

How Should Feyerabend have Defended Astrology? A Reply to Pigliucci
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I am grateful to Massimo Pigliucci for his response to my paper,¹ the subject of which was Paul Feyerabend's well-known, but poorly-understood "defences" of astrology, voodoo, and other "eccentric" beliefs, practices, and traditions. Like many modern Feyerabend scholars, my sense is that there is a lot of sense in the epistemic anarchist's work, but a lot less sense in the way that he said it. I can sympathise with those without the patience to put up with and filter through the mass of polemics, exaggerations and provocations that characterise so much of Feyerabend's writing. Indeed, the first chapter of Eric Oberheim's masterly study, *Feyerabend's Philosophy*, is taken up with the important task of showing that, despite the presentational deficiencies, there is much that is important and interesting in Feyerabend's writings.²

Central among these are the criticisms of *scientism*, a theme flagged by Pigliucci, himself a distinguished foe of pseudoscientific distortions. What Feyerabend was "against" was not science or method at all, but rather dogmatic claims about scientific enquiry made in ignorance of the realities of its history and practice. The modern cheerleaders for science that Pigliucci points to—such as Hawking, Krauss, and deGrasse Tyson—are today's continuants of those dogmatic dithyrambs to science and so often lapse into scientism—and so, perhaps, drift dangerously close to the epistemic vices that prompted Feyerabend's own "defence" of astrology.³

Astrology and Other, Better Examples

Pigliucci opens with two related worries about the headlining example of astrology: these are that Feyerabend is wrong to say that astrology is a good example of the limits of scientific explanations and also of the ways that scientists engage with topics outside their domain of expertise. Indeed, astrology has been decisively refuted on empirical and theoretical grounds and it most certainly does fall within the domain of competence of modern science: that being so, it is not the potent example that Feyerabend, at least in 1978, thought it to be.

Pigliucci is quite right, of course, on both of these points, but they are ones that Feyerabend himself appreciated. By the early 1980s, under the influence of his soon-to-be wife, Grazia Borrini, the range of examples significantly shifts, with Feyerabend delightedly reporting that he "now had much better examples of the limits of a scientific approach than those I had been in the habit of using (astrology, voodoo, a bit of medicine)."⁴ From now on, the examples were all taken from cultural anthropology, development studies, and agriculture.⁵ So Feyerabend, at least by the early '80s, agrees that astrology was a bad example: or, at least, that there are much better examples. I suspect the use of astrology was due partly to that being the topic of the *Humanist* proclamation and for its provocative power.

¹ Kidd 2016a.

² Oberheim 2006.

³ See Kidd 2016b, 2016c.

⁴ Paul Feyerabend 1987, 318.

⁵ See, eg., Feyerabend 1987, 24, 53, 70.

Moreover, Feyerabend would also agree with Pigliucci that astrology is indeed within the area of competence of science—for that was a key part of his frustration with the *Humanist* signatories: his claim is not that there is no good scientific basis for a critical refutation of astrology, but quite the opposite: there are many good objections to astrology, it's just that the signatories did not make use of them. When Feyerabend complains that those signatories “neither know the subject they attack, astrology, nor those parts of their own science that undermine their attack,”⁶ his point is that, had those signatories done the work, they could have given perfectly good scientific objections.

Feyerabend wanted to show that champions of science ought to assert and justify its authority by putting it to work in fairly and principled ways. Since science has good objections to astrology there really is no need to resort to assertions, edicts, and *ex cathedra* demands and to use those risks giving the wrong impression of science as dogmatic and authoritarian—a worry echoed by Carl Sagan in the same case of the *Humanist* declaration.⁷ If one really does have good arguments, then one ought to use them, rather than act in the dogmatically authoritarian ways that will only confirm the suspicions and cynicisms of the anti-science brigadiers.

There are two smaller points I want to briefly comment on. First, Pigliucci takes issue with my suggestion that it was “perfectly sensible” for Feyerabend to judge that voodoo has a “material basis,” for instance in psychopharmacology,⁸ for much turns on how “sensible” is defined. Within the relevant forms of life, voodoo practitioners and believers do not accept such naturalistic explanations of those beliefs and practices. I do not have space, here, to go into this issue, so will content myself by saying that this remark was included in the paper to persuade readers that Feyerabend did not believe in voodoo: he took its origins and efficacy to be explicable in naturalistic rather than magical terms.

Second, Pigliucci remarks that astrology was not a “research program,” as I suggest it was, which I am happy to concede. Again, that remark was only included as an illustration of Feyerabend's general view that there are good objections against astrology, and that drawing upon Imre Lakatos' philosophy of science could be one way to make that point. Perhaps it was also Feyerabend's hope to draw Lakatos into a discussion of astrology, given his own well-known contributions to the literature on pseudoscience.⁹

In the next section, I move on to consider two further sets of issues. The first concerns my appeal to Polanyi as a “contrast case” with Feyerabend and is the topic of the next section. The second concerns the very good worry that Feyerabend is actually guilty of failing to act in the epistemically virtuous ways that he describes.

