

*The Coherence of Feyerabend's Pluralist Realism**Hasok Chang***2.1 Overview**

Contrary to common impressions, Paul Feyerabend was a defender of realism throughout his career. It is the task of this chapter to give plausibility to that contentious statement. I hope that this exercise will not only contribute to a better and clearer understanding of Feyerabend's philosophy, but also generate helpful insights for those philosophers of science, epistemologists, metaphysicians and practising scientists who continue to wrestle with the question of realism in and about science.

It should not be a surprise to any careful reader of Feyerabend's texts that he advocated a kind of realism strongly in his early work. There are explicit statements to that effect in Feyerabend's own writings, and John Preston devoted a whole chapter to this topic in his well-known exposition of Feyerabend's philosophy (Preston 1997a, chapter 4). But in his later work, Feyerabend's stance would seem to be more in line with the popular image of him as an iconoclastic postmodernist who rejected the arrogance and absolutism often associated with scientific realism. Preston (1997b) states that Feyerabend retreated from realism in his later work. Although there is some truth to this reading, I will argue (see Section 4) that there is a common thread running in Feyerabend's thought concerning realism, though 'realism' may be an inconvenient label because of the ambiguities in the meaning of the term.

It is commonplace to observe that Feyerabend freely changed his mind and even contradicted himself, and it may be unwise for the interpreter to impose too much tidiness on his thought. However, I do think that there was a very coherent direction of development in Feyerabend's thought when it comes to the issue of realism. He began with a rather narrowly defined position on realism, and then went on to broaden and strengthen it as the years went by. I agree with Luca Tambolo's view that even

Feyerabend's last writings were 'fully compatible with a robustly realist view of science', and that the later Feyerabend can be seen as 'a potential ally of sophisticated versions of scientific realism' (Tambolo 2014, p. 197). The key is to understand that his realism was pluralistic through and through. And to understand the development of his views, it is crucial that we lose the common prejudice that pluralism cannot possibly be realist; dispelling that prejudice may be the most useful thing I can contribute to the discussion of Feyerabend's realism. There was no abrupt change in Feyerabend's pluralist realism; it is only that his pluralism became stronger, more explicit and more cogent.¹ In my reading, it is only what Feyerabend would have considered a *perversion* of realism that he explicitly objected to in his later work. The rejection of such 'realism' actually ran through his work from the start, though it is clearer in the later works.

2.2 Feyerabend's Early Advocacy of the Realist Pursuit of Theories

2.2.1 Feyerabend's Early Stance on Realism

I begin by acknowledging again my debt to John Preston's work. Not only did he give us the first comprehensive book-length treatment of Feyerabend's philosophy,² but he has also provided a detailed and illuminating discussion of Feyerabend's views on realism in that book and in later articles. And in fact I agree with almost everything Preston says about Feyerabend's take on realism, if taken on Preston's terms. But I have a sense that, in the end, he finds Feyerabend's views disagreeable and that this prevents him from getting the maximum possible sense out of Feyerabend's statements. What I can offer here is a different perspective, arising from a more sympathetic engagement.

The first thing to confirm briefly is that the early Feyerabend was an advocate of realism, and explicitly so. Richard Burian (1971, p. 49) goes as far as to say: 'We may label the central doctrine of Feyerabend's positive programme "scientific realism"'.³ But what exactly did Feyerabend mean

¹ In this view about Feyerabend's attitude towards pluralism, I concur with Jamie Shaw (2017), though other experts seem to disagree.

² One should also note the earlier publication by George Couvalis (1989), and Richard Burian's (1971) very early PhD dissertation on the work of Feyerabend before *Against Method*.

³ This is despite the fact that Burian (1971, p. 239) then goes on to give a harsh verdict that Feyerabend's programme was seriously 'deficient' as realism, despite 'his occasional appropriation of the label "realism" for his philosophy.'

by 'realism'? Burian (1971, pp. 49–55) notes that the central point is to take scientific theories seriously, as accounts of the world 'with ontological relevance', which can often reveal aspects of reality that are contrary to the testimony of our senses. What Feyerabend was talking about in his early works fits nicely into the later and now-classic articulation of scientific realism given by Bas van Fraassen (1980, p. 8): 'Science aims to give us, in its theories, a literally true story of what the world is like; and acceptance of a scientific theory involves the belief that it is true. This is the correct statement of scientific realism'. The two main points here are a literal interpretation of scientific theories when it comes to unobservables, and the policy of pursuing the truth about the literally interpreted statements about unobservables.

