Introduction
Paul Feyerabend's Philosophy in the Twenty-First Century

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This volume aims to develop our understanding of and critically engage with themes in the corpus of Paul Feyerabend. The eleven chapters of the volume collectively pursue two intertwined goals: providing historically robust interpretations of Feyerabend's texts and reinjecting ingredients of Feyerabend's thought into current discussions. Before delving into this, it is worth making some brief remarks on Feyerabend's legacy and the extant secondary scholarship.

Discerning Feyerabend's legacy is a complicated, yet fascinating topic. On the one hand, nearly every philosopher of science has encountered Feyerabend at some point. His texts are a mainstay of philosophy of science courses at all levels; his name is frequently mentioned as a forerunner of the historical turn that reshaped the discipline, and his work is widely discussed outside of academia. In a recent poll, Feyerabend was ranked as the ninth most significant twentieth-century philosopher of science.[1] If one consults Elizabeth Lloyd's (1996, p. 261) list of prominent scholars who have been influenced by Feyerabend, it is understandable that the layout of contemporary philosophy of science reverberates themes from Feyerabend's corpus. 'Some of Feyerabend's claims . . . are accepted as *standard* by so many philosophers of science . . . they are such a basic part of philosophical background' (pp. 257–258). Looking at things this way, one would think that Feyerabend was markedly influential and should figure prominently in current philosophical discussions concerning science (at least historically). But strangely, this is not the case. The literature that critically engages with his thought in depth is scarce, even on topics that Feyerabend brought to the forefront. For example, in recent volumes on topics which Feyerabend was famous for discussing at length (e.g. scientific method, demarcation, values in science, democracy and science, the

[1] https://leiterreports.typepad.com/blog/2010/10/most-significant-philosophers-of-science-of-the-20th-century-the-results.html. Last date accessed: November 18, 2020.

disunity of science), he is barely mentioned, and when he is, it is often in passing. More generally, though, his views are not engaged with either. Amongst his detractors, Feyerabend's thought is often referenced obliquely through the slogan 'anything goes', which stands in for an obviously flawed idea by one of 'the worst enemies of science' (Theocharis and Psimopoulos 1987) that requires no serious attention (see Kusch, this volume). Amongst his sympathisers, Feyerabend's insights are often quickly lumped together with his contemporaries, especially Kuhn's (Bschir 2015). Philip Kitcher admits that 'the awful bogey Kuhn-Feyerabend [was] a chimera constructed by people (including me) who failed to recognize the important differences between these two thinkers' even though 'Feyerabend was very clear that his ideas were different from Kuhn's' (Kitcher 2019, p. 4). While these comparisons are not altogether out of order, their prevalence at the expense of detailing Feyerabend's particular positions has contributed to the lack of engagement with the unique elements of his perspective. Feyerabend's insights have become part and parcel of more general themes in the philosophy of science, rather than those of a unique thinker. With both audiences, Feyerabend's thought has failed to garner detailed attention.

What we are left with is a mixed legacy. Feyerabend is extremely well known and, simultaneously, overlooked. More accurately, most are acquainted with (at least) a coarse-grained depiction of Feyerabend's thought, but the details of his views have escaped attention. As will become clear in this volume, a deeper understanding of Feyerabend may lead to many (perhaps) unexpected fruits.

Feyerabend's early work, from the late 1940s until the late 1950s, mostly focussed on technical issues in quantum mechanics. While these findings were influential on his later thinking (van Strien 2019; Kuby, this volume), they made little impact in physics or philosophy. Feyerabend's work that is more famous emerged in the early 1960s. His landmark 'Explanation, Reduction and Empiricism', published in 1962, became a focal point of philosophical discussion. Here, Feyerabend develops and analyses the notion of 'incommensurability' in the same year as Kuhn in *The Structure of Scientific Revolutions*. Moreover, this paper was filled with in-depth historical case studies. This was becoming fashionable and, since Feyerabend was one of the first to dedicate extensive space for history in his papers, it became noteworthy as an exemplar of historical philosophy of science. Finally, the radical nature of incommensurability led to the re-analysis of many of the basic presumptions of logical empiricism, which was still the primary topic of discussion. Feyerabend's follow-up papers in

the mid-1960s, including 'How to Be a Good Empiricist', 'Realism and Instrumentalism', 'Problems of Empiricism, Part I', and 'Reply to Comments', built off Feyerabend's arguments developed in 1962.

