

Paul Feyerabend and Austrian Philosophy His Formative Years in Postwar Vienna

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Vasso Kindi

Feyerabend's Ambivalent Relation to Wittgenstein

Feyerabend had an ambivalent relation to Wittgenstein's philosophy. He was influenced, both in his early and late periods, by Wittgenstein's later work, but he also criticized, dismissed, or misinterpreted it. I argue that, in his early period, Feyerabend used Wittgenstein's discussion of perception to challenge the theory-observation dichotomy, while in his late work, he appropriated Wittgenstein's focus on particulars –which he elsewhere criticized–, to combat abstract theorizing. Feyerabend's understanding of meaning in Wittgenstein's *Philosophical Investigations* was used, in the early period, to defend the meaning variance of scientific terms and, in the late, to contest the view that meanings are determined by phenomena. Feyerabend criticized Wittgenstein as a conformist and contrasted his own pluralism to Wittgenstein's considerations of alternative games. They both opposed scientism, but their orientation is different. Finally, Feyerabend's late emphasis on the sense of wonder at the mysteriousness of life which, supposedly brings him close to Wittgenstein, feeds a rather robust idea of reality which is not to be found in Wittgenstein's work.

Martin Kusch

A Trialogue on Relativism: Frank, Neurath, Feyerabend

In this paper, I shall compare the different conceptions of relativism put forward by Philipp Frank, Otto Neurath and Paul Feyerabend. I have two goals: first, to get a better sense of the intellectual distance between Frank and Neurath on the one side, and Feyerabend on the other side; and second, to better understand some of the limitations of Feyerabend's position.

My project here is not to determine what Feyerabend owed to his Viennese background. To study these issues would require a much wider investigation into Feyerabend's debts to all three Vienna Circles, and to Arthur Pap.

Finally, Thomas Uebel (2000) and David Bloor (2011) have highlighted Frank's and Neurath's proximity to Barry Barnes' and David Bloor's Relativistic "Strong Programme" in the "Sociology of Scientific Knowledge". This suggests widening my triologue at least in my final section to a "tetralogue" with SSK as the fourth voice.

SPEAKERS

Ulrich Arnswald

Wittgensteins Impact Upon Feyerabend in His Formative Years in Postwar Vienna: Feyerabend's Review of the Philosophical Investigations In Two Parts As a Possible Key

In the literature, the question is raised how Feyerabend's wish to study with Wittgenstein came about in 1951, when Wittgenstein had long since been diagnosed with cancer and was in the terminal phase of the disease. Wittgenstein would hardly have accepted a student. However, the circumstances can be guessed from certain previous events: Firstly, Feyerabend could apply for the fellowship only after he received his doctorate in 1951; secondly, Feyerabend had already been taken in by Wittgenstein, namely at the latest when he received from Elisabeth Anscombes a copy of the still unpublished Philosophical Investigations as well as of the Remarks on the Foundations of Mathematics in Vienna. He got to know Anscombe in late 1949 and spend several months in Spring 1950 discussing the Investigations with her.

There is no doubt how much Feyerabend was attracted to Wittgenstein, how much his personality impressed and influenced him. We know that he criticized Wittgenstein as the only philosopher "never or almost never", which was a rare event for Feyerabend. Feyerabend's Viennese post-war socialization is connected with the Österreichisches College, which organized every summer a symposium in the Tyrolean village of Alpbach from 1945 on.

This Alpbach network became the defining one for Feyerabend, as he met psychologists (Tranekær-Rasmussen), economists (Hayek), physicists (Schrödinger, Pryce, Ehrenhaft, Rosenfeld, Thirring) and above all philosophers (Popper, Frank, Carnap, Feigl) there, which was then reflected in his scientific development.

Around 1948, the College Community Vienna, better known as the "Kraft Circle", was formed. A list of the participants in the discussions does not exist, however, it can be proven that Elisabeth Anscombe, Ludwig Wittgenstein and also Georg H. von Wright

visited. Between December 1949 and March 1950, Wittgenstein lectured there, which was the only meeting between the two, but left a lasting impression on Feyerabend.

