**Reawakening to Wonder**

**Wittgenstein, Feyerabend, and Scientism**

*Ian James Kidd*

**1. Introduction**

In a recent book, entitled *Every Thing Must Go*, two distinguished philosophers of science declare that they ‘admire science to the point of frank scientism’ and pledge their allegiance to the ‘comprehensive worldview’ of scientific naturalism. Any ‘projects and styles of reasoning’ incompatible with that worldview by definition do not ‘qualify’ as part of the ‘great epistemic enterprise of modern civilization’, and so ought to be ‘discontinued’. Although their specific target is analytic metaphysics, the range of projects and styles of enquiry at risk of nomination for discontinuation is obviously far broader (Ladyman and Ross 2007, 61, vii, 310, vi).

Although such overt declarations of scientism in the philosophy of science are rare, so, too, is explicit anti-scientism.[[1]](#endnote-1) A striking exception is the iconoclastic philosopher of science, and ‘epistemic anarchist’, Paul Feyerabend. During the 1970s, books like *Against Method* and *Science in a Free Society* offered potent critiques of inflated conceptions of the nature, scope, and value of science. Indeed, their tone and content became increasingly strident, culminating in Feyerabend’s (1976) call for a ‘critique of scientific reason’, focusing on the question – neglected, but ‘fundamental’ – ‘What’s so great about science?’ Although the critical target was scientism, not science, the well-known rhetorical excesses of this period of Feyerabend’s work obscured this fact (see Oberheim 2006, ch.1). Indeed, *Nature* later dubbed him ‘the worst enemy of science’, a charlatan purveyor of ‘anti-science’ doctrines.

It is only now, some forty years later, that Feyerabend’s status as a critic of scientism is being appreciated. John Preston pointed out long ago that ‘worst enemy of science’ is a misleading description: a central project of *Against Method* and other works was to give a ‘philosophical critique of science’, specifically of its ‘pretensions to answer *all* our questions’. But that critique, at least in the form that Feyerabend offered it, was disparate and unsystematic, its main arguments unarranged and their motivations unclear. Moreover, it can seem at odds with the more scientistic mood of some of Feyerabend’s earlier writings (Preston 1997, 209, 211).

My aim in this chapter is to reconstruct Feyerabend’s anti-scientism by comparing it with the similar criticisms of one of his main philosophical influences – Ludwig Wittgenstein. I argue that they share a common conception of scientism that gathers around a concern that it erodes a sense of wonder or mystery required for a full appreciation of human existence – a sense that Feyerabend, like Wittgenstein, characterised in terms of the ‘mystical’.

**2. Influences**

Feyerabend once remarked that a philosophical education ought not to promote theories or systems, but to cultivate a sense of ‘the possibilities of human existence’. His own ‘educators’ included, by his own account, John Stuart Mill, **Søren** Kierkegaard, and Wittgenstein (1991, 495). Given the radiant character of his admiration for Mill and Kierkegaard (see Lloyd 1997 and Kidd 2011), the inclusion of Wittgenstein among Feyerabend’s educators is significant.[[2]](#endnote-2)

The inclusion of his fellow Austrian is unsurprising, for they met once, in early 1950, when Wittgenstein was terminally ill, staying at his family home in Vienna. The young Feyerabend was the secretary of a philosophy club of ‘raging positivists’, and with the help of Elizabeth Anscombe, successfully invited Wittgenstein to address the society (on what one sees when looking through a microscope). Though the other members were unimpressed, Feyerabend reported being profoundly influenced by him, as well as by later conversations with Anscombe about Wittgenstein’s later writings (see 1993, 254 and 1995, 75-6). These included the *Remarks on the Foundations of Mathematics*, whose emphasis on the multifariousness and complexity of practice greatly influenced Feyerabend’s later conception of science (see 1991, 489 and Floyd 2006, 143). Unfortunately, Wittgenstein’s death, the following year, prevented any further interactions, and, given his illness even at the time of their meeting, Feyerabend’s claim (e.g.1987, 312) that Wittgenstein had agreed to supervise his postdoctoral studies at Cambridge is highly problematic.[[3]](#endnote-3)

Although Feyerabend made clear the significance of Wittgenstein’s influence, he gave very few concrete details. The most explicit remarks are, for instance, that studying the *Philosophical Investigations* turned him away from the idea that anything other than ‘scientific knowledge’ is ‘bunk’ (1991, 489). Elsewhere, Feyerabend credits Wittgenstein with impressing on him the need for attention to concrete practices, embedded in historical traditions, as an essential check against the lure of ‘abstract’ philosophical theory (1981, 8, 24, 22). Such remarks are too vague to be useful, which is frustrating, not least since there are significant differences between Wittgenstein and Feyerabend – for instance, the former is more sensitive to language, the latter more historical (see Floyd 2006, §§1-2).

