Archive at Konstanz, and Grazia Borrini-Feverabend for their intellectual and personal efforts in making his work available.<sup>4</sup>

Taken together, then, these books, lectures, papers, and sets of correspondence offer a rich resource for those with a scholarly interest in Feyerabend's life and work. In the next section, we address the complicated question of its contemporary relevance.

#### 2. 'The worst enemy of science'

It is well-known that Feyerabend has a complicated reputation within the philosophy of science. Despite his considerable influence on mid-twentieth-century philosophy of science, including important exchanges with Kuhn, Popper, and Lakatos, and despite his importance and citation outside of the discipline, these days his reputation is rather messy.

Most obviously, his name was, and still is, associated with a range of striking, and often negative epithets. Depending upon whom you read, Feyerabend is a 'cultural relativist', 'epistemological anarchist', 'the Salvador Dali of philosophy', 'the wild man of twentieth-century philosophy of science', and—for one particularly expressive commentator-'the agent provocateur, the Shakespearean Fool, and the gifted charlatan all rolled into one'. Perhaps the most persistent label is the one given by two writers for *Nature*, who judged Feyerabend to be 'the worst enemy of science' (Theocharis & Psimopoulos, 1987). The name 'Feyerabend' conjures up an image of a philosophical trickster, wickedly willing to praise voodoo and astrology and demean science and reason. Peculiar legends have grown up around him, colleagues often delightedly report stories and anecdotes about him, and many have criticized him for being nasty and aggressive and for his wanton disregard for academic and scholarly norms and conventions. Several of these complaints are not without some basis, and even sympathetic admirers must admit that Feyerabend often did himself no favours; for instance, by berating the discipline and practitioners of philosophy of science as an obsolescent discipline populated by 'creeps and incompetents'. Indeed, such criticisms, legends, and epithets loom so large that the first chapter of Oberheim's book, entitled 'Facing Feyerabend', is devoted to dismantling them.

Still, despite such efforts, it seems that, for many people, Feyerabend still suffers the title given to him by two writers for *Nature*: 'the worst enemy of science'. As Peter Godfrey-Smith (2001, pp. 102-103) once pointed out, however, though one might call Feyerabend "the" wild man ... there have been various other wild men—and wild women' in the philosophy of science, even if Feyerabend was 'uniquely wild'. Many encyclopaedia and biographical dictionary entries still repeat this image of Feyerabend as a raving 'anti-science' irrationalist. A bad reputation is, indeed, hard to shake.

The contributors to this volume seek to challenge this inherited perception of Feyerabend in three main ways. The first is to offer critical reappraisals of his claims, arguments, and theses, often by connecting them with subsequent developments in philosophy of science, epistemology, and the history of science and culture. Feyerabend's status as a 'relativist', for instance, is shown by Lisa Heller and Martin Kusch (this volume) to be far more complex than it initially appears. The second is to explore the ways in which Feyerabend's own ideas can contribute to current areas of debate within the philosophy of science, especially on topics, such as science and democracy, that were unusual in his day, but quite mainstream today. The papers by Helene Sorgner and the two editors each explore how Feyerabend's work can contribute to central topics of debate in socially engaged philosophy of science, such as expertise, education, and democratic politics.

The third way to challenge the inherited perception is to offer a reappraisal of Feyerabend's status within the history of the philosophy of science and his relationship to the wider history of philosophy and science. This includes 'usual suspects' such as Einstein, the Popperian school, and positivism, as explored by Eric Oberheim, Matteo Collodel and Daniel Kuby, respectively, as well as to ancient Greek thought, which is treated by Helmut Heit, Gonzalo Munévar, and Preston. Many other influences and precedents have been identified and explored, including Søren Kierkegaard, Pseudo-Dionysius the Areopagite, and John Stuart Mill.<sup>5</sup> There is also rich scope for further studies of Feyerabend's relationship to wider intellectual and political developments, including early analytic philosophy, the Cold War, the 1970s 'counterculture', postmodernism, and contemporary feminist and postcolonial philosophies of science among others.<sup>6</sup>

Alongside these three sets of reasons, it is worth noting a further point about Feyerabend's 'bad reputation'. This is that many of the claims that Feyerabend, in the 1970s, and which earned him his status as a radical anarchist are now the received wisdom within mainstream philosophy of science. As Howard Sankey (2012, p. 475) has pointed out, 'many of Feyerabend's key themes are now commonplace', such as the fact that 'science' is pluralistic, disunified, value-laden, and complexly bound up with social and political concerns.

Indeed, the call to take seriously the practical and political context of the scientific enterprise that earned Feyerabend his 'anarchistic' status is now honoured by a rich community of pluralist, feminist, political, and socially-engaged philosophies of science—even if only a few of them appreciate Feyerabend's status as a precursor of their interests and approaches. More generally, many of the other claims that Feyerabend made that seem radical, may, be more sensible than is often supposed. Helen Longino (1990, p. 65) has pointed out that, in fact, many of Feyerabend's claims, for instance that 'objectivity has been fetishized'—are, on analysis,

<sup>&</sup>lt;sup>3</sup> See Feyerabend (1978, 1980, 1984), respectively.

<sup>&</sup>lt;sup>4</sup> With the mention of Grazia, we also invite readers to look at the work of the Paul K. Feyerabend Foundation, founded in 2006, which (to quote its mission statement) 'promotes the empowerment and well being of disadvantaged human communities'. The Foundations' website, http://pkfeyerabend.org/paul-k-feyerabend/? lang=en, also includes photographs and an audio recording of Feyerabend—a real treat!.

<sup>&</sup>lt;sup>5</sup> See Kidd (2011, 2012) and Lloyd (1997), respectively.

<sup>&</sup>lt;sup>6</sup> See Floyd (2006), Kidd (2016), Preston (1998), and Stadler (2006).