When the latter after Wittgenstein's death moved to London to work under Popper, he held on studying the typescript of the Investigations and preparing a summary. After returning to Vienna Feyerabend's article in two parts appeared in *Wissenschaft und Weltbild* in 1954. This represents one of the earliest review of the Philosophical Investigations. It is all the more astonishing that – with the exception of Juliet Floyd casually in 2006 and partly Georg Meggle in 1985 – no one has dealt with these reviews yet. The subject of the lecture will therefore be to reconstruct Feyerabend's approach to the content of Wittgenstein's philosophy in his formative years in Postwar Vienna.

Jordi Cat

Feyerabend's Vienna Realism(s): From Philosophy of Science to Science and From Facts to Values

Six years prior to the publication of his autobiography, *Killing Time*, Feyerabend discussed in letters the Vienna Circle and his connection to it through Kraft's Circle, the so-called Third Vienna Circle. Feyerabend's view of the Vienna Circle may have been informed by Kraft's original account, with an emphasis on the philosophers Carnap, Wittgenstein and Popper and by his personal acquaintance with the latter two. Yet it also echoes Kraft's later account emphasizing his own heterodox position and Neurath's importance. Feyerabend's own work adopts a realist, and explicitly anti-positivist rhetoric, that reflects both connections to the Circle, Popper's views and, much less explicitly, also Kraft's. By the time of his late reminiscences, his realism had evolved away from those connections and become relativistic, pluralistic, and linked to criteria, or epistemic values, that he associated with particular physicists,

including, in Vienna, Mach and Boltzmann. This was part also of a broader type of realism he historicized at different scales as part of cultural world conceptions, the scientific one associated with the Vienna Circle being only one and old example. These broader sets of beliefs and standards were now endorsed voluntaristically in terms of Wittgensteinian and Aristotelian forms of life or collective projects centered on questions of values and action.

David Chandler

“Halt, so geht das nicht!”: Wittgenstein’s Influence on Feyerabend’s Philosophical Development

My primary aim in this paper is to make out the historical significance of Wittgenstein’s influence on the philosophical development of Feyerabend. With this in mind, our discussion is intentionally restricted to the brief period of 1948 to 1952: beginning with the former’s lectures to the “Kraft Circle” and ending with the latter’s presentation of his thoughts to some prominent Wittgensteinians in Oxford such as Geach and von Wright. Namely, I want to understand the sway of these intervening events on some of the earlier ideas present within Feyerabend’s philosophy of science, especially concrete research and scientific change. My suggestion is that such an investigation should act per the following outline. I will attempt to correctly place the formation of the Kraft Circle within the philosophical landscape of the time. By making clear their assignment to consider philosophical problems, albeit, in a non-metaphysical way concerning contemporary findings in the natural sciences, we can establish the intellectual atmosphere that acted as the background to Wittgenstein’s lecture to the group in late 1950. In doing so, we can also uncover the connection between Feyerabend and Anscombe, not only because it was the latter who suggested that Wittgenstein be invited to speak but as a first step in the former’s relationship with the Philosophical Investigations through his reading of several transcripts shared with him during his time in Vienna. I will extend these comments to both Feyerabend’s studies at the London

School of Economics under Popper and his subsequent presentation of his research to the collection of individuals mentioned above.

Matteo Collodel

Feyerabend's Philosophical Breakthrough: Origins, Reception, and Development of Feyerabend's Theoretical Pluralism

This paper explores the historiographic hypothesis that Feyerabend's philosophy can be most insightfully understood in light of contextual evidence concerning the material circumstances of the composition of Feyerabend's output and his changing inclinations, only partly driven by philosophical arguments. More specifically, Feyerabend's evolving thought can arguably be accounted for as the dialectical response to intellectual stimuli within characteristically Socratic settings. To show how this approach can help disentangle current scholarly disputes, I provide a reconstruction, based on recently discovered documents, of the genesis, reception and development of Feyerabend's methodological proposal of a form of theoretical pluralism throughout the 1960s, in the context of his dialogue with leading representatives of the logical empiricist movement, with Popper and his school and with Feyerabend's Berkeley colleagues, including Kuhn.

Instrumental to the emergence of Feyerabend's theoretical pluralism were Feyerabend's second visiting appointment at the MCPS in 1959-60 and his participation in the 1959 AAAS meeting. A first draft of Feyerabend's groundbreaking ERE was completed in the late spring of 1960 and finalized in early 1961 after revisions mostly due to qualms expressed by Popper and Watkins in the summer of 1960. The composition process of ERE illuminates some of its ambiguities as the more direct criticism of Popper's falsificationism that complemented Feyerabend's attack against Hempel's and Nagel's logical empiricist accounts of explanation and reduction in the first draft was moderated in its final version. Ultimately, ERE was an attempt to develop a "good" or genuinely critical empiricism by enhancing Popper's falsificationism: combining it with Bohm's view of nature as an infinitely layered structure, Feyerabend

landed on the idea that proliferating (radically) alternative (incommensurable) theories increases the empirical content, hence the falsifiability, of the theory under test.