Feyerabend's early papers (starting with 1958/1981) were quite clear that scientific theories should be given literal interpretations, if possible; in a move against positivism, he advocated the 'realistic interpretation' of theories, according to which 'a scientific theory aims at a description of states of affairs, or properties of physical systems, which transcends experience' (1960/1981, p. 42). He argues against global instrumentalism (which he considered a variety of positivism),⁴ and he is also at pains to push back on 'local instrumentalist' arguments, which argue that in some important cases (e.g. quantum theory) it is impossible to give a literal interpretation of the theory. When that appears to be the case, scientists should do something to make a literal interpretation possible. This is what Galileo did with heliocentrism, by undermining the observational facts that seemed to preclude a literal interpretation of heliocentric theory, and by creating a new kind of dynamics in which the motion of the earth could make physical sense.

This is an advocacy of pursuit (much more than it is an assessment of success), as in van Fraassen's definition of scientific realism. Galileo did not know in advance that the heliocentric theory would be able to thrive thanks to the changes he introduced, but Feyerabend judges that what Galileo did was worth trying. This judgement is not tied to our retrospective knowledge that what Galileo did was in the end successful, though that knowledge of success undoubtedly adds rhetorical force to the case. But do all theories deserve such realist pursuit? At least interesting ones do, as Feyerabend hints in *Against Method* (1975a, p 98): 'Galileo is to be applauded here because he preferred protecting an interesting hypothesis to protecting a dull one'. And perhaps that comes to saying that any theory that anyone really cares to pursue is worth pursuing.

⁴ See Preston (1997a, pp. 70–73) for a critical discussion of Feyerabend's argument here.

2.2.2 Arguments for Realism

Having noted Feyerabend's early advocacy of realism, the next question is what arguments he actually gave for it. Why is it the right thing to do, in his view, to defy even accepted facts and methods to pursue certain theories in a realist way? The most general form of the argument is outlined by Feyerabend as follows, in the 1981 introduction to the first two volumes of his *Philosophical Papers*:

(i) criticism \rightarrow proliferation \rightarrow realism

As he notes in this retrospect that in the early papers reprinted in Volume 1, 'this chain is applied to a rather narrow and technical problem, viz. the interpretation of *scientific theories*' (1981a, p. ix). He admits that the three terms occurring in that schema are not precisely defined, 'nor does the arrow in (i) express a well-defined connection such as logical implication'. Rather, it indicates 'starting with the left hand side and adding' various other elements, 'a dialectical debate will eventually at the right hand side' (pp. ix–x).

Feyerabend's various arguments for proliferation are well known, which include the idea that proliferation is good because it facilitates a Popperian sort of criticism of theories. But the next step in schema (i) may seem more mysterious: how is proliferation meant to lead to realism? Preston (1997a, p. 63) gives a helpful summary of Feyerabend's line of thought: 'scientific progress . . . is best furthered by theoretical proliferation; and scientific realism leads to a proliferation of theories, while positivism does not. This is clearly a development of Popper's suggestion that positivism is heuristically infertile, that it would produce bad science'. But why is it that realism favours proliferation? I think Preston (1997a, p. 72) is correct to note that anti-realists can also practise proliferation, and in fact anti-realism may even be more conducive than realism to proliferation. But there he is being somewhat uncharitable, in downplaying one important side of Feyerabend's thinking, which comes out famously later in *Against Method*: following the instrumentalist respect for accepted observations would have prevented the Copernicans from maintaining the pursuit of their theories; for such proliferation, a realist attitude for one's theory is required, to the extent of emboldening one to dismantle observations in favour of a realist acceptance of the theory.

Having seen Feyerabend's arguments for realism, one may ask why he cared so much about it. To adapt his famous question about science: what's

so great about realism? Without being able to go into this question deeply, I want to leave a few suggestions. Schema (i) does indicate that Feyerabend took the importance of criticism as his starting point. As Jamie Shaw argues, even from his very early work, Feyerabend was concerned to argue against ‘rationalism’, or ‘conception of scientific methodology that provides normative exclusive rules for theory pursuit’ (Shaw 2020, p. 2). Anti-rationalism in that sense was an expression of a deeper and general anti-authoritarian and anti-absolutist sensibility that would find fuller expressions in Feyerabend’s later work, which I will discuss in detail in Section 5 later.

2.3 But What Is Realism, Exactly?

I commented earlier that the early Feyerabend does not seem to have been too concerned about laying down a precise definition of realism. I could be wrong about that, but at any rate this certainly changes later as he enters into an elaborate consideration of the meanings of ‘realism’ in his paper on ‘Scientific Realism and Philosophical Realism’ (1981b), written as an introductory chapter to the first two volumes of his *Philosophical Papers*. This is the ‘middle Feyerabend’ if you will, who took a retrospective on his earlier publications after unleashing *Against Method* and *Science in a Free Society* on the philosophical world. Although Feyerabend’s retrospective views on his own earlier work must be treated with caution, I think it is not insignificant that in the 1981 retrospect (1981b, pp. 15–16) he singled out the two realism papers (1958/1981 and 1964/1981) as ‘misleading’ and ‘dogmatic’.