Polanyi, Pragmatism, and Roles for Philosophy of Science

Scientism as a contemporary phenomenon is shaped by broader public and academic attitudes towards and conceptions of the nature, scope, value, and authority of science,

⁶ Feyerabend 1978, 92.

⁷ See Kidd 2016a, 471f.

⁸ Kidd 2016a, 467.

⁹ Lakatos 1974.

whether at the level of specific theories, an institution, or a broader worldview. Science always has its critics and its champions and the ranks of the scientific are the natural “opposite numbers” to the ranks of radical anti-science legions—whether their attitudes are ones of ignorance, hostility, or alienation of the sorts and in the ways described by Philip Kitcher.¹⁰

Pigliucci credits Feyerabend with appreciating, quite early on, that public trust in science is a complex and fragile matter and that the activities of making and constantly revising judgments about science is a tough job for which few people in democratic societies plausibly have the leisure, education, or resources. But Michael Polanyi also recognised this problem, but offered a very different to it than that offered by Feyerabend.

In the third chapter of his neglected 1946 book, *Science, Faith, and Society*, Polanyi notes a tension between certain ideals of freedom construed as informed personal autonomy and the realities of “the world of science” as a disciplined domain of expert authority. In this book, the rather sanguine proposed solution is to invoke the ideals of “love of science [and] the devotion to scientific standards” and organise society to ensure public trust in science.¹¹ But, some twenty years later, it was apparent that those ideals had not taken root in society, as evidenced both by growing public enthusiasm for pseudoscience and a growing scepticism, at least in some quarters, towards science itself. Hence Polanyi’s 1967 paper, “On the Growth of Science,” itself provoked by the public reception of the work of Immanuel Velikovsky.¹² Subsequent cultural developments in developed world societies have quite clearly shown that public “faith” in science of the sort described by Polanyi is no longer viable.

The problem that Pigliucci points to is that of how best to secure and maintain public trust and confidence in science in an intellectual and cultural climate where science is itself subject to attacks from a variety of religious, political, ideological, and economic quarters—a world of anti-vaxxers, climate change deniers, creationists, and the like, of a sort that is, of course, very familiar to Pigliucci, who is himself a distinguished foe of pseudoscience.

Two of the broad styles of response to that problem are represented by Polanyi and Feyerabend: both urge us to improve scientific literacy and to expand public education and both share a commitment to the cognitive and cultural authority of science. But they represent different strategies about how to accomplish this that ultimately invoke some very deep issues about the nature of epistemic authority in democratic societies. Polanyi wants us to assert the authority of science and resist slippery slope suggestions about democratising science for the broadly consequentialist reason—noted by Pigliucci—that the practical stakes are just too high to play hostage to the fortunes of public opinion. If we put faith in the public, then one thing we get are anti-vaxxers and climate change deniers, each with horrible consequences: a pragmatist approach that is aligned with Kitcher’s recent work, especially his book, *Science in a Democratic Society* (whose title is a nod to the book of Feyerabend’s in which the defence of astrology occurs).

¹⁰ Kitcher 2012, chapter 1.

¹¹ Polanyi 1946, 64.

¹² See Polanyi 1946, 1967.

But what of Feyerabend's calls for an alternative grounding of the authority of science in the critical deliberations of an informed and educated citizenry? Build into that vision is, one suspects, a tacit expectation that informed, educated citizens will not end up as anti-vaxxers or climate change sceptics—an expectation that a cynic worries is liable to expose Feyerabend's stirring idealism as a sham. But the champions of science can reply that the inevitable consensus of a group of educated, rational people on the authority of science is to be expected because it is the educated, rational thing to do.¹³

These are interesting rival conceptions of the desired grounds for the authority of science in modern democratic societies that inevitably invoke a wider constellation of issues of a social, political, and educational character—a set of rivals we can dramatize by talking of the pragmatism of Polanyi and the idealism of Feyerabend. Ought we to aspire for a society in which the authority of science is secured by the active promotion of a trust and faith in its institutions or through the critically reflective decisions of properly educated citizens? The matter is not “all or nothing,” of course, since the criteria and practices of trust, criticism, and decision are complexly related. But Feyerabend definitely agreed with Pigliucci that a crucial role should be played in these debates by science studies scholars who can initiate and sustain “a more vibrant, more diverse conversation.”¹⁴

The obvious worry is that the conversations would, all too often, end up as either preaching to the converted or as doomed-from-the-start exchanges of mutually inconsistent convictions. But that is a counsel of despair that should be resisted, not least for the reason that science studies scholars have “not just ... a scholarly duty ... but ethical and social ones as well” to try to start and sustain those conversations with publics and policymakers.¹⁵