After the mark he made in 1962, his philosophical colleagues began to follow Feyerabend's work and, despite frequent and radical disagreements, respected him as a talented philosopher worthy of attention. His papers during the early to mid-1960s were taken seriously and discussed in great detail – as would be expected. There are many remarks from prominent philosophers and physicists who would assent to this statement of Feigl's:

> Immediately, during my first conversation with Feyerabend, I recognized his competence and brilliance. He is, perhaps, the most unorthodox philosopher of science I have ever known. We have often discussed our differences publicly. Although the audiences usually sided with my more conservative views, it may well be that Feyerabend is right, and I am wrong. (Feigl 1968/1981, 668; see also Stadler 2010)

Regardless of how unconventional or perplexing some of Feyerabend's views appeared, his contemporaries felt like his works were worthy of attention. This respect was reciprocal, as Feyerabend thought highly of many of his colleagues, even if he did not always make it explicit. This allowed dialogue to flourish even while disagreeing on some of the most fundamental matters imaginable. It is beyond question that Feyerabend was a highly talented scholar, not a mere contrarian or crank.

Beginning in the late 1960s, the intellectual landscape of philosophy of science changed dramatically. This is largely due to a series of retirements and deaths of many of the most prominent figures in the field. Koyré died in 1964, Hanson in 1967, Carnap in 1970 and Lakatos in 1974. Braithwaite retired in 1966, Popper in 1969, Feigl in 1971, Hempel in 1973, Goodman in 1977, and Polanyi and Quine in 1978. The decreasing plausibility of logical empiricism and an increasingly younger generation of philosophers led to a new philosophical community with a new set of interests.[2] Some of the most popular topics in the early 1980s include confirmation, causation, explanation, feminist perspectives on science, and realism. Feyerabend's work on confirmation had little to do with solving riddles of induction, which he mocked as being unimportant. He wrote next to nothing on causation, and his interest in realism was not related to abductive arguments of Putnam and Boyd (see Chang, this volume). His only work directly relevant to explanation was on incommensurability. It is curious

[2] A version of Planck's principle, where intellectual changes correspond with changes in the composition of the community, seems to be operative here (see Zivin et al. 2019).

why Feyerabend's thought is invoked less in feminist philosophy of science, despite being an influence on Longino and Harding. Finally, general philosophy of science became more divided up into philosophy of individual sciences which engaged with general themes concerning science less and less. As such, it makes sense that thinkers writing on these themes would not delve deep into Feyerabend's corpus.

Moreover, the new generation of philosophers was less acquainted with Feyerabend's earlier works and was introduced to his thought mainly through *Against Method* (AM). Despite the fact that AM contained many verbatim passages from his earlier papers, they were blended and surrounded with intense rhetoric and provocative pronouncements like 'anything goes'. This was met with confusion and hostility within the philosophical community. His lectures, which had garnered a reputation within and outside of academia (see below), were provocative and packed full of hyperbole, jokes and riddles. At one point, even Lakatos, upon hearing Feyerabend claim that Aristotelian mechanics had greater empirical content than classical mechanics, screeched 'Oh Paul! How can you say such a thing?' (quoted in Gillies 2019, p. 107). This contributed to a newfound perception of Feyerabend as a provocateur rather than a dignified philosopher in the search for truth. The respect Feyerabend earned from his previous colleagues was absent, and his new techniques of presentation led to his gradual irreverence from the perspective of many of his new interlocutors.

Another major source of contention was that Feyerabend frequently spoke favourably about systems of thought, such as Aristotelian physics or astrology, which, from the perspective of modern science, were seen by many as either outdated or simply false. What many of his contemporaries did not understand was that Feyerabend did not defend these systems, because he thought that they were true in the strict sense. His interest in unconventional theories and world views arose mainly from the fact that they created meaning and value for those who held them. For Feyerabend, it was this feature that made them worth studying. Similarly, he attacked rationalism and a purely scientific outlook on life and reality neither because he was against science in principle nor because he thought that rationality is intrinsically bad. His attacks were mainly directed against those philosophers or scientists who propagated rationalism and science with hegemonic ambitions (see Shaw 2020). His proclivity to react to criticism with even more rhetoric and provocation certainly did not help much to clarify existing misunderstandings.