Feyerabend’s early position on realism was riddled with significant tensions. In other people’s terminology, the early Feyerabend might have been a ‘conjectural realist’, or a ‘quasi-realist.’⁵ Either way, there is discomfort. Conjectural realism would argue for the legitimacy of pursuing various theories because we don’t know which one will turn out to be correct, in which case pluralism is only temporary, at least provisional even if forever. Quasi-realism would advocate acting as if our theories were true (even though they are not, or we cannot know if they are, or it makes no sense to say that they are) – in this way, pluralism is only bought at the cost of rendering realism really instrumentalist.

With these tensions in the background, it is interesting to review the different senses of realism that he tried tease apart in the 1981 publication

⁵ The ‘conjectural realism’ designation can be found in Preston (1997b, p. S421 and S429).

mentioned earlier. He begins with a statement that is frustratingly indeterminate but thereby productive: 'Scientific realism is a *general* theory of (scientific) knowledge. In one of its forms it assumes that the world is independent of our knowledge-gathering activities and that science is the best way to explore it' (Feyerabend 1981b, p. 3). Does this description say anything in particular, if we accept his view that there really is no well-defined thing called 'science'? We can only assume that he means by 'science' here (as in other places) the rather illusory thing that exists clearly in the popular and philosophical imagination, the thing in the name of which the hegemony of 'Western civilization' is justified. More importantly for our current purposes, note that he says that the familiar realist idea (the mind-independence of the world, and of the scientific knowledge of the world) is upheld only in 'one of its [realism's] forms', clearly implying that there are other forms of realism in which this idea is not affirmed. And why is he emphasising 'general' in the first sentence quoted? That has to be a rather clumsily phrased warning against taking aspects of one particular form of realism as pertaining to all varieties of realism.

He proceeds to distinguish at least three, perhaps four, specific types of realism. The first was practised emblematically by the Copernicans, for whom 'the issue is about the *truth of theories*'. Feyerabend adds an interesting observation: 'Claims to truth can be raised only with regard to particular theories. The first version of scientific realism therefore does not lead to a realistic interpretation for all theories, but only for those which have been chosen as a basis for research'. (Feyerabend 1981b, p. 5) Most scientific realists would want to add some strict rules here about what kinds of theories should be chosen as a basis for research, while Feyerabend's own position is much more liberal.

The next type of realism Feyerabend identifies is somewhat puzzling: 'A second version of scientific realism assumes that *scientific theories introduce new entities with new properties and new causal effects*' (p. 6). Did he mean to suggest that *all* theories do this? Most likely not, as he adds: 'a direct application of the second version of scientific realism ('theories always introduce new entities') and a corresponding abstract criticism of 'positivistic' tendencies are too crude to fit scientific practice. What one needs are not philosophical slogans but a more detailed examination of historical phenomena'. (p. 7) I am all for engaging with details of history, but it is not clear what kind of doctrine this second type of realism is. What seems clear is that this realism is an attitude that scientists choose to take (or not), concerning particular theories. But, what is not clear is when Feyerabend thinks how the attitude taken can be justified, in each

particular case. The best interpretation I can give is that he thinks the justification can only consist in the fruits of the effort: for example, the vector potential in electrodynamics was taken in a non-realist way by most investigators; Faraday went against this trend, and he was vindicated in various ways, even by the Aharonov–Bohm effect of the mid-twentieth century. Also note that Faraday’s original theory of the ‘electrotonic state’ does not fit with modern theories, so the situation is complicated: ‘A theoretical entity may represent a real entity – but not in the theory in which it was first proposed’ (p. 6). Then we have a position somewhat like Ian Hacking’s ‘entity realism’, in which the truth of a theory and the existence of an entity can diverge from each other, and we need to have a separate notion of what makes an entity real; this latter is something that Feyerabend articulates later, as I will discuss in the next section.