Feyerabend's sweeping criticisms and thought-provoking proposal – presented at Pittsburgh, Berkeley, the annual AAAS meeting (1961), and Delaware (1962) – soon became a topic of contention for philosophers of science in North America. Feyerabend refined its formulation throughout 1962-63, during his sabbatical at Berkeley and his third MCPS visiting appointment, in both circumstances in live interaction with Popper. However, in 1964-65, serious issues about the soundness and implications of Feyerabend's arguments were raised in private correspondence, in a public colloquium and in a closed-door seminar organized to discuss Feyerabend's views at Boston and Pittsburgh, as well as in print. Feyerabend faced his critics openly, but also successfully applied for a research grant for 1965-66 to consolidate his methodological proposal.

Yet, momentous meetings in 1965-66 triggered the "skeptical phase" (1965-69) that gradually led Feyerabend from the methodologically normative approach of his theoretical pluralism to the anti-methodological outlook of his epistemological anarchism. Despite the impact of Feyerabend's views on Hempel's revision of some basic tenets of logical empiricism, reservations about those views expressed at a 1966 MCPS conference contributed to bringing Feyerabend's methodological project to a standstill. In the following years, also urged by concerns levelled by Lakatos and Giedymin, Feyerabend resorted to recasting his pluralistic argument in the Millian framework displayed in *Against Method* (1975), leaving however crucial questions unanswered.

Margaretha Hendrickx

Remembering Paul Feyerabend as a Philosopher of the Linguistic Functioning of Science

How can one do justice to the legacy of Paul Feyerabend as a philosopher of science? In my paper, I will use archival research about Feyerabend's exposure to the work of Karl Kraus and his engagement with the performing arts in his home country, Austria,

to argue that Feyerabend's significance for posterity can be best understood by relabeling him a tormented philosopher of the linguistic functioning of science.

Feyerabend, without ever saying so in the most explicit terms, studied the role of rhetoric and composition throughout philosophy history and the history of science and philosophy, but he also walked the talk of the rhetorical function of language and experimented with it in his (1975/1988/1993) *Against Method*, pushing it to its limits in his (1978) *Science in a Free Society*. He later expressed that he did not want to see the latter reprinted (Borrini-Feyerabend, 1995: xi), as if he understood himself that rhetoric is a double-edged sword.

In my paper, I propose to stop pussy-footing around the rhetorical function of the written word, irrespective of whether one labels it graphic symbols, mathematical symbols, logical symbols, science writing, philosophical investigations, or something else. Feyerabend's work can be used to document the cycling between blindness and insight that members of any learned discipline experience.

Feyerabend's Nachlass richly illustrates the challenge of working with the performative function

of the written word responsibly. For example, about 40 years ago, there was a lively discussion in the Academy – John Searle vs. Jacques Derrida – all for the purpose of getting on top of the performative function of written word (metaphor usage) and taking the material reality of its semantic implications seriously. However, if one examines how scientists and their followers argue with one another today, it looks like the Academy has forgotten what it was supposed to have learned from these late 20th century debates.

My paper consists of three parts. In Part I, I review Feyerabend's relation with the performative arts. In Part II, I review the contemporary grasp of the performative function of the written word, with a special emphasis on the work of Ludwig Wittgenstein, Karl Popper, Jacques Derrida, Klaus Krippendorff, and Jan Simner. In Part III, I propose how Feyerabend's writings can be used as a negative benchmark to demonstrate to the future generations of scientists and philosophers how to write and argue responsibly.