'more subtle' than many hasty readers have supposed. Granted, this policy of charity cannot rehabilitate all of his apparently outrageous acts and claims; but, still, many of his putatively eccentricities, such as his defences of alternative medicine and proposals for educational reform, often turn out, on examination, to be more sensible than one might expect (see, e.g., Kidd, 2013a, 2013b; in press).

There is a good reason, though, why it is often difficult to identify and appreciate Feyerabend's views, namely his regular changes of position and interest. It will be useful, then, to outline several phases in his work, and give a sense of both the continuities and shifts of position and emphasis can be found throughout his work.

### 3. Phases of Feyerabend's work

It is well known that Feyerabend was a temperamental and philosophical pluralist who could adapt easily to a changing philosophical climate. The discipline of philosophy of science experienced several decisive 'turns' during the last century—such as the historical turn of the early 1960s—and Feyerabend was striking for his ability to reorient his philosophical interests and approaches accordingly.

Preston (1997) classifies Feyerabend's work into two periods: early Feyerabend, roughly pre-1970, is a scientific realist and Popperian who defends a pluralist methodology for science, while late Feyerabend, beginning with *Against Method* (1975), is an epistemological anarchist, relativist, and postmodernist. (The periodization comes with relatively positive and negative evaluations of the early and late periods, respectively.) Eric Oberheim has critiqued Preston's approach and argued instead that there is very little change in basic philosophical commitments throughout Feyerabend's career, and therefore continuity rather than distinct periods. Feyerabend's main commitment throughout his career, according to Oberheim, is to pluralism and anti-dogmatism, and the appearance of major shifts of commitment are really a deepening of his understanding of pluralism and a shift in attention to different issues.

We believe there is a middle way. We agree with Oberheim that there is a significant continuity throughout Feyerabend's career of both philosophical commitments and philosophical style. Nevertheless, there are significant shifts of emphasis and strategy in his career that are definitely worth emphasizing. We propose the following way of classifying Feyerabend's work into periods:

- *Early Work* (c.1951–1975): Here Feyerabend defends a type of semantic realism that is opposed to phenomenalism or verificationism, argues for pluralism *within science*, and his main goal is to defend science against philosophies of science that would damage it.
- Middle Work (c.1978–1987): Here, Feyerabend argues for pluralism in society, with science understood as one social tradition amongst others, and calls the view "relativism." His main goal is to defend society from science, in the sense of its having undue authority over society.
- *Later Work* (*c*.1989–1994): Feyerabend returns to an interest in realism and what he calls 'the problem of reality', explicitly denies relativism, and takes up metaphysics in earnest. The period is marked by a broader agenda of engaging with classics and the arts in addition to science and society.

The main qualification we would add to this periodization concerns the transition between the early and middle work. That transition is slow in maturing and its end-point depends crucially on your interpretation of the first edition of *Against Method*. Aspects of this transition can be seen already in 1968 with Feyerabend's renewed interest in and appreciation for the work of Niels Bohr, whose complementarity interpretation of quantum mechanics he had earlier attacked as a vicious form of conceptual conservatism, but which he later defended against attacks from Popper and others. In those papers, Feyerabend reads Bohr as a relationalist and an anti-universalist, and he reads the doctrine of classical concepts not in terms of conceptual conservatism but rather in terms of preserving the connection between science and the concerns of human life, as a strategy for preventing science from becoming abstract and esoteric. The shift is definitely complete by 1978, with the publication of *Science in a Free Society*, which is firmly situated in the themes of Feyerabend's middle work. We suggest that one can read the 1975 edition of *Against Method* as a transitional work, mainly occupied with the concerns of the early work, but moving in the direction of the middle period.

Feyerabend describes the transition between his early and middle periods in the introduction to the first two volumes of his collected papers (Feyerabend, 1981, pp. ix-xiv). While Feyerabend's own account of his intellectual development is unreliable at best, in this we think there is something interesting. He describes the two periods in terms of "argumentative chains" that reverse from one period to the other. So the early work follows the chain

## $criticism \Rightarrow proliferation \Rightarrow realism$

That is, the importance of criticism to science recommends a methodology of pluralism and proliferation, and that methodology requires a commitment to realism in interpreting preferred theories. In *Farewell to Reason* (1987), he describes himself in this phase of his career as a "scientific libertarian" whose "battle cry could have been 'leave science to the scientists!"(p. 317). By contrast, the chain from the middle period can be represented as

 $L \Rightarrow \neg criticism \Rightarrow \neg realism_{\neg L}$ 

Or more explicitly,

Accepting a certain form of life  $L \Rightarrow$  reject the universal value of criticism  $\Rightarrow$  Anti-realism about beliefs incompatible with L

The middle period work is thus concerned with discussion of the beliefs and traditions of non-scientific or at least non-Western cultures, with an explicit defence of "relativism," and with discussions of the role of science in democratic societies. Many works from this period have an angry, vitriolic tone, exemplified by the section of *Science in a Free Society* (1978) entitled 'Conversations with Illiterates', which contains acidic responses to critics of the first edition of the book, *Against Method* (1975). The last work that fits under the rubric of the middle work is *Farewell to Reason* (1987), which itself contains transitional elements. The publication of 'Realism and the Historicity of Knowledge' in the *Journal of Philosophy* (1989) announces the shift to the later period.

The distinction between the early and middle work is valuable for understanding a number of key features of Feyerabend's development, not only the changes of emphasis within his philosophical works, but also his changing fortunes within the profession. Understanding how his interests and emphasis developed between these periods can help us understand how a major defender of scientific realism in the 1960's could become the author of "How to Defend Society Against Science" in the 1970's, as well as understanding how a rising star of philosophy of science, a participant in many of the major intellectual forums of the field could later be described 'as the sad story of a brilliant mind run amok' (Suppe, 1991, p. 297).<sup>7</sup>

<sup>&</sup>lt;sup>7</sup> This is Suppe's judgement of his colleagues' general views, not his own view, but nonetheless, it is telling.