The third type of realism, which Feyerabend identifies in the works of Maxwell, Helmholtz, Hertz, Boltzmann and Einstein, is even harder to pin down. Feyerabend calls this the ‘*positivistic version of scientific realism*’ with conscious paradox: ‘making judgments of reality here amounts to asserting that a particular “phantom picture” . . . is preferable to another phantom picture’ (p. 10). Phantom picture, or ‘inner phantom picture’, *Scheinbild* in German, is a term from Hertz to characterise our theoretical pictures or models of reality. But Feyerabend explains that for Hertz the correspondence was not directly between the phantom picture and reality, but between inferences, as follows: ‘the logically necessary [*denknotwendigen*] consequences of the picture are always pictures of the physically necessary [*naturnotwendigen*] consequences of the objects pictured’. (Hertz quoted in Feyerabend 1981b, p. 8). Hertz thought that we could judge such correspondence – but how? And even if that were straightforward, how should we deal with the problem of underdetermination? Feyerabend noted in the discussion of the second type of realism that ‘theories can be formulated in different ways, using different theoretical entities and it is not at all clear which entities are supposed to be the “real” ones’ (p. 6). And, indeed, a key part of Hertz’s work on mechanics was to highlight the Newtonian, Lagrangian and Hamiltonian formulations of classical mechanics, and to add another one of his own (Hertz 1894/1899, Introduction). Boltzmann thought that the choice came down to the simplicity of the picture, and that ‘Hertz made it quite clear to physicists (though philosophers most likely anticipated him long ago) that a theory cannot be an objective thing that really agrees with nature’ (Boltzmann quoted in Feyerabend 1981b, p. 9). But, if we go with such a view, the paradox ceases to be benign: such ‘realism’ is, on the face of it,

indistinguishable from anti-realism. So here, it might appear that Feyerabend's embrace of pluralism takes him away from any kind of realism worth its name; why he would have thought of this as realism becomes clear only when we consider his view of reality articulated in his later works.

After distinguishing these three types of realism, Feyerabend seems to add at least one more: 'The ideas of Maxwell and Mach differ from all the versions I have explained so far. They are also more subtle' (p. 11). So subtle, that Feyerabend did not give us simple characterisations. For Maxwell, the key is the method of analogies, which are good because 'they have heuristic potential' unlike mere mathematical formulae, but 'they don't blind us' like simple-minded physical hypotheses do. That is to say, 'Maxwell wants a conception that *guides* the researcher without *forcing* him into a definite path; that makes suggestions without eliminating the means of controlling them.' (p. 12). But how does this constitute realism? That, I suggest, we can only understand when we see Feyerabend's full-blown version of pluralism discussed in the next section. As for Mach, Feyerabend's reading is highly unconventional, though I think correct. Feyerabend's Mach is not the positivist of popular and philosophical imagination, but an anarchistic scientist pursuing knowledge in any way possible: according to Mach, '*science explores all aspects of knowledge, 'phenomena' as well as theories, 'foundations' as well as standards; it is an autonomous enterprise not dependent on principles taken from other fields.*' This idea according to which all concepts are theoretical concepts, at least in principle, is definitely in conflict with the positivistic version of scientific realism'. For Mach, 'even sensation talk involves a "one-sided theory"', and the distinction between theoretical and observational concepts is there, but 'it is regarded as temporary and as being subjected to further research' (p. 13). Boltzmann, too, agrees: 'In my opinion . . . we cannot utter a single statement that would be a pure fact of experience' (p. 13). But we seem to have lost the thread by now: how does all *this* count as realism, and how does it go with Maxwell's analogy-based realism? That, again, is also only understandable in the light of Feyerabend's later articulations.

In summary: Feyerabend's 1981 attempt at articulating different meanings of 'realism' raised more questions than it answered. Not only did it reveal again some of the tensions in the pluralist realism stated in his earlier works, but it also created puzzles as to how all the different versions of 'realism' he outlined could be considered realist. I want to argue that these tensions were resolved in the later works of Feyerabend. He achieved this

by making his realism and pluralism both stronger, rather than watering them down.

2.4 The Later Feyerabend: Pluralistic Reality versus ‘Scientific Realism’

2.4.1 *Did Feyerabend Retreat from Realism?*

In this part of the chapter, my main task is to puzzle out Feyerabend’s stance concerning realism in his later works. As indicated in the introductory section of this chapter, the picture I want to present is one of continual articulation and development right up to his death in 1994, rather than one of distinct phases.

As mentioned earlier, Preston (1997b; 2000) argues that Feyerabend in his later and more notorious postmodernist phase retreated from his earlier realism. Eric Oberheim (2006, chapter 6) counters this view vehemently: ‘Feyerabend did not retreat from scientific realism. He was never a scientific realist’ (p. 204; see also p. 191). Even though I agree with the points that he makes about Feyerabend’s various statements, I also think that Oberheim’s conception of what constitutes ‘scientific realism’ is overly narrow. For example, while he is correct in pointing out that the ‘realism’ that Feyerabend advocated in many of his major publications was ‘a *normative* claim about how best to set the aims of science’ (p. 188), he speaks in haste when he declares that such a position cannot be considered a scientific realist one. Consider that van Fraassen (as quoted earlier), one of the leading contemporary commentators in the scientific realism debate, unequivocally defines scientific realism as something to do with the aims of science.