Paul Hoyningen-Huene

Paul Feyerabend and the Fountain

It is well known that from the late 1960s on, Feyerabend described himself as an anarchist and a Dadaist. He preferred the Dadaism label because he thought that Dadaism was more humane than anarchism. Marcel Duchamp, who has been considered a Dadaist, was a role model for Feyerabend because his “Fountain”, a urinal, was a prototype of the sort of intervention that Feyerabend had in mind in 1969. In a letter to Hans Albert, Feyerabend writes on August 5, 1969: “The Dadaist also knew how to arouse serious art from its slumber: by elevating the urinal to a work of art (Duchamp), he criticized serious art and annoyed its representatives beyond measure. My aim now is to write a Dadaist critique of science, and nothing would give me greater pleasure than to find the urinal-equivalent in science ...” In the paper, I shall first explicate what Feyerabend exactly meant by this analogy. Secondly, I shall ask whether Feyerabend’s understanding of the role of Duchamp’s Fountain for the arts is adequate and whether it really fits his own purposes.

Rita Kimijima-Dennemayer

On Anscombe’s Intentionality and Feyerabend’s Incommensurability

One of Paul Feyerabend’s most important concepts is that of incommensurability, or the inability to directly compare concepts in two distinct theoretical systems. He writes that “all facts are theoretical...and not merely theory-laden”¹ because the theoretical framework in which an observer operates itself constrains and defines the kind of concepts that one can work with. We know from Feyerabend’s autobiographical remarks that these ideas on the incommensurability of theories germinated in the presence of G.E.M. Anscombe. He writes, for example, that “On one occasion...Anscombe, by a series of skillful questions, made me see how our

¹ Paul Feyerabend, *Farewell to Reason* (London: Verso, 1987), 289.

conception (and even our perceptions) of well-defined and apparently self-contained facts may depend on circumstances not apparent in them.”² But in what way, exactly, can we see Anscombe’s philosophical influence on the development of Feyerabend’s own thinking?

There are some interesting parallels that one can draw between Feyerabend’s notion of incommensurability and Anscombe’s writing. Anscombe is famous for her work on intentionality in action, and she extends the concept of intentionality to perception as well. She argues against purely external theories of perceptual objects, noting the fact that we experience the world primarily through conceptual interpretations, not through careful analyses of light across a visual field. For example, one may ‘see’ a large Bible, only to later realize that one had misjudged the distance of the material object, which was in fact a small prayer book all along.³ Anscombe’s observations point to the fact that perceptual experience is molded by our intentions, and Feyerabend reflects similar sentiments in remarks such as: “Even small children do not perceive bare colours and sounds, they perceive meaningful structures such as smiles or friendly voices.”⁴ The conceptual schemata of an observer, then, seem to play an important role in both thinkers’ views on perception.

In this talk, I would like to further elucidate the impact of Anscombe’s thinking on Feyerabend’s rejection of naïve empiricism. Drawing mainly from Anscombe’s work in *Intention*, I would like to show that the intentionality of action may be applied to the realm of science, wherein the theoretical internal states of scientists mold scientific practice. I will then use this analysis to further develop Feyerabend’s notion of the incommensurability of distinct theoretical systems by sketching a more detailed description of the internal states that lead to the relevant differences in worldviews.

² Paul Feyerabend, *Science in a Free Society* (London: NLB, 1978), 114.

³ G.E.M. Anscombe, “The Intentionality of Sensation: A Grammatical Feature,” in *Vision and Mind: Selected Readings in the Philosophy of Perception*, ed. Alva Noë and Evan Thompson (Cambridge: MIT Press, 2002), 70.

⁴ Feyerabend, *Farewell to Reason*, 133.

Artur Koterski

Feyerabend's Common Ground with Neo-positivism

Paul Feyerabend made a lasting contribution to the philosophy of science, and certainly one thing by which he is remembered is his emphatic critique of logical empiricism. Neo-positivism and its derivatives, he maintained, are incoherent, as well as scientifically and socially harmful positions that represent a step backwards with respect to their great predecessors like Ernst Mach and J.S. Mill. The logical empiricists of the Vienna Circle and the Berlin School, i.e., 'the barren fathers of positivism', had no in-depth knowledge of either philosophy or physics. Because of this ignorance, they 'distorted science and ruined philosophy'. They, therefore, merit candid descriptions such as 'the rodents of neo-positivism' or 'pioneers of simple mindedness', and the era during which they wielded influence is to be seen as 'the positivistic Dark Age'. However, the firm and straightforward nature of this criticism may be perplexing, since among those who had the major influence on Feyerabend's intellectual development were Victor Kraft, Herbert Feigl, and Philipp Frank; in The Kraft Circle, where his views shaped at the earliest stage, there were two other participants from the former Wiener Kreis — Béla Juhos and Walter Hollitscher. Indeed, Feyerabend directed his overwhelming critique almost entirely against some other neo-positivists, such as Rudolf Carnap, Moritz Schlick, Hans Reichenbach, Carl Hempel, Ernest Nagel, or A.J. Ayer. Two or three favorable remarks that appeared in his writings pertained to yet another representative of the Circle. According to Feyerabend, 'In the Vienna Circle [...] Neurath had a clear conception of the properties of scientific research'. Therefore, their positions should exhibit points of commonality. So, I will endeavor to compare Feyerabend's views with those of Neurath, focusing on topics so dear to the latter: observational sentences, unity of science, anti-absolutism (including the rejection of Popperian methodology), and humanism. These observations will elucidate the philosophical terrain that Feyerabend shared with Neurath, and a fortiori, with the Vienna Circle and logical empiricism.