The distinction between the middle and later works is crucial to a number of the contributions to this volume, for example, in the contributions of Heller and Kusch to the discussion of Feyerabend's changing approaches to the topic of relativism. Relativism is not a theme in the early works, but Feyerabend flies it as his banner in his middle works, while he comes to reject it in the later works. His careful, if idiosyncratic, interrogation of various versions of relativism in 'Notes on Relativism' in *Farewell to Reason* is a key transitional work.

### 4. Feyerabend's place in the history of philosophy of science

During his intellectually and geographically wide-ranging career, Feyerabend studied, worked, and argued with some of the most influential figures in the history of twentieth century history and philosophy of science. He was one of the 'Big Four' philosophers of science of the mid-twentieth century, alongside Thomas Kuhn, Karl Popper, and Imre Lakatos.

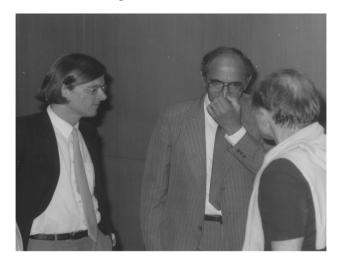
There is a relatively well-known account of Feyerabend's early philosophical development, which we need not repeat in too much detail, here (see Preston, 2012). According to this account, Feyerabend studied at the University of Vienna, first in history and sociology, then in theoretical physics, and finally philosophy, during which time he was, in his own words, 'a raving positivist' (Feyerabend, 1993, 257). He was a founding member of the Kraft Circle, a sort of post-war extension of the Vienna Circle, named after its chair, Viktor Kraft, a philosopher at the University of Vienna, who was Feverabend's dissertation advisor. Feverabend also attended the Austrian College Society summer seminars in Alpbach. where he met Karl Popper, who would have a major influence over his early work. After attaining his doctorate, Feyerabend took up positions in the UK with Popper's support, after which his relations with Popper and critical rationalism became increasingly complex, until, by the 1970s, he had moved into 'full scale' epistemological anarchism.

Familiar as this 'positivism to Popper' story is, two of the contributions to this issue problematize aspects of it. Daniel Kuby's discovery of new, very early work by Feyerabend provides an opportunity to reevaluate Feyerabend's relationship to positivism and the Vienna Circle, while Matteo Collodel's contribution interrogates Feyerabend's relationship to Popper. In each case, the real story is more complex than the familiar story.

Besides his association with Popper, Feyerabend is often discussed along with two other key figures of what is sometimes called 'post-positivist' philosophy of science: Imre Lakatos and Thomas Kuhn, both of whom Feyerabend knew well. Feyerabend's relationship with Lakatos has been mentioned above. Feyerabend met Thomas Kuhn when he took up a position Berkeley in 1958, where Kuhn was already working in a joint position between history and philosophy. In the following years, Kuhn and Feyerabend had conversations that were greatly influential on Feyerabend, focusing upon a manuscript that Paul Hoyningen has called 'Proto-Structure' (see Hoyningen-Huene, 1995; 2006). It was around this time that both developed the ideas they would eventually refer to, in the early 1960s, as 'incommensurability', and that Feyerabend became convinced that the history of science was indispensible to the philosophy of science. Feyerabend was advocating for the value of Kuhn's ideas even prior to the publication of Structure and played an important role connecting Kuhn to Popper.

It is interesting to note that the three figures, who are generally regarded as the architects of the historical turn in post-positivist philosophy of science were personally very close, and that Feyerabend played such an important mediating role between the three of them, even if their later personal relations became much more fraught. Indeed, we second Norette Koertge (2013, p. 141)'s recent call for historians to devote more attention to 'the social networks and personalities involved in philosophical and scientific movements'.

Kuhn and Feyerabend began to drift apart in the early 1960s, around 1961 or 1962. It is difficult to reconstruct the reasons for this, but certainly they had little contact with one another until. in 1984. Feverabend asked Paul Hovningen-Huene to invite Kuhn to Zurich. Although initially reluctant. Kuhn eventually visited in 1985, apparently impressed by Feyerabend's support of Hoyningen-Huene's visit to work with Kuhn at MIT a few years earlier. The Zurich event took place at the Eidgenössische Technische Hochschule Zürich over three days, opening with a talk by Kuhn at the splendidly named Auditorium Maximum, followed by a trip around the lake, walks, and dinners. Indeed, such was the easy warmth of that time, that Hoyningen-Huene only learned about their conflict from the early '60s to the mid-'80s some ten years later, after Feyerabend's death. At the 2012 conference in Berlin on Feyerabend's philosophy, Hoyningen-Huene gave a moving account of that meeting.



This photograph of Paul Feyerabend and Thomas Kuhn's reunion in Zurich courtesy of Paul Hoyningen-Huene.

See also the photo in Killing Time (Feyerabend, 1995, p. 152).

Such eventual *rapprochement* did not occur between Feyerabend and Popper and those he pejoratively dubbed 'the Popperians', of course, and from the mid-70s onwards, after Lakatos' death, the sense is one of Feyerabend as deeply professionally and intellectually isolated. The hostile critical reception that greeted the first edition of *Against Method*, simultaneous with Lakatos's death, which left Feyerabend 'devastated and quite angry' (1995, p. 130), led to the radical claims and intemperate tone of *Science in a Free Society*. At this point, it seems that Feyerabend and the rest of the philosophy of science community parted company; hence Suppe's judgement, in 1977, that, despite its previous merits, Feyerabend's philosophical work at that point had 'little to recommend itself and was 'losing whatever importance and significance it once had within philosophy of science' (1977, p. 643).