Feyerabend would heartily endorse this call to arms on behalf of the discipline that he once described as having “a great past.” That was intended as a backhanded compliment—a gesture to an earlier generation of philosophers of science who regarded reflections on the place of science in society as central to their agenda. Feyerabend felt that the philosophy of science, of the mid-twentieth-century at least, had lost that sense of its disciplinary purpose. So he would welcome the sort of work done not only by Pigliucci but also by a whole new generation of philosophers of science are now engaged busily in projects that are self-consciously applied and socially relevant.¹⁶

Epistemic Virtues and Vices

I want to close by considering one final criticism that Pigliucci makes of my interpretation of Feyerabend's defences of astrology. The gist of my paper is that those defences make better sense if they are framed in the terms of virtue epistemology—for what Feyerabend was doing was calling out failures by the *Humanist* signatories to evince the epistemic virtues that are constitutive of the

¹³ See Helene Sorgner 2016.

¹⁴ Pigliucci 2016, 5.

¹⁵ Pigliucci and Bourdy 2013, 4.

¹⁶ See Heather Douglas 2010; Carla Fehr and Kathryn Plaisance 2010.

identify and authority of scientists qua epistemic agents. By resorting to rhetorical attacks, ignorant attacks, and so on, those signatories can be formally charged with a set of epistemic vices that include arrogance and dogmatism. But Pigliucci makes two very acute critical observations. First,

Feyerabend, while rightly chastising (some) scientists for their epistemic arrogance, himself fell short of virtue: he did not seem to be overly bothered by the lack of integrity on display when one defends—in however qualified a manner—practices that are not only indefensible epistemically, but in some cases positively dangerous

And second,

Moreover, it seems that it didn't even cross his mind that his scorched earth attitude would damage not just his own credibility (which it very clearly did), but that of his whole field of inquiry, philosophy of science.¹⁷

I am very sympathetic to both of these worries: my paper begins by recording the fact that the defences of astrology and the like contributed to the charges that Feyerabend was guilty of unprofessional conduct—a wilful damaging of both his reputation and that of the philosophy of science.¹⁸ But Pigliucci adds to this the insight that my subsequent appeal to a normative responsibilist virtue epistemology amplifies the objection—for here we now see Feyerabend failing to practice what he preaches: how could a self-styled epistemic anarchist have seriously thought that the best way to defend the authority of science was to mount a defence of astrology and an attack on distinguished scientists, even if there was an epistemic rationale for his doing so. For even though there is a good rationale—or rather three, as described in sections 4 and 6 of my paper—these were obviously liable to be missed by the readers of “The Strange Case of Astrology.”

My reply is that the legitimacy of a virtue-epistemic conception of scientific authority and modes of criticism are not contingent upon the actual demonstration of those virtues by the critic. It is, of course, *better* if the critic exemplifies the virtues that they are deploying. But a charge of vice is not legitimate only if the critic is not themselves vicious.¹⁹ I think that Feyerabend had many virtues, as does Hoyningen-Huene,²⁰ Noretta Koertge,²¹ and Sheldon Reaven.²² But if he had epistemically vicious dispositions at certain times of his life, then he joins the rest of us in having a dappled character—a fact he affirms in his autobiography.²³ So the fact that Feyerabend himself fell short of virtue does not undermine the virtue-epistemic reading of his work that I offered—for my aims were to show that this usefully fills out the rationale for his criticisms of the *Humanist* signatories and points to an interesting conception

¹⁷ Pigliucci 2016, 1-2.

¹⁸ See Kidd 2016, 465-6.

¹⁹ A claim defended at length by, *inter alia*, Andrew Aberdein 2014, Heather Battaly 2010, Kidd 2016d.

²⁰ Paul Hoyningen-Huene 2000.

²¹ Koertge 2013.

²² Reaven 2000.

²³ Feyerabend 1995.

of epistemic authority. Neither of those requires that Feyerabend was himself a paragon of virtue and I would concur with Pigliucci and other commentators that his personal professional conduct did him more harm than good.²⁴

I am grateful to Pigliucci for his critical comments on my paper. Underlying both his work and Feyerabend's is a strong conviction that a central and urgent task for the philosophy of science is to actively contribute to public and political understanding of the sciences. It is hopefully now clearer that virtue epistemology can contribute useful resources to this large project—to affirm the epistemic virtues constitutive of scientific authority and to expose the epistemic vices characteristic of so many enemies of science.

Errata

I would also like to correct two referencing errors in my paper. First, I omitted a reference to a 1967 paper by Polanyi, added below. Second, the two indented quotations from Feyerabend's "On the Strange Case of Astrology" on page 471 of my article were both given as "x," but are both to page 92 of *Science in a Free Society*.

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²⁴ See Eric Oberheim 2006, ch.1.

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