Daniel Kuby

On the Benefits of the Cold War: The Case of Paul Feyerabend and the Vienna Circle

In earlier work, Kuby (2018) proposed some ways in which some of Paul Feyerabend's most famous 'post-positivist' theses can be traced back to his early involvement with scientific philosophy (in particular Logical Empiricism) during his post-war formative years in Vienna (1946-1955, cf. Kuby 2010; Stadler 2010a; Collodel and Oberheim 2020). This gives rise to a serious historical puzzle which needs a solution: How is it possible that Feyerabend's formative years occurred on the background of scientific philosophy? After all, virtually all historical evidence attests that by the mid 1930s the philosophical landscape in Europe had been purged from most scientifically-oriented philosophy (see exemplary studies in Dahms 1985; Stadler 1987; Fischer and Wimmer 1993). This, in turn, strongly affected the post-war development, excluding not only Vienna but most of the continent from well-known trends in philosophy of science for decades.

In this talk I will present evidence which aids to give a solution to the historical puzzle. Indeed, Feyerabend's formative years developed on the background of scientific philosophy not because of a supposed positivist climate in post-war Viennese academe (as has been

sometimes assumed in Feyerabend scholarship), but despite a strong anti-positivist climate (Stadler 2010b; esp. Schorner 2010; Kuby, Limbeck-Lilienau, and Schorner 2010). Here I offer a study of the establishment of scientific philosophy in averse historical conditions. My contribution is to situate Feyerabend on the background of the political and cultural situation in early post-war Vienna, from which scientific philosophy and Feyerabend greatly benefited for a time. Vienna as a battlefield of early strategies for cultural dominance in the upcoming Cold War created (at least until the early 1950s) a virtuous competition to recruit young brilliant minds and Feyerabend was a target of this recruitment as a student. I claim that the temporary fortune of scientific philosophy in post-war Vienna is an example of a "constructive account" of Cold War (Isaac 2007), which complements the clearly "repressive accounts" on American soil given by Howard (2003) and Reisch (2005).

Christoph Limbeck-Lilienau

Arthur Pap, Feyerabend and the Criticism of Logical Empiricism

Arthur Pap (1921-59), one of the most promising young analytic philosophers of the post-war era, spent a year in Vienna in 1953/54. He lectured at the University of Vienna and during his time in Vienna Feyerabend became his teaching assistant. Especially important for Pap's interaction with Feyerabend were his Viennese lectures on the newest developments in analytic philosophy in the United States since the war. Based on the notes Feyerabend took in this course, Pap published the German monograph *Analytische Erkenntnistheorie* (1955). This book presented the standard positions in the analytic philosophy of the time but was also a discussion and criticism of core positions of the logical empiricists. Shortly before Pap came to Vienna, he had published, in 1953, an English translation of Viktor Kraft's monograph on the Vienna Circle (Kraft 1950). In his correspondence with Carnap, Pap discussed some of the shortcomings of Kraft's book and some of the aspects of logical empiricism which have been challenged by more recent developments in analytic philosophy. Pap's 1955 book can be seen as a kind of critical reply to Kraft's presentation of the main positions of logical empiricism in the light of the newer developments of analytic philosophy in the United States. I will present the philosophical context which shaped Pap's year in Vienna before analyzing Pap's arguments against one of the core theses of the logical empiricists: his arguments against the linguistic theory of necessity, i. e. the position that all necessity is logical and that all apriori truths are analytic truths. Against this position, Pap defended a version of the synthetic apriori.