Tambolo (2014, p. 205) is correct to note that while Feyerabend often attacked what he called ‘realism’, his critique ‘does not apply to all versions of scientific realism’. The important point that we can all agree on is that Feyerabend was fundamentally opposed to some of the attitudes exhibited by many philosophers who have called themselves ‘scientific realists’. Given that, the interesting question to ask is: what sense can we make of Feyerabend’s realism, and how did that position develop as Feyerabend’s thinking changed over the years? I concur with Matthew J. Brown (2016) that a pluralist kind of realism, which he calls ‘abundant realism’, can be discerned in Feyerabend’s late writings, especially *The Conquest of Abundance* (1999). But, I would also not agree wholly with the view, expressed for example by Jamie Shaw (2018a, p. 35), that the realism

defended by the later Feyerabend is different from his earlier realism (which Shaw locates in the period from 1951 to 1981). The later Feyerabend's objections to what some philosophers called 'realism' do not amount to, and were not accompanied by, a renunciation of his own earlier stance that he had called 'realism'.

I want to show that Feyerabend's realism only became *stronger* in his later works, at least in one sense: as mentioned previously, his earlier position could be taken as a quasi-realist one: 'we treat scientific theories *as if* they described the world without being committed to the view that theories succeed in doing so' (Shaw 2018a, p. 35). In his later view, as I will explain further, there is no 'as if' involved: reality *is* what good theories describe. This idea also strengthens Feyerabend's pluralism: what he now advocates is not an ultimately frustrating proliferation of provisional 'as if' theories, most of which will fade away, but a proliferation in which each theory, each way of life, helps create a new and different reality, not to be discarded when the correct one is found. Calling this move a 'retreat' from realism does not square with the spirit of Feyerabend's thought; it is only a perspective forced by the presumption that realism cannot be truly pluralist. Oberheim (2006, section 6.3) is correct to note the increasing neo-Kantian tendency in Feyerabend's thinking, but seeing that tendency as anti-realist makes Oberheim undervalue in Feyerabend's thinking what we may fairly call realism, and its continuity. It is true that there was a more semantic and less metaphysical emphasis in his earlier statements, but I do not think that this shift of emphasis amounts to a whole new position; on the contrary, the later *addition* of a metaphysical dimension to Feyerabend's realism only made it more complete and coherent.

2.4.2 Feyerabend's Pragmatist–Pluralist Notion of Reality

I think that already in the 1960s Feyerabend started to make significant moves in the development of his *pluralist realism*. By the time he penned the 'Outline of a Pluralistic Theory of Knowledge and Action' in 1968, the pluralist aspect of his realism began to shine through clearly. Once again defending his 'principle of proliferation', Feyerabend noted that new theories could reveal new facts: 'There may exist facts that endanger [the current theory] *T*' but that can be revealed with the help of alternatives only'. If that happens, the alternative theory has 'not just accentuated an already existing difficulty [for *T*]; it has actually created it' (Feyerabend 1968/1999, p. 108). Here one can hear an echo of Thomas Kuhn saying that we have to learn to make sense of how after a scientific revolution scientists

would seem to inhabit a different empirical world. In addition, Feyerabend spoke of ‘the metaphysical components of observation’, which could also be replaced by scientific theories (pp. 109–110). The obvious epistemological dimension of proliferation began to show metaphysical implications. By 1981, he used the phrase ‘pluralistic realism’ explicitly, and spoke of alternative ‘cosmologies and forms of life’ (Feyerabend 1981a, xi).

In grappling with Feyerabend’s pluralist realism, it is crucial that we understand what Feyerabend meant by ‘reality’ as he tried to spell that out in the set of texts collected as the posthumous volume *The Conquest of Abundance*. This volume consists of an unfinished manuscript of that title, together with reprints of related essays that were previously published.⁶ Among the latter are a few papers that lay out quite clearly Feyerabend’s later conception of reality, one that Preston finds beyond the pale: ‘One of the most remarkable things about his last work is that he commits himself, albeit tentatively, to a new metaphysical picture of the world, a clear rival to the picture of mind-independent reality that undergirds scientific realism. The replacement is a metaphysic best characterised as “social-constructivist”’ (Preston 2000, p. 94). Brown (2016, section 4) gives an excellent account of Feyerabend’s later metaphysics, and my own reading of Feyerabend’s texts is buttressed by Brown’s exegesis.