The reference to the loss of Feyerabend's significance within the philosophy of science is significant, however, since from the mid-'70s onwards it gained new popular and academic audiences. These include those with intellectual or political interests in relativism, environmentalism, pacifism, and ideological denunciations of the 'tyrannies' of rationalism, science, and other core components of late modernity. As ever, Feyerabend was naturally aligned with emerging intellectual and cultural trends—as, Zelig-like, he adapted to the changing world—such that his work was, then as now, never without an enthusiastic audience.

Certainly his work typically attracts undergraduate students, who are-in the editors experiences at least-usually delighted with a self-confessed 'anarchist', but testimonies from Feyerabend's own students are, in fact, quite a mixed bag. All agree that Feyerabend was a brilliant and charismatic lecturer-attracting audiences from far and wide, causing queues outside lecture halls-but, oneon-one, accounts begin to vary. Karin Knorr-Cetina, for instance, attended his lectures at Berkeley in 1976-77, and reports that, though they were 'fascinating', it was 'very difficult to have an intellectual discussion with him' (quoted in Bechtel & Callebaut, 1993, p. 109). Yet she adds that this was soon after Lakatos died, an event that, of course, cast Feyerabend into an emotional and intellectual despair. Indeed, a few years earlier, Donald Gillies recalls that Feyerabend was 'very kind ... helpful to students and ... accessible', and always willing, despite his 'world star' status, to make himself available to students for discussion and debate.<sup>8</sup>

Clearly Feyerabend inspired, provoked, and engaged his students, but it is an open question whether many of them were, as it were, 'Feyerabendians'. Karl Svozil attended Feyerabend's philosophy of science lectures at Berkeley in 1983 and reported an audience of twenty, half of whom were 'devotees and curious listeners'. Although Feyerabend, by his reactions, evidently 'despised' the 'fan club', Svozil opines that he also 'longed for them', albeit in an 'ambivalent' manner (2006, p. 89). It is certainly difficult to imagine that Feyerabend would want disciples, preferring to encourage students to form their own positions, even if they contrasted with his own, rather than propagandise on behalf of his own.

A rare example of someone who was strongly and directed influenced by Feyerabend is, however, the philosopher of mind Paul Churchland, whose first book, *Scientific Realism and the Plasticity of Mind* (1979) made clear his debt to Feyerabend. Specifically, Churchland has consistently made clear that his own defences of *eliminative materialism* were inspired by Feyerabend's initial presentation of it (see, e.g., Feyerabend, 1963a, 1963b). This is the doctrine that the concepts of our commonsense psychology might be *replaced* by the materialist language of neuroscience, rather than analytically reduced. What is less well appreciated is that Churchland's philosophy of mind is to a great degree an *application* of his philosophy of science, which was a heavily influenced by Feyerabend, particularly Feyerabend's critique of 'conceptual conservatism.' Indeed, as Churchland (1997, p. S420) once explained, 'my epistemological impulses, and my heart, incline to Feyerabend'.

Other philosophers of science took up Feyerabend's themes and interests, including the members of the so-called 'Stanford school'. Philosophers such as John Dupré, Nancy Cartwright, and others emphasised that science is pluralistic, disunified, charged with values, and complexly bound up with social, political, and policy issues—all core Feverabendian claims. Indeed. Dupré remarked. at the end of The Disorder of Things, that Feyerabend was 'the philosopher with whose general perspective on science I find myself most closely in agreement'. The reason is that Feyerabend was-in the early 1990s, at least—'an oasis of serious critical analysis' of the social and political status of science, which then, unlike now, was a neglected topic. Dupré goes on to observe wisely that epistemological anarchism was 'intended above all as a therapy against the antidemocratic and oppressive consequences of the monopoly of epistemic authority sustained by science' (1993, pp. 262-263). Nowadays, of course, philosophy of science is cheerfully and busily engaged with topics like pluralism, values, policy, and the democratic control of science—all topics that, throughout the late '70s and '80s, were central to Feyerabend's philosophical agenda.

Interestingly, these sorts of concerns have been robustly explored in two closely related areas that make relatively little use of Feverabend: namely, feminist and postcolonial philosophies of science, as represented in the distinguished work of Donna Harraway, Sandra Harding, Evelyn Fox Keller, and Helen Longino, among others (see Koertge, 2013). Certainly many of the themes that have been central to feminist epistemology and philosophy of science of the last forty years are reflected, if unsystematically, in Feyerabend's writings. These include an emphasis upon the socially and politically textured nature of scientific enquiry, the ways that historically contingent epistemic practices and institutions can generate and sustain oppressive systems of social power, and a programmatic concern with social injustice and epistemic pluralism-all themes that run through Feyerabend's writings. Yet despite his pluralism, there are barely any references to feminist thought in Feyerabend's writings, and his few references to it are, at the most, inconclusive.

Another curious blind spot is the pragmatist tradition—for, as Brown argues (this volume) there are rich parallels between Feyerabend's thought and both classical American pragmatism (especially that of John Dewey) and contemporary developments in pragmatist philosophy of science. An obvious example is Philip Kitcher, who, in a recent book, *Science in a Democratic Society*—an obvious nod to Feyerabend's *Science in a Free Society*—incorporates some of Feyerabend's ideas on pluralism and dissent into his recent proposals for a 'pragmatist philosophy of science' (see, e.g., 2011, §§ 24, 25, 34). Relatedly, Miriam Solomon has explored Feyerabend's status as a 'major exception to the consensus on consensus' in the philosophy of sciences, and his situation in relation to contemporary epistemological debates about diversity and dissent in science (see, e.g., Solomon, 2001; 2006).