I will analyze why on Pap's view the logical empiricists failed to substantiate their claim that only analytic truths are a priori and necessary. I will then discuss how Feyerabend's own early criticism of logical empiricism, which was already quite explicit before Pap's arrival in Vienna (see Feyerabend 1951/2010), can be situated relative to Pap's criticism as well as how Pap's 1955 book may have shaped Feyerabend's own views.

Eric Oberheim

Paul Feyerabend: From the Limited Validity of Falsificationism to ‘Anything Goes!’

The lecture explains the genesis of Paul Feyerabend’s peculiar views on meaning and method and how they developed from his Ehrenhaft experience in 1949 into his mature early philosophy of science as set out in his landmark essay “Explanation, Reduction and Empiricism” (1962, henceforth ERE), which criticizes Carl Hempel on “Explanation”, Ernst Nagel on “Reduction” and Karl Popper on “Empiricism” (hence the title ERE). Feyerabend was trying to combine Wittgenstein’s insight that one sentence can make two incompatible statements (like Jastrow’s duck-rabbit) – for example, ‘the ball fell’ meant it was pushed by its impetus before it meant it was pulled by gravity — with Popper’s-hypothetico-deductive model of testing, with ‘incommensurability’ as the result. Feyerabend’s main conclusion was that Popper’s empiricism has only a limited validity because (like Hempel and Nagel’s accounts) it cannot take incommensurability into account, and more generally no such formal account of explanation can be given due to meaning variance in the terms used to state and test theories after scientific revolution. Feyerabend was also trying to explain how Wittgenstein’s genuinely philosophical problems arise from antiquated scientific principles that haunt everyday language as well as how their dissolution can play a positive function in scientific progress. Then the lecture explains how and why Feyerabend generalized from the limited validity of falsificationism to ‘Anything goes’ when on the 17th December 1967, Feyerabend explicitly announced his break from Popper’s school in two histrionic letters (one to Imre Lakatos and one to John Watkins) that explain his epiphany and how he had just ‘awoken’ from his “dogmatic slumber”. In these letters, Feyerabend also outlines his new “position” (in ‘scare quotes’), which is anything goes except what is compatible with “hedonism”, to be entitled “Against Method” (following Susan Sontag’s Against Interpretation). This marks the transition from his early to his later philosophy in a reversal on realism: From recommending correcting common knowledge with science to recommending protecting common knowledge from scientism in a ‘historical turn’ as a lesson learned from Wittgensteinian belatedly gradually finally sank in – science contains not only abstract rules, but entire traditions.

John Preston

Paul Feyerabend's Ludwig Boltzmann

Paul Feyerabend was indebted to certain physicist-philosophers of the late nineteenth and early twentieth centuries, particularly Ernst Mach and Ludwig Boltzmann. My paper is a critical study of the latter's influence on Feyerabend.

I begin by outlining Feyerabend's account of the role and influence of Boltzmann's scientific work, especially his role as 'the last pillar' of atomism and the mechanical world-view.

Then, endorsing Feyerabend's 1967 contention that Boltzmann's philosophy had been neglected, I pay tribute to his role in drawing attention to it. I proceed to discuss the attention that has been paid to Boltzmann's philosophy since Feyerabend's Encyclopedia of Philosophy article.

Moving on to Feyerabend's basic claims about Boltzmann's philosophy, I first agree with him that Boltzmann was an evolutionary thinker, and thus a confirmed fallibilist. I then deal with the two most constant themes in Feyerabend's mentions of Boltzmann, that Boltzmann was a pioneer pluralist, and that he was what I will call an anti-observationalist (in fact, an anti-empiricist). While the identification of Boltzmann as a pluralist is correct and important, I urge reservations about the idea that he opposed empiricism.

Feyerabend's view of logic seems to have been a radicalised version of Boltzmann's, so I discuss the changes in Boltzmann's views on logic, and argue that his evolutionary approach to that subject was one of the less convincing aspects of his philosophy.

I then discuss the vexed issue of whether or not we should think of Boltzmann as committed to 'scientific realism'. At first, Feyerabend identified him straightforwardly as such. Under the influence of Martin Curd's unpublished doctoral dissertation on Boltzmann, though, he clearly began to have doubts. The formulation he eventually came up with was that Boltzmann endorsed 'the positivistic version of scientific realism'. I explain what that version is supposed to be, but critique the idea that there was such a shared version.