This is on display when one analyses the reviews of AM. The reception of AM was overwhelmingly negative, with few exceptions (e.g. Naess 1975).

Feyerabend's views were characterised as 'absurd', 'not worth taking seriously', 'between trivial and false', and 'unphilosophical'. He was not given the benefit of the doubt which followed from the intellectual respect of his previous colleagues; the (mostly) new generation who were not directly aware of Feyerabend's prowess saw little reason to engage with his texts deeply. Most of the strawmen that have become associated with Feyerabend's views came from these reviews and persist until today (see Shaw 2017, pp. 7–8). He also admits that laziness played a role in his replies, such that he did not try in earnest to make himself understood (Feyerabend 1995, pp. 144–145). Moreover, Feyerabend's response to this tirade was less than productive (see Kidd, this volume). He was angry and depressed, leading him to call his critics 'illiterates' and question their ability to understand basic argumentative norms. He even conjectured why this response came about, noting the youth of his reviewers.[3] Given how widespread and common the 'mistakes' of their reviews were, Feyerabend hypothesised that AM was received poorly simply because philosophers only knew philosophy and were unfamiliar with the rhetorical techniques he used; they 'have read only Popper and Carnap and who have never heard of Heine, Mencken or Tucholsky' (Feyerabend 1978a, p. 38).

As a consequence, Feyerabend had been feeling increasingly isolated in academia. His best philosophical adversary and friend, Lakatos, had suddenly and unexpectedly died in 1974. It makes sense, given this, that Feyerabend would turn his back on the philosophical community as a result of the less-than-ideal feedback he felt he received. After these vitriolic retorts, Feyerabend published less on the themes of his earlier work, focusing more on politics (see Brown, this volume), history, anthropology and art (see Ambrosio, this volume). He gradually removed himself from the academic community, even stating that he was 'not a philosopher' (Feyerabend 1993) and arguing that philosophy of science should be defunded in his later life (Feyerabend 1994a). The fact that Feyerabend never offered a level-headed defence of his earlier views further led to his ostracisation within the community.

Finally, an additional contributing factor to a decline in interest in Feyerabend's work concerns his students. A well-known mechanism to

[3] In Feyerabend's own words: 'Against Method (AM) is my first book and the first work whose reviews I studied in some detail. In the course of this study, I discovered two things. Most reviewers are 'young' people whose careers started one or two academic generations after the Kuhn-Lakatos era; and their reviews (with some rare exceptions here and there) have certain features in common' (Feyerabend 1978a, p. 37).

keep interest in particular topics alive is to supervise successful students who continue to engage with these topics. Despite Lakatos' sudden death, many of his views continued to be discussed, even if in an insular fashion, given the professional successes of his doctoral supervisees who wrote extensively on his philosophical views. Most of Feyerabend's students did not publish a great deal on his work and focussed on other topics (by and large).[4] Given Feyerabend's personality, it makes sense that he wouldn't feel inclined to direct his students towards his own work. In a letter to Lakatos, Feyerabend writes that

> I like to hear that I am an important Figure, but I also *don't* like to hear it . . . Because then think I should do this and I should do that, write and write, make things clear, correct here, and correct there, make things 'perfectly clear' where I have been misunderstood, and for the like of me I do not want to be dragged down into the sewers by tendencies of this kind. I want to live a quiet, peaceful, lazy life. (in Motterlini 1999, p. 281)

While there is certainly nothing problematic here, it had the consequence of further contributing to a lack of serious engagement with his views.

Outside of philosophy, though, Feyerabend made a more positive impression. As Preston observes, 'the real impact he made was outside philosophy' (Preston 2017). *Against Method* was an international best seller and the sentiment often voiced was that it was a liberating text that empowered younger scientists to reject the teachings of previous generations and experiment with new approaches. This message especially resonated within the social sciences, who were under intense pressure to conform to 'the standards' of the natural sciences (see Solovey 2013). Moreover, Feyerabend himself became an increasingly popular personality outside academia and his lectures became legendary and were massively attended. One participant writes that '[t]he lecture hall was always packed with eager students who even sat on the floor in front of the podium. He was very entertaining and fun to listen to' (Meyer 2011). His sphere of influence stretched outside academia, so the lack of engagement with Feyerabend in print should not lead us to believe that he did not leave a mark.[5]