Feyerabend’s paper titled ‘Realism’, published in 1994, the year of his death,⁷ is a bewildering piece; his long discourse on Achilles and honour does not clearly spell out anything about realism. However, the later parts of the paper are clear enough. Feyerabend is not against realism, but against monism and absolutism. He criticises the ‘scientific realists’ for their hegemonic view of modern science, about which he had already expressed clear disdain in *Against Method* and other writings in the 1970s. A key passage in the 1994 paper is his discussion of the Parmenidean ‘realist’ argument that change is impossible, and its modern descendants resulting in notions such as the ‘block universe’. He is rightly incredulous about these arguments, but his real point is not that such a view is wrong. What he finds really objectionable is the insistence that it is the only correct view.

Feyerabend reminds us that there were various ways of conceiving reality advanced by the ancient Greeks: ‘Thus we can say that at the time in question (fifth to fourth century B.C.) there existed at least three different ways of establishing what is real: one could ‘follow the argument’

⁶ As the published papers included in the volume date from 1989 to 1995, I see the development of Feyerabend’s thoughts as a fairly continuous one: 1989 was only eight years after the first two volumes of his *Philosophical Papers* were published, and just two years after *Farewell to Reason*.

⁷ The opening chapter of *The Conquest of Abundance* closely follows the content of this paper.

[Parmenides]; one could 'follow experience' [Leucippus]; and one could choose what played an important role in the kind of life one wanted to lead [Aristotle]. Correspondingly there existed *three notions of reality* which differed not so much because research had as yet failed to eliminate falsehoods but because there were different ideas as to what constituted research.' So 'it seems that the "problem of reality" has many solutions' (1994/1999, p. 190). All of the solutions were legitimate, though it seems clear that Feyerabend's own sympathies were with the Aristotelian conception. Advocates of each conception of reality should by all means try to make it work; it was Feyerabend's optimistic view that just about any conception of reality could be made to work to a degree, and that many conceptions, including some that are rejected by modern science, could be made to work quite well.

For my argument in favour of continuity in Feyerabend's thinking, it is important to note that already in 1981 he had inserted a pluralist view of reality into the Introduction to the first two volumes of his *Philosophical Papers*, to frame his earlier papers reprinted in that collection: '*we decide to regard those things as real which play an important role in the kind of life we prefer.*' This is quite a perfect statement of what Brown (2016, p. 147) identifies as the fourth central plank in Feyerabend's late 'metaphysics of abundance', namely, 'Aristotle's Principle: What is "real" is what plays a role in our valued practices and form of life, what we care about and identify with.' And in the same text of 1981, Feyerabend also already had a clear negative verdict on monist-absolutist realism: 'Realism . . . only reflects the wish of certain groups to have their ideas accepted as the foundations of an entire civilization and even of life itself' (1981a, p. xiii). A clear difficulty in exegesis here, as noted earlier, is that Feyerabend often just said 'realism' in such passages, without qualifying exactly what kind of realism he had in mind. So, as usual, we cannot avoid the task of careful interpretation.

The italicised statement quoted in the previous paragraph cries out for a pragmatist interpretation, and Feyerabend's later writings do deliver such an interpretation. The following is perhaps the clearest passage: 'putting reality where the achievements are, there are different kinds of reality defined by different modes of successful research' (Feyerabend 1994/1999, p. 194). Such pragmatism goes together well with pluralism – not as a matter of logical or conceptual necessity, but as a matter of historical fact. Feyerabend argues that different conceptions of reality have occurred not only at the level of general metaphysical perspectives, but also at the level of concrete scientific detail: 'the different conceptions of reality that occur in the sciences have empirical backing. *This is a historical fact, not*

a philosophical position, and it can be supported by a closer look at scientific practice.’ And such differences have not disappeared with the development of science: there are many modern scientists who are in a way ‘continuing the Aristotelian approach, which demands close contact with experience and objects’, while there are others such as Einstein who prefer the method of ‘following a plausible idea to the bitter end’ (p. 191). Many different scientific fields with different approaches ‘have been successful, thus confirming the notions of reality implicit in their theories’ (p. 192).

Feyerabend was by no means the only thinker who advocated such a pragmatist pluralist realism. Israel Scheffler (1999) made a plea for ‘plurealism’ around the same time as the publication of *Conquest of Abundance*, emphasising how naturally realism can embrace pluralism. Around the same time, Roberto Torretti (2000) gave expression to the view that a viable kind of realism would be a pluralist position, referring explicitly back to Hilary Putnam’s ideas from his ‘internal realist’ phase. As Torretti points out, Putnam (1987, p. 17) mused that he should have used the phrase ‘pragmatic realism’ instead of ‘internal realism’ to designate his position. Putnam’s and Torretti’s pragmatist realism had clear pluralist implications, and I am currently at work in developing these implications further.⁸