A similar situation obtains with Feyerabend and postcolonial science and technological studies (PSTS). From the last 1970s onwards, one finds, in Feyerabend's writings, a consistent and obviously sincere concern with the epistemic and political marginalization of aboriginal cultures, the complicity of scientific knowledge and institutions in culturally imperialistic policies and trends, and energetically polemical denunciations of the human and environmental costs of Westernisation. In a recent book, for instance, Harding outlines her programmatic aim of exposing and interdicting the exclusion of 'peoples at the periphery of modernity', and, by doing so, enable 'realistic reassessments of both Western and non-Western knowledge systems and the social worlds' (2008, pp. 5-6). Feyerabend would surely applaud, for his later writings are filled with passionate affirmations of the value of cultural diversity, the unrecognized cognitive and practical sophistication of aboriginal lifeways, and the deleterious environmental and cultural effects that they entail (see Kidd, 2010: chap.6 and 7).

Unfortunately, though Feyerabend did, into the 1980s, engage with cultural anthropology and environmental studies, he did not, to our knowledge, engage in any sustained way with postcolonial theory, with the unfortunate consequence that the rich literature in PSTS today typically mentions him only as a figure in the critical reactions against positivist philosophies of science—which, through true, does not fully reflect the depth and particularity of his shared concerns. What Feyerabend called the 'conquest of abundance' is, at least in part, both a celebration of the cultural and epistemic diversity evinced by the history of human cultures, both 'Northern' and 'Southern', and regret and anger at the erosion of such diversity at the hands of the forceful imperialistic political, economic, and epistemic policies of certain institutions, groups, and traditions from the global North.

<sup>&</sup>lt;sup>8</sup> Personal communication with Ian James Kidd, 26 June 2008.

Indeed, one reason why Feyerabend urges us to be 'against method' and to bid 'farewell to reason' is because of his sense that these epistemic ideals—of a transculturally legitimate methodological norms and rational values—have been used to justify epistemically, socially, and environmentally ruinous policies, thereby 'conquering' the 'abundance' of the natural and social worlds.

## 5. Feyerabend's contemporary significance

It is striking, as Sankey says, that many of the key ideas for which Feyerabend was branded a radical, are now rather commonplace in philosophy of science. It is widely accepted, at least among those who work in the area, that science is and ought to be guided by or laden with values, and that this fact is not a scandal. Likewise, the role of science in democratic society is of great interest, and neither the authority nor the autonomy of science is taken as a given. The disunity of science and scientific pluralism are no longer uncommon views, and they are certainly no longer regarded as 'anti-science' positions. Sensitivity to the history and practice of science is, of course, equally well established, with the 'historical' and 'practical' turns in philosophy of science well under way. While some of Feyerabend's views are still less popular, such as the contingency of scientific development, and the role of pre- and nonscientific (or non-Western) cultures and ideas in science and society, they also have something to contribute to contemporary debates.

Oddly, though, Feyerabend's status as a precedent for these developments is not always appreciated. From the early 1990s onwards, for instance, several influential calls have been made for a deeper appreciation of the pluralistic and 'disunified' nature of the scientific enterprise, including Dupré (1993), Galison and Stump (1996) and, more recently Kincaid, Dupré, and Wylie (2007), and Hasok Chang (2012), among others. Among these, only Chang and Dupré have noted that Feyerabend is an important precedent for this turn towards a more pluralistic, disunified picture of science, yet in it is a consistent theme throughout his work, both in *Against Method* (which most philosophers of science are familiar with) through to later works like *Conquest of Abundance* and *Tyranny of Science* (which most are not).

A similar point holds for the major contemporary interest in the related issues of the role of values in science and the relationship between science and democratic politics. Feyerabend early on defended a version of the view that science was value-laden, including his contrast between the value of Truth and freedom in 'How to Defend Society Against Science', his insistence that our commitment to forms of life could give us principle reasons to reject realism about certain scientific theories, his many articulations of 'Aristotle's Principle', according to which we should regard as real those entities that play a successful role in the kind of life we would like to live, and his essay on 'Ethics as a Measure of Scientific Truth'.

We conclude that Feyerabend has a greater significance to the history and contemporary state of philosophy of science than is often imagined. Certainly his status as a 'maverick' ought to be largely interpreted in terms of his advocacy of views that, back in the '70s, were radical, but which today, some forty years later, are now widely honoured as the inherited common sense of philosophy of science (which is, of course, not to say that *everything* that Feyerabend said back then was sensible). Moreover, careful study of his wilder claims can often help us to distinguish the valuable and challenging ideas in them from the exaggeration and nonsense, and so give us a clearer view of his workable ideas. Hopefully this volume will go some way towards identifying and developing these different ways that Feyerabend anticipated and can contribute to on-going enquiry within the discipline.

#### 6. Summary of the volume

This volume is divided into six thematic sections. These should not be taken to refer to areas of Feyerabend's thought that are rigidly separated from one another; his work is interesting, in part, because of the ways that it blends together history, philosophy, art, classics and other areas.

The first section. 'Historical Antecedents and Influences'. explores the diverse figures and traditions that shaped and informed the development of Feyerabend's ideas, and that, in turn, show how many of his broad theses can be located within the wider history of philosophy. Gonzalo Munévar traces Feyerabend's intellectual antecedents from ancient Greece to the early modern period and into the nineteenth century. Munévar's discussion confronts the common belief that Feverabend's methodological and philosophical views were very radical with the fact that the same or similar views were help by a variety of canonical thinkers. Eric Oberheim argues that Albert Einstein at least anticipated, and probably directly influenced both Feyerabend's and Thomas Kuhn's philosophies of science. In particular, Oberheim sees Einstein's influence in the idea that scientific theory-change is a conceptual replacement and not just a cumulative revision, in the concept of incommensurability of theories, and in the 'Kant-on-wheels' metaphysics that he argues all three adopt. Matteo Collodel provides an extremely thorough analysis of the question, 'Was Feyerabend a Popperian?' Collodel analyzes both the personal and intellectual relationship between Karl Popper and Feverabend, as well Feverabend's connection with the so-called 'Popperian school'. Collodel's paper makes extensive use of unpublished archival material and contributes not only to our understanding of Feyerabend, Popper, and the Popperians, but provides important reflections on the methodology of history of philosophy of science.