Feyerabend's thought was not entirely overlooked in print either. Most who studied him closely and sympathetically, though, did not work in philosophy. His texts became increasingly prominent within the newly

[4] An incomplete list of Feyerabend's doctoral students include Anna Carolina Krebs Pereira Regner, Sheldon Reaven, Maurice Finocchiaro, Gonzalo Munévar, Nancey Murphy and Neil Thomason.
[5] For a current example, see Smolin (2006).

burgeoning field of science and technology studies. Many of the founders of the field claimed that Feyerabend was an important influence on their views, and their naturalistic depictions of science were developed with a Feyerabendian spirit. However, these scholars were ideologically and institutionally segregated from the philosophical community. The 'Science Wars' largely took disciplinary lines, with the science study scholars on one side and philosophers on the other (Brown 2001; Sismondo 2005). Feyerabend's work, in both communities, was seen to fall within the former camp despite his rank as a philosopher. He was lumped together with many others who denied the rationality or objectivity of science (e.g. in Sokal and Bricmont 1998). Again, we see Feyerabend's work being taken as a token of a larger movement. As a result, Feyerabend's work became increasingly prominent outside philosophy and increasingly dwindling within philosophy.

Against this grain, in the past thirty years, there has been a staggered increase of interest in Feyerabend's thought. In the late 1980s, George Couvalis published a series of articles and a book, *Feyerabend's Critique of Foundationalism*, on Feyerabend. Two of the papers focussed on Feyerabend's philosophy of drama and another on Feyerabend's case study on Brownian Motion. Independently, a collected volume, *Beyond Reason* (edited by Gonzalo Munévar) was released in 1991. This volume contained an impressive selection of papers on a wide variety of topics from notable scholars in the field. In the mid to late 90s, a pair of influential papers by Elizabeth Lloyd were published and a series of papers and a book, *Feyerabend: Philosophy, Science and Society*, were composed by John Preston. From here, the literature on Feyerabend gained steam. A second collected volume, *The Worst Enemy of Science?* (edited by D. Lamb, J. Preston and G. Munévar), was released in 2000 followed by a series of papers and books by Robert Farrell and Eric Oberheim. Since then, there has been an exponential increase of interest in Feyerabend's philosophy, with numerous conferences and papers devoted to Feyerabend including important contributions by authors in this volume. It seems like now, more than ever, we are in a position to start taking Feyerabend seriously again.

This literature has mostly focussed on understanding Feyerabend's perspective rather than critically engaging it or applying it to contemporary topics. This is not to say that there is a lack of criticism altogether. Preston, for example, is vocal about his grievances with Feyerabend's conception of semantics and scientific method. Moreover, there are excellent examples of papers that engage Feyerabend's thought

with contemporary issues (e.g. Brown 2009; Wray 2015; Sorgner 2016; Stuart 2020). We hope that this volume will amplify this undercurrent and shine a spotlight on Feyerabend's corpus to see what insights have yet to be unearthed. Of course, we are not claiming that this lack of criticism is due to the fact that there is none to be had. Rather, there is no proof (in publication, at least) that Feyerabend's views have been found to be fallacious and this justifies their absence. It is this point that we hope to rectify in this volume by showing the continuing fecundity of Feyerabend's corpus.

The eleven chapters in this volume nicely reflect Feyerabend's intellectual breath and diversity. The first six chapters (Ambrosio, Chang, Barseghyan, Wray, Kusch, Shaw) discuss various central themes within Feyerabend's philosophy. Chiara Ambrosio's chapter engages with Feyerabend's writings on art, which have received little attention compared to his works in philosophy of science. Focussing on Feyerabend's treatment of representation across art and science, and in particular on his treatment of the role of imitation in representative practices, Ambrosio shows that art provided Feyerabend with a powerful metaphor to rethink imitation as a relational and performative process, in line with the very development of his later philosophy.

Hasok Chang explores the evolution of Feyerabend's pluralistic realism. Contrary to the common assumption that Feyerabend must have discarded realism as he became more flamboyantly pluralist in his later years, Chang demonstrates that Feyerabend made realism even stronger by adding a metaphysical layer of pluralist realism to the longstanding epistemological layer thereby resolving some tensions in his earlier views, which are revealed in his mid-career attempt to distinguish different meanings of 'realism'.