(If space permits, I will deal with Feyerabend's misguided supposition that Boltzmann was opposed to the notion of world-views).

I conclude that although Feyerabend's picture of Boltzmann is somewhat one-sided, he does deserve credit for keeping the views of these philosopher-physicists in focus during an era in which they were overshadowed by philosophies of science deriving from logical positivism and critical rationalism.

Marij van Strien

Feyerabend and Popper on the Possibility of Philosophical Criticism of Quantum Mechanics

Although Paul Feyerabend was strongly influenced by Karl Popper, in later years he became increasingly critical of Popper, first (from the late 1950s) of Popper's views on quantum mechanics and later (from the late 1960s) of Popper's philosophy of science as a whole. This paper examines the influence of Popper on Feyerabend, the origins of their disagreements about quantum mechanics, and in how far Feyerabend's later criticisms of Popper's critical rationalism are related to their earlier disagreements about quantum mechanics.

In the 1950s and early 1960s, both Popper and Feyerabend were highly critical of the standard approach to quantum mechanics, which they both saw as positivistic and instrumentalistic. Both favored a realist approach. Feyerabend's arguments for realism were methodological and Popperian: scientists should take current scientific theories to be absolutely valid and true descriptions of reality, in order to make them maximally falsifiable. Another similarity can be found in their views on determinism: despite their disagreement with the standard interpretation of quantum mechanics, neither Popper nor Feyerabend had a problem with its indeterminism.

But already in the late 1950s, Feyerabend argued that Popper's criticisms of quantum mechanics missed the mark because these criticisms were merely aimed at a philosophical and methodological level. According to Feyerabend, this criticism was too superficial. Feyerabend increasingly stressed that positivism was built into the

theory of quantum mechanics, so that this theory could offer no realistic description of quantum processes; moreover, he argued that this was no arbitrary feature of quantum physics but motivated by physical arguments. This meant, for Feyerabend, that it was not possible to develop a realistic interpretation of the present theory. He argued that rather than re-interpreting the existing theory, physicists should try to develop an alternative theory of quantum physics, based on different concepts. Such an alternative theory need not be consistent with established theories and may only become testable after a while, and test may be inconclusive, as theory change could also lead to changes in what the observed facts are. These arguments were still influenced by Popper but (at least in Feyerabend's perception) went beyond Popper. I show how this criticism of Popper's views on quantum physics already formed the basis of Feyerabend's later rejection of Popper's philosophy of science.

Gerrit Tiefenthal

Feyerabend's Gay Philosophy of Science (Based on Homer, Mach and Nietzsche)

Feyerabend's examination of the Vienna Circle's image of science permeates his entire philosophical life. While he still vehemently advocated this during his studies, a break with this idea of science can already be observed in his dissertation and criticism of representatives of this image subsequently determined a large part of his texts until the end of his life. However, he always excluded Ernst Mach from his „global criticism of the Vienna Circle” (Stadler), as he saw himself as its epigon.⁵ What Feyerabend believes to be a false reception of Mach is ultimately a decisive 1 reason for his rejection of the philosophy of science of the Vienna Circle, which he accuses of having, since its inception as the ‚Verein Ernst Mach’, pursued a ‚Mach mythology’ in which Mach is portrayed a positivist and founder of a rational-scientific world view. A misinterpretation that can be found right up to Popper's presentation of Mach's

⁵ Stadler, Friedrich, Paul Feyerabend - Ein Philosoph aus Wien, in: Fischer, Stadler (Hrsg.), Paul Feyerabend - Ein Philosoph aus Wien, S. xxv.

thinking.⁶ An explanation for this different reception can be found in the fact that Feyerabend locates Mach - in contrast to the Mach reception of the Vienna Circle - in close intellectual proximity to Nietzsche.

He reads Mach's criticism of the thing in itself as a parallel criticism to Nietzsche's rejection of the „metaphysical faith“ on which the philosophical „faith in science rests, [...] which was also Plato's faith, that God is truth; that truth is divine“.⁷ In this sense, Feyerabend sees Mach's and „Nietzsche's pragmatism“ (Gori) as a continuation of Homeric cosmology and philosophy and its understanding of science, as defended by Herodotus and Protagoras, against the attacks of Plato. Against an idealization of science driven by the Platonic philosophical tradition, Feyerabend finds in Mach and Nietzsche an understanding of science as an art - in the sense of the Homeric *technai* - that „offers the people who take part in it a home and tools for survival“.⁸ In this sense, Mach, as a central „figures of a counter-history of Western thought“ (Wark), and Nietzsche, together with the Homeric, provide the cornerstone of Feyerabend's formulation of a gay philosophy of science.