The second section continues the historical theme by offering a lost 1948 paper by Feyerabend, 'Der Begriff der Verständlichkeit in der modernen Physik [The Concept of Intelligibility in Modern Physics]', rediscovered by Daniel Kuby and translated by him and Eric Oberheim into English. We have included Kuby's transcription of the original piece, discovered in the European Forum Alpbach archives by him, the translation into English by Kuby and Oberheim, and Kuby's essay that introduces the piece and explains its relevance in understanding Feyerabend's early philosophical development.<sup>9</sup> Even the original German work is almost entirely unknown, having been published in a fairly obscure newsletter and never republished until now. Kuby argues convincingly that this unsigned manuscript from the Alpbach archives is Feyerabend's first philosophical publication, and that it provides unprecedented insight into what Feyerabend called his 'positivist' phase as a student and into discussions of the 'Third Vienna Circle' (what we above called the "Kraft Circle").

The third section is devoted to Feyerabend's lengthy studies of ancient Greek thought and culture, focusing on the grand historical thesis that he dubbed 'the rise of Western rationalism'. The two papers in this section, by Helmut Heit and John Preston, offer different readings of both the thesis and its place within Feyerabend's wider thought, a topic which, so far, has received scant attention. To start with, Heit argues that many of the distinctive features of Feyerabend's thought, including his complex attitudes towards rationalism and relativism, can be better understood in the light of his studies of ancient Greek thought. The culture, art, and philosophy of ancient Greece is, of course, a constant feature of Feyerabend's work and Heit argues that it plays a much more central role than

 $<sup>^{9}\,</sup>$  Republished here with permission from the European Forum Alpbach, to whom we are grateful.

one might suppose. Preston offers a different reading, arguing that Feyerabend's account of the development of 'Western Rationalism' is, in fact, serious problematic. Still, a critical consideration of that account can, Preston argues, tell us a lot about Feyerabend's relation to Popper's appeals to ancient Greek thought, and to views on rationalism, criticism, and the nature of philosophy.

The fourth section explores the contested question of Feverabend's relativism-or, rather, relativisms, Martin Kusch offers a careful study of the changing conceptions of relativism throughout Feyerabend's writings, concluding that while many of them were unoriginal and vague, others were original and still merit serious consideration. Indeed, some of Feyerabend's ideas can be usefully explored in relation to current debates about scientific pluralism, expertise, and political philosophy of science-indeed, as Kusch notes, the participants in those debates would do well to pay Feyerabend more attention. Lisa Heller charts the oscillations of Feyerabend's changing conceptions of the forms of relativism-epistemic, cultural, political, and so on-and the different roles to which he put them. She argues that careful attention to the shifts in his views shows a gradual shift away from the robust political relativism of middle-period works such as Science in a Free Society and Farewell to Reason through to the epistemic relativism of his later works, such as Conquest of Abundance and The Tyranny of Science. This complicates the familiar critical charge that Feyerabend was a 'relativist'-his position changes, often in response to criticism, and so his ongoing experiments ought not to be dismissed as merely polemical or rhetorical devices.

The related calls for closer attention to the content of Feyerabend's relativism and its application to current debates is developed by Stefano Gattei, who places those ideas within the specific context of contemporary Italian academic and popular debate. Perhaps owing to Feyerabend's residence in Italy, his ideas have played a central role in debates in that country, although different writers put his ideas to different uses. Gattei explores the ways that several Italian philosophers and cultural commentators have used Feyerabend's ideas to support and situate their own interventions into debates about science, society, religion, and philosophy-—indeed, several leading Catholic critics of relativism target Feyerabend, including no less a figure than Pope Emeritus Benedict XVI.

The fifth section turns to Feyerabend's increasing engagement, throughout his middle and late period, with topics concerning politics, education, culture, and religion. Helene Sorgner explores the relationship of Feyerabend's political relativism with the current interest, among sociologists of science, in scientific expertise. Focusing on the work of Harry Collins and Robert Evans, she shows the untenability of many of Feyerabend's own proposals, but she also argues that his challenge to a presumptive privileging of the political and epistemic convictions of modern democratic societies still remains as a salutary challenge to a major theme in contemporarv academic reflection on science and democracy. A similar strategy is employed by Ian James Kidd, who argues that, though Feyerabend's headlining proposal—'the free society'—is, in fact, indefensible, his guiding concerns to secure the epistemic authority of science in democratic societies can, in fact, be achieved. By focusing on his scattered remarks on political and educational thought, he argues that one can reconstruct a conception of epistemically alert 'critical citizenship'-of a sort, in fact, echoed by many modern writers on science and democracy.

The final paper in this section, by Eric Martin, offers an overview of the scattered but suggestive remarks on religious themes in Feyerabend's later writings. Although Feyerabend was not, as far as we can tell, a religious man, his writings do evince a seemingly sincere concern with the spiritual and existential adequacy (or inadequacy) of the 'scientific worldview' and evident interest in Western mystical thought. Scattered as such remarks are, Martin suggests that there is an evident worry, throughout the later writings, about the capacity of a scientific worldview to afford deep spiritual satisfaction; an issue also being developed, these days, by philosophical advocates of secularism, such as Philip Kitcher.

The sixth and final section of the volume, 'Epistemology and Metaphysics', is devoted to Feyerabend's evolving views on the nature of reality—of what he called 'Being'—in his late work, and the epistemological implications that he drew from it. Ron Giere draws upon his own advocacy of a thesis of 'scientific perspectivism' to argue that the later Feyerabend—specifically, as reflected in *Conquest of Abundance*—is a perspectival realist. Giere argues that Feyerabend, too, appreciates the plurality and permeability of perspectives upon the world, each with different epistemic and practical merits; if so, then one can welcome Feyerabend back into the fold of scientific realism—albeit in up-to-date perspectivist garb—without surrendering his pluralist sentiments. The world may be 'abundant', but still structured in a way that scientific enquiry can identify and describe in terms compatible with sophisticated forms of scientific realism (see, further, Tambolo (2014)).