2.4.3 Feyerabend’s Constructivism

It is in line with common misunderstandings of pragmatism that some critics take the later Feyerabend as a ‘constructivist’ in a pernicious sense of the term: ‘Feyerabend’s more radical version of postmodernism has anti-realist implications, bearing negatively both on realism about scientific *theories*, and on realism about scientific *entities*’ (Preston 2000, p. 89). And Feyerabend certainly gave some cause for such interpretation. For example, he says that humans are ‘sculptors of reality’.⁹ In contrast to the standard realists who would insist on the mind-independence of reality (‘atoms existed long before they were found’, and so on), Feyerabend says: ‘A better way of telling the story is the following. Scientists . . . used ideas and actions (and, much later, equipment up to and including industrial complexes such as CERN) to *manufacture*, first, metaphysical atoms; then, crude physical atoms; and, finally, complex

⁸ See Chang (2016) and Chang (2018) for some preliminary forays. I have made a mistake of composing these papers without mentioning Feyerabend. I hope that the present chapter goes some way towards correcting that mistake.

⁹ Or even that nature is a ‘work of art’ (see Preston 2000, p. 94).

systems of elementary particles out of a material that did not contain these elements but could be shaped into them' (1989/1999, p. 144).

However, it is important to note two things. First of all, what we successfully manufacture is real, after the manufacturing is done; this is just as the etymology of the word 'fact' indicates something that has been (successfully) made. In that sense, there is no conflict between constructivism and realism. Secondly and more importantly Feyerabend, like the pragmatists, is very clear that we cannot construct just any kind of reality we might like: 'I do not assert that any combined causal-semantic action will lead to a well-articulated and livable world. The material humans (and, for that matter, also dogs and monkeys) face must be approached in the right way. It offers resistance; some constructions (some incipient cultures—cargo cults, for example) find no point of attack in it and simply collapse' (p. 145). As Tambolo (2014, section 3) expresses the point: the 'pliability thesis' upheld by the later Feyerabend is clearly tempered by the 'resistance thesis'. Again, Feyerabend had been anticipated by the pragmatists: as William James put it (1907/1978, p. 106), 'Experience, as we know, has ways of *boiling over*, and making us correct our present formulas'.

2.4.4 *The Inscrutability of Being*

But what exactly is the 'material' that he speaks of in both of the statements just quoted? In some places it seems that what Feyerabend means by the 'material' is the 'world itself' or 'Reality' with a capital 'R'. Preston (2000, pp. 94–97) rightly notes that there is something Kantian about such a view, expressing disapproval. If so, here language (Feyerabend's or anyone's) fails us, and there is no convenient answer to the question. The ultimate Reality is completely inscrutable, like Kantian noumena, as it does not fall under any concepts. How Reality interacts with what we do so that tangible realities are produced, is also inscrutable. About this process, Feyerabend says that we can try to give an account, but any such account would be 'from the inside' of a particular approach that we adopt: 'We can tell many interesting *stories*. We cannot explain, however, how the chosen approach is related to the world and why it is successful, in terms of the world. This would mean knowing the results of all possible approaches' (Feyerabend 1989/1999, p. 145). This view is repeated five years later: 'describing a response and not Being itself, all knowledge about the world now becomes ambiguous and transparent. It points beyond itself to other types of knowledge and, together with them, to an unknown and forever unknowable Basic Reality' (1994/1999, p. 196).

Despite the initial plausibility of the interpretation just given, I think there must be something different, or at least something additional, that Feyerabend meant. If the ‘material’ is the inscrutable Being, then it makes no sense to talk about how we can *shape* it into anything. It makes more sense to see Feyerabend’s ‘material’ as not the world itself, but the world as we have it according to some inherited account. It is important not to equate this ‘material vs. product’ distinction with the usual ‘appearance vs. reality’ distinction, which Feyerabend did not like so much. When the standard realists talk about appearance and reality, they do mean that the reality hidden behind appearances can be known, or at least got at in some partial way. For Feyerabend, appearances *are* realities, and the Being that may be conceived to be ‘behind’ the apparent realities is ineffable, inscrutable.¹⁰ In this context, it is interesting to note Feyerabend’s commentary on Parmenides (p. 188): ‘This was the first, the clearest and most radical separation of domains which later were called reality and appearance and, with it, the first and most radical defence of a realist position. It was also the first theory of knowledge. Those who are ready to make fun of Parmenides should consider that large parts of modern science are bowdlerised versions of his result’. Consider modern scientists’ attachment to conservation laws, and their surprising willingness to commit to the ‘block universe’ picture in which the future is fixed in the same way as the past.