In my lecture I will provide insight into the results of my dissertation on Feyerabend's and Latour's understanding of science and politics, in which this criticism of Platonism and the pragmatism as can be found in Homeric and in Mach and Nietzsche play a central role.

Natalia Tomashpolskaja

Feyerabend and Wittgenstein

Feyerabend was influenced by Wittgenstein's *Philosophical Investigations* and *Remarks on the Foundations of Mathematics*, in the academic year 1948-1949 with the recommendation from Anscombe he invited Wittgenstein to take part in a new Vienna Circle (Kraft Circle) meeting organised by Austrian College Society.

⁶ Feyerabend, *Irrwege der Vernunft*, S. 274.

⁷ Nietzsche, *Die fröhliche Wissenschaft*, 344, KSA3.

⁸ Feyerabend, *Irrwege der Vernunft*, S. 88.

Wittgenstein accepted the invitation and was discussing in detail what one sees looking in a microscope and its higher importance than “abstract considerations about the relation of ‘basic statements’ to ‘theories’” (1995, 76). Feyerabend wanted to study with Wittgenstein in Cambridge, passed exams, was accepted ready to leave for Britain but Wittgenstein died on 29 April 1951. This was the reason why Feyerabend had to choose Karl Popper to be his supervisor and moved to the London School of Economics (1995, 86). He maintained a friendship with Elizabeth Anscombe and in 1952 during his stay in London he concentrated in his research on quantum theory and Wittgenstein, quite a surprising combination. Even, Feyerabend in his autobiography said that he had become a Wittgensteinian (1995, 94). We may suppose that Wittgenstein’s conception of plurality of forms of life and different facets of his critique of scientism played a big role in the development of Feyerabend’s thought, especially his unacceptance of formal scholar frames in science, idea of ‘local grammars’ (1965, 116), alternative models of a theory (1965, 115), ‘pragmatic theory of meaning’ connected with interpretation and ostensive definition (1958), lack of universal methodological rules for science (only local owing to different grammar). Both Feyerabend and Wittgenstein in their critique of modern science shared Kierkegaardian ‘existential criteria’. “For is it not possible that science as we know it today, or a ‘search for the truth’ in the style of traditional philosophy, will create a monster? Is it not possible that an objective approach that frowns upon personal connections between the entities examined will harm people, turn them into miserable, unfriendly, self-righteous mechanisms without charm or humour? ‘Is it not possible,’ asks Kierkegaard, ‘that my activity as an objective [or critico-rational] observer of nature will weaken my strength as a human being?’” (Feyerabend 1993, 154) In LE Wittgenstein said, “the scientific way of looking at a fact is not the way to look at it as a miracle. [...] The experience of wondering at the existence of the world ‘is the experience of seeing the world as a miracle” (PO 1993, 43). ‘Man has to awaken to wonder. [...] Science is a way of sending him to sleep again’ (CV, 1980, 5e). In Culture and Value Wittgenstein continued his critique of people asking ‘why’ instead of seeing ‘what’ of phenomena, ‘People who are constantly asking ‘why’ are like tourists who stand in front of a building reading Baedeker and are so busy reading the history of its construction, etc., that they are prevented from seeing the building’. Wittgenstein does not stand against science and scientific knowledge at all and specific scientific

statements, but he draws attention to the fact that at the current time the scientific worldview has replaced all other. He said that science in the modern world has become a new religion. But ‘Every explanation is after all a hypothesis’ (RFGB 2018, 34-5). Moreover, scientific methods ‘all seem partly by comparison, preliminary stages at best’ (CV 1980, 60e). ‘The existence of the experimental method makes us think that we have the means of getting rid of the problems which trouble us; but problem and method pass one another by’ (PI II, 2009, xiv, §371). In CV (1980, 40e) Wittgenstein derided scientific attitude, ‘What a curious attitude scientists have—,“We still don’t know that; but it is knowable and it is only a matter of time before we get to know it!” As if that went without saying.’ Further in this book he continued to mock contemporary scientists, ‘The popular scientific books by our scientists aren’t the outcome of hard work, but are written when they are resting on their laurels’ (CV 1980, 42e).