A different reading of the later Feyerabend's metaphysical views is offered by Matthew J. Brown, who, like Giere, argues that the later writings are best read as searching for an alternative to standard, "objectivist" scientific realism. The 'abundance' in praise of which Feyerabend wrote is, argues Brown, a thesis of sophisticated ontological pluralism that is partly, but not exclusively, captured by the sciences; if so, then the epistemic authority of the sciences ought to be rethought. Indeed, Nancy Cartwright has recently developed a similar strategy of using metaphysical conclusions to urge a rethinking of practical and policy issues in detail (1999, 2007).

We hope that this collection might inspire and inform future studies of the content, development, and significance of Feyerabend's philosophy. Certainly his broad vision of the scientific enterprise as a pluralistic, value-laden, socially structured, politically invested project sits comfortably alongside many current trends in philosophy of science—a view which, though 'anarchistic' forty years ago, is, today, increasingly recognized as a vision of science that is fit to meet the practical, epistemic, and socially challenges of the twenty-first century. Furthermore, many other aspects of his work still call out for further engagement: obvious examples include his constant engagement with the history and theory of art, the cultural and critical purposes of drama and the theatre, and the discipline and purpose of academic philosophy, among others.<sup>10</sup>

A last note. So far, Feyerabend scholarship has been largely the province of male scholars, with a few admirable exceptions (e.g. Floyd, 2006; Lloyd, 1997). When the programme of the 2012 conference in Berlin-at which may of these papers were first presented-was first published on various internet fora, it invited much criticism for its lack of gender balance. As Elisabeth Lloyd (2013, p. 144) later pointed out, such implicit prejudice was precisely the sort of 'unconscious suppression of opinion that Feyerabend abhorred'. We think this criticism was fully justified and are pleased that the organizers were able, in response, to add some female speakers to the conference line-up. This volume has a better gender balance than previous Feyerabend scholarship, although much more progress is necessary into the future. Feyerabend's unwavering valorization of pluralism and diversity would have surely led him to support current efforts to make philosophy more inclusive, both intellectually and demographically.

There is much left to be done to combat the trends of exclusion and injustice in philosophy of science, but we hope that both critics

<sup>&</sup>lt;sup>10</sup> See, e.g., Couvalis (1987,1988).

and admirers of Feyerabend will agree with us that he would be cheered to see philosophers of science using their energies and expertise to work for social justice both in the discipline and in wider society.

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#### References

- Bechtel, W., & Callebaut, W. (1993). Taking the naturalistic turn: Or, how real philosophy of science is done. Chicago: University of Chicago Press.
- Cartwright, N. (1999). The dappled world: A study of the boundaries of science. Cambridge: Cambridge University Press.
- Cartwright, N. (2007). Hunting causes and using them: Approaches in philosophy and economics. Cambridge: Cambridge University Press.
- Chang, H. (2012). Is water H<sub>2</sub>0? Evidence, realism, and pluralism. Dordrecht: Springer. Churchland, P. M. (1979). Scientific realism and the plasticity of mind. Cambridge: Cambridge University Press.
- Churchland, P. M. (1997). To transform the phenomena: Feyerabend, proliferation, and recurrent neural networks. Philosophy of Science, 64(Suppl.), \$408-\$420.
- Couvalis, S. G. (1987). Feyerabend's epistemology and Brecht's theory of the drama. Philosophy and Literature, 11(1), 117-123.
- Couvalis, S. G. (1988). Feyerabend, Ionescu, and the philosophy of the drama. Critical Philosophy, 4, 51-66.
- Dupré, J. (1993). The disorder of things: Metaphysical foundations for the disunity of science. Harvard: Harvard University Press.
- Farrell, R. P. (2003). Feverabend and scientific values: Tightrope-walking rationality. Dordrecht: Kluwer.
- Feyerabend, P. (1963). Mental events and the brain. Journal of Philosophy, 40. http:// www.collodel.org/feverabend/295-6
- Feyerabend, P. (1963). Materialism and the mind-body problem. Review of Metaphysics, 17. http://www.collodel.org/feyerabend/49-67
- Feyerabend, P. (1975). Against method: Outline of an anarchistic theory of knowledge. London: New Left Books
- Feyerabend, P. (1978). Der wissenschaftstheoretische Realismus und die Autorität der Wissenschaften. Braunschweig: Vieweg.
- Feyerabend, P. (1980). Erkenntnis für freie Menschen. Frankfurt am Main: Suhrkamp Verlag.
- Feyerabend, P. (1981). Realism, rationalism and scientific method, volume 1 of philosophical papers. Cambridge: Cambridge University Press.
- Feyerabend, P. (1984). Wissenschaft als Kunst. Frankfurt am Main: Suhrkamp Verlag.
- Feyerabend, P. (1987). Farewell to reason. New York: Verso.
- Feyerabend, P. (1989). Realism and the historicity of knowledge. The Journal of Philosophy, 86(8), 393-406.
- Feyerabend, P. (1993). Against method (3rd ed.). New York: Verso.
- Feyerabend, P. (1995). Killing time: The autobiography of Paul Feyerabend. Chicago: University of Chicago Press.
- Feyerabend, P. (1999). In B. Terpstra (Ed.), Conquest of abundance: A tale of abstraction versus the richness of being. Chicago: University of Chicago Press
- Feyerabend, P. (2009). In H. Heit, & E. Oberheim (Eds.), Naturphilosophie. Frankfurt am Main: Suhrkamp Verlag.
- Feyerabend, P. (2015). In S. Gattei, & J. Agassi (Eds.), Philosophy and physics: Philosophical papers (Vol. 4) Cambridge: Cambridge University Press.
- Floyd, J. (2006). Homage to Vienna: Feyerabend on Wittgenstein (and Austin and Quine). In F. Stadler, & K. R. Fischer (Eds.), Paul Feyerabend: Ein Philosoph aus Wien (pp. 99-151). New York: Springer-Verlag.
- Galison, P., & Stump, D. J. (1996). The disunity of science: Boundaries, contexts, and power. Stanford: Stanford University Press.
- Godfrey-Smith, P. (2001). Theory and reality: An introduction to the philosophy of science. Chicago: University of Chicago Press.
- Harding, S. (2008). Sciences from below: Feminisms, postcolonialities, and modernities. Durham: Duke University Press.