One additional clarification is necessary here, to make something approaching a well-rounded picture of the later Feyerabend’s metaphysics. This concerns one rare place where I think Brown’s excellent exposition needs a slight correction. Brown (2016, p. 149) states: ‘when Feyerabend asserts that Being is “ineffable and unknowable,” he is *not* making the transcendental idealist metaphysical claim . . . that we lack any access whatsoever to Being, etc. Instead . . . the ineffability and unknowability of the world follows from its abundance. The complex, overlapping, malleable nature of Being’s structure make[s] it impossible to capture in a single formulation.’¹¹ In speaking of ‘Being’s structure’ being such and such, I think Brown falls into the trap of talking about ‘the unknowable . . . as if we know what it is like’, against which he warns us (*ibid.*). No, abundance is not the same thing as ineffability. ‘Being’ or ‘Basic Reality’, whatever that is, is ineffable, indescribable, unknowable. What is abundant is the richness of experience, and all the different ways in which people

¹⁰ See Ian Kidd’s (2012) instructive discussion of the link between this notion of ineffability and epistemic pluralism.

¹¹ In this quotation, I have suppressed in the ellipses the parts of Brown’s passage which I think do get things exactly right, to highlight only the parts that need revision.

have known and made sense of experience. The 'conquest' of that abundance can only be managed by the human collective in a pluralist way.

2.5 Proliferation and Human Flourishing

In closing, it would be appropriate to make a brief consideration of Feyerabend's deeper motivations. In relation to his earlier works, testability and 'anti-rationalism' were identified as the drivers of his thinking about realism. At least from *Against Method* onwards, Feyerabend made it clear that his sights were set on no less than human flourishing in a general sense. And Feyerabend's inclination concerning human flourishing was strongly towards diversity and freedom. It is not an accident that he looked to John Stuart Mill's *On Liberty* for his inspiration and arguments for pluralism (e.g. Feyerabend 1981c, pp. 139–141; Lloyd 1997). Rejecting the Platonic ideal of the Good as an inoperative one, Feyerabend held that the good was to be sought and worked out by each individual and each community of human beings. He quoted Aristotle's *Nicomachean Ethics* on this point: 'Even if there existed a Good that is one and can be predicated generally or that exists separately and in and for itself, it would be clear that such a Good can neither be produced nor acquired by human beings' (Feyerabend 1994/1999, p. 189). Where human freedom and diversity meet the abundance of nature, the only reasonable attitude is tolerance and openness.

From Feyerabend's view of life, it is obvious that the forcing of one mode of inquiry and one mode of life on other people must be done with the greatest reluctance, and that it is much more rarely necessary than people imagine. This view he laid out quite clearly at the end of *Against Method*, and more extensively in *Science in a Free Society*. In 'Consolation for the Specialist' he declared: 'Progress has always been achieved by probing well-entrenched and well-founded forms of life with unpopular and unfounded values. This is how man gradually freed himself from fear and from the tyranny of unexamined system' (Feyerabend 1970a, pp. 209–210). He was clearly against the misuse of philosophical notions often associated with 'realism' as oppressive devices: 'One of my motives for writing *Against Method* was to free people from the tyranny of philosophical obfuscations and abstract concepts such as "truth", "reality" or "objectivity", which narrow people's vision and ways of being in the world' (Feyerabend 1999, p. viii, quoted from *Killing Time*). Feyerabend also refused to regard science as a body of knowledge isolated from the rest of life. As the years went by, he increasingly and adamantly viewed science as a set of human practices, and inquiry as a natural and indispensable part of human life. Here again there is

remarkable affinity between Feyerabend's thinking and pragmatist philosophy, especially some key ideas of John Dewey.

In closing, I must note that I am giving an interpretation of Feyerabend that looks very close to some views that I have been developing myself (e.g. Chang 2016, 2018). Does this signal a bias in my interpretation? Yes, but I think it is a helpful bias. Feyerabend has often been misunderstood because many commentators ultimately regard his views as absurd, even when they study them closely. *That* bias results in a rendition of Feyerabend's views in a more absurd form than necessary, leading to hasty dismissal. My bias comes from sympathy, which makes me inclined to formulate his views in the most defensible way. Not only is this in line with the old 'principle of charity', but also especially in the case of Feyerabend, it serves as a useful antidote to the general atmosphere of hostility and misunderstanding. And my interpretation has been tested empirically in the same sort of way in which many enemies of Feyerabend would insist scientific theories should be tested, namely by independent confirmation. Initially, I was inspired by Feyerabend's pluralism, with no knowledge of his commentary on realism; my own Feyerabend-inspired pluralism developed into a kind of realism, and found a congenial home in pragmatism; and then when I came to read Feyerabend's comments on realism, I found them to be resonant with my own views, in line with what I think a Feyerabendian thinker should think, and what I thought Feyerabend *would have said* about realism. So, if my own interpretive lens seems to be refracting Feyerabend's views too strongly, that is not quite how the situation is. Rather, my lens is itself Feyerabendian, well suited for viewing Feyerabend.¹²

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