Drawing on Feyerabend's particularist axiology and his lack of appreciation for key historiographic distinctions such as between theory acceptance and pursuit or between explicit and implicit assumptions of epistemic agents, Hakob Barseghyan's shows why Feyerabend was never able to articulate a general theory of scientific change.

K. Brad Wray's chapter puts Feyerabend's defence of theoretical pluralism in contrast with contemporary defences of pluralism. Wray argues that in his defence of theoretical pluralism, Feyerabend emphasised the importance of comparative evaluation in determining the epistemic merits of competing theories. Feyerabend's rationale for defending pluralism was never to highlight the fact that, when scientists consider more theories, they are more likely to hit the true theory.

Martin Kusch compares and contrasts Feyerabend's best known work AM with the central ideas of Bas van Fraassen's *The Empirical Stance*, one of the few contemporary philosophers of science who engage closely and charitably with Feyerabend's work. Kush draws an insightful parallel between Feyerabend's epistemological anarchism and van Fraassen's epistemic voluntarism and his notion of philosophical 'stances'. Kusch's goal is to arrive at a better understanding of anarchism and epistemic relativism in the philosophy of science.

Jamie Shaw draws attention to Feyerabend's philosophy of mind and to his contributions to the mind–body problem. Contrary to common interpretations, Shaw argues that Feyerabend should not be seen as an early proponent of materialism. Rather, Feyerabend believed that the mind–body problem admits many different solutions, which are to be sorted out as science progresses. Shaw also shows how Feyerabend's view evolves from a methodological to an ethical view on what a proper solution to the mind–body problem would entail.

Chapters 6 and 7 analyse the relevance of Feyerabend in the philosophy of physics. While one takes a historical exegetic approach (Kuby), the other provides an application of Feyerabend's ideas to current discussions in the philosophy of physics (Manchak). Daniel Kuby's contribution turns to Feyerabend's earlier philosophy of physics, which typically has not received the amount of attention as his later considerations in the general philosophy of science have. Kuby offers a specific interpretation of how Feyerabend came from a Popperian critique of the Copenhagen interpretation to a detailed re-evaluation of Niels Bohr's idea of complementarity. Kuby also argues that Feyerabend's intellectual development in physics provides the backdrop for his thoroughgoing turn from methodological monism to methodological pluralism, for which he would have been known to a wider audience.

In a perfectly Feyerabendian fashion, J.B. Manchak ventures into a 'joyful experiment' in the philosophy of physics by exploring 'unreasonable' models of the universe within the general theory of relativity. Manchak's experiment leads to two insightful ideas: first, a stimulating analysis about the potential significance of seemingly unreasonable models, and, second, a critical reflection on the distinction between reasonable and unreasonable ideas in science more generally.

The last three chapters (Kidd, Brown, Roe) draw attention to some of Feyerabend's ideas on the role of science in society that emerge in his later philosophy. Ian James Kidd engages in a thorough analysis of Feyerabend's frequently discussed critique of scientism thereby clarifying a central

misunderstanding in many interpretations, namely that Feyerabend's critique of scientific reason must not be taken as a critique of science per se, but rather as a critique of scientism and misplaced estimation of the power and value of science in human life.

The focus of Matthew J. Brown's chapter is Feyerabend's *Science in a Free Society* (1978b). While it remains one of Feyerabend's least well-regarded works and undoubtedly contains many controversial claims, Brown argues that the book is in many aspects ahead of its time, asking normative questions about the place of science in democracy that have only come into fashion more recently.

Sarah Roe applies Feyerabend's remarks on scientific expertise and the relations between science and the public to current discussion about citizen science. Roe shows how Feyerabend's insights may offer us a better understanding of how citizen science can best promote scientific education, offer broader knowledge to participants, increase citizen interest in conservation and policy, increase both citizen local and national engagement and promote a rewarding experience for both the expert and citizen.

We hope this volume constitutes the first set of steps in revitalising an interest in Feyerabend's thought. The range of topics he covered is seemingly endless and the depth of his thought will require great efforts to uncover. To a large extent, philosophy of science marched forward without taking a close look at his perspective. In this volume, we will get a sense of how unfortunate this historical unfolding was.

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