- Hoyningen-Huene, P. (1995). Two letters of Paul Feyerabend to Thomas S. Kuhn on a draft of the structure of scientific revolutions. Studies in History and Philosophy of Science, 26(3), 353-387.
- Hoyningen-Huene, P. (2006). More letters by Paul Feyerabend to Thomas S. Kuhn on proto-structure. Studies in History and Philosophy of Science, 37(4), 610-632.
- Kidd, I. J. (2010). Pluralism and the 'Problem of Reality' in the later philosophy of Paul Feverabend. Durham University. PhD dissertation.
- Kidd, I. J. (2011). Objectivity, abstraction and the individual: The influence of Søren Kierkegaard on Paul Feyerabend. Studies in History and Philosophy of Science, 42, 125-134.
- Kidd, I. J. (2012). Feyerabend, pseudo-dionysius, and the ineffability of reality. Philosophia, 40(2), 365-377.
- Kidd, I. J. (2013a). A pluralist challenge to 'integrative medicine': Feyerabend and Popper on the cognitive value of alternative medicine. Studies in History and Philosophy of Biological and Biomedical Sciences, 44(3), 392-400.
- Kidd, I. J. (2013b). Feyerabend on science and education. Journal of Philosophy of Ed-
- ucation, 47(3), 407-422. Kidd, I. J. (2016). "What's so great about science?" Feyerabend on science, ideology, and the cold war. In E. Aronova, & S. Turchetti (Eds.), The politics of science studies (in press)
- Kitcher, P. (2011). Science in a democratic society. New York: Prometheus.
- Kincaid, H., Dupré, J., & Wylie, A. (2007). Value-free science?: ideals and illusions. Oxford: Oxford University Press.
- Koertge, N. (2013). Feyerabend, feminism, and philosophy. HOPOS: The Journal of the International Society for the History of Philosophy of Science, 3(1), 139-141.
- Lakatos, L. & Feverabend, P. (1999). In M. Motterlini (Ed.), For and against method. including Lakatos's lectures on scientific method, and the Lakatos-Feyerabend correspondence. Chicago: University of Chicago Press.
- Lloyd, E. A. (1997). Feyerabend, Mill, and pluralism. Philosophy of Science, 64(Supplement), S396-S407.
- Lloyd, E. A. (2013). Constitutional failures of meritocracy and their consequences. HOPOS: The Journal of the International Society for the History of Philosophy of Science, 3(1), 142-144.
- Longino, H. (1990). Science as social knowledge: Values and objectivity in scientific inquiry. Princeton: Princeton University Press.
- Munévar, G. (Ed.). (1991). Beyond reason: Essays on the philosophy of Paul Feyerabend. Dordrecht: Kluwer.
- Munévar, G. (Ed.). (1991). Beyond reason: Essays on the philosophy of Paul Feyerabend, Boston studies in the philosophy of science (Vol. 132)London: Kluwer.
- Oberheim, E. (2006). Feyerabend's philosophy. New York: De Gruyter.
- Oberheim, E. (2006). Feyerabend's philosophy. Berlin: Walter de Gruyter.
- Preston, J. (1997). Feyerabend: Philosophy, science and society. Cambridge: Polity Press.
- Preston, J. (1998). Science as supermarket: 'Post-modern' themes in Paul Feyerabend's later philosophy of science. Studies in History and Philosophy of Science, 29(3), 425-447.
- Preston, J., Munévar, G., & Lamb, D. (Eds.). (2000). The worst enemy of science: Essays in memory of Paul Feyerabend. Oxford: Oxford University Press
- Preston, J., Paul Feyerabend, The Stanford Encyclopedia of Philosophy (Winter 2012 Edition), E. N. Zalta (Ed.), URL http://plato.stanford.edu/entries/feyerabend/
- Sankey, H. (2012). Philosophical fairytales from Feyerabend. Metascience, 21(2), 471-476.
- Solomon, M. (2001). Social empiricism. Cambridge, Mass: The MIT Press.
- Solomon, M. (2006). Norms of epistemic diversity. Episteme, 3(1-2), 23-36.
- Stadler, F. (2006). Paul Feyerabend-Ein Philosoph aus Wein. In F. Stadler, & K. R. Fischer (Eds.), Paul Feyerabend: Ein Philosoph aus Wien (pp. xi-xxxiv). New York: Springer-Verlag.
- Suppe, F. (1977). The structure of scientific theories. Urbana: University of Illinois Press.
- Suppe, P. (1991). The observational origins of Feyerabend's anarchistic epistemology. In G. Munevar (Ed.), Beyond reason: Essays on the philosophy of Paul. Feyerabend (pp. 297-312). Dordrecht: Kluwer.
- Svozil, K. (2006). Feyerabend and physics. In F. Stadler, & K. R. Fischer (Eds.), Paul Feyerabend: Ein Philosoph aus Wien (pp. 75-97). New York: Springer-Verlag.
- Tambolo, L. (2014). Pliability and resistance: Feyerabendian insights into sophisticated realism. European Journal for Philosophy of Science, 4(2), 197-213.

Theocharis, T., & Psimopoulos, M. (1987). Where science has gone wrong. Nature, 329, 595-598.

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