 The scholarship exploring Wittgenstein’s influence on Feyerabend is largely focused on issues concerning meaning and language, orthogonal to my theme of scientism. The most sophisticated discussion is offered by Eric Oberheim (2006, ch. 2), who identifies the deep lesson Feyerabend took as being the idea that conceptual change can transform the content and interpretation of experience of the world (on Wittgenstein’s views on conceptual change and scientism, see Klagge 2017). A lesson of the history of science is that conceptual and theoretical changes can enrich and expand our perceptions and interpretations of phenomena: but they can and have also generated ‘new conceptions … of the very nature of reality’ (Oberheim 2006, 7). It was this conviction that had such a profound influence upon Feyerabend, and it lies at the heart of his anti-scientism.

An increasingly central conviction of all of Feyerabend’s work is that epistemic and, later, cultural pluralism matters because it expands our ways of experiencing and conceiving of the world. Though initially confined to the context of scientific enquiry, it was gradually expanded, over the course of forty years, onto cultures and worldviews. Conceptual innovation leads not only to ‘*change of experience*’, but, at its most potent, can initiate a radical ‘re-evaluation of all experience’ (1993, 72, 75). These convictions gradually modulated, over Feyerabend’s career, into a doctrine of ‘abundance’ – of delight in the ‘many ways’ of experiencing the world, of unrealised ‘potential meanings’, apt to be ‘actualised’, within a diversity of ways of life (1999, 33). The title of his last, unfinished book, *Conquest of Abundance*, dramatizes what Feyerabend takes to be an entrenched tendency to privilege only certain ways of conceiving and cognising the world. Its most recent manifestation is the scientistic transformation of ‘scientific beliefs’ into a ‘cosmology, corresponding ways of life, and an all-embracing “spirit of the age”’ (1999, 29). Although this is not objectionable in itself, clearly Feyerabend thinks that the particular contingent forms that science has developed are problematic. The very early lessons imbibed from Wittgenstein that emphasised the many ways of experiencing and describing the world therefore found its fullest manifestation in Feyerabend’s very last writings (see Oberheim 2006, 4, 75).

 It is easy to see, based on these remarks, how the theme of scientism can be easily connected to the influence described by Oberheim. One way is to emphasise the pluralistic call for retrieval or cultivation of ways of experiencing and conceiving the world, including ones not classifiable as scientific. Confining our imaginations to a ‘scientific worldview’ prevents our having a properly pluralistic sense of the possibilities for human life and thought – something that, for Feyerabend, will require learning from ‘the humanities, from religion, and from … ancient traditions’ (1993, 249). Another is to explore the hostility to dogmatism and conceptual conservatism in philosophy, science, and our intellectual culture. Wittgenstein often criticised ‘preoccupation with the methods of science’, evident among philosophers and the general public (BB 18; CV 60). Such preoccupation is a main cause of a loss, among scientists, of ‘fascination’ with and ‘contemplation of different possibilities’ (PO 396). Such criticisms of scientists’ lack of ‘fascination’ due to ‘preoccupation’ with science also run through Feyerabend’s writings: the ‘one true method’ described by scientists is a ‘myth’ (1993, 162), encouraging the attitude that scientific ‘ideas and methods’ can be ‘turned into measures of everything else’. The resulting ‘monolithic monster’ is then invoked to provide the warrant for the derogation and displacement of anything ‘unscientific’, including whole ‘cultures and ways of life’ (1987, 38, 155, vi).

 Such parallels fall short, however, of establishing the stronger claim that I indicated, of a shared conception of scientism to which the themes of wonder and mystery are central. Nor does the scholarship on Wittgenstein and Feyerabend address the topics of scientism or mystery and wonder, though their shared anti-scientism is noted by Juliet Floyd (2006, 104f). Oberheim focuses his discussion on Wittgenstein’s *Philosophical Investigations* and the early period of Feyerabend’s career – roughly, from the early ‘50s to the early ‘70s. These foci are well justified: Feyerabend’s earlier writings are much better known and include several publications on the *Philosophical Investigations*, including a long essay review written under the encouragement of Anscombe. But the writings where the themes of scientism, mystery, and wonder are most prominent come from their respective ‘later’ periods – those from Wittgenstein’s work from the mid-1930s, for instance as collected in *Culture and Value*, and Feyerabend’s work from the mid-70s through to the very last writings, published as *Conquest of Abundance*. Although those themes are not confined to those writings, they are most visible in them, hence my focus on them.

**3. ‘Forms of life’ and critical appraisal**

Central to any critique of scientism is the provision of criteria by which to criticise scientistic attitudes, beliefs, and convictions (see Stenmark 2001). Another key task is to specify the critical target, which might, in the case of scientism, be attitudes, beliefs, or convictions, or something broader, such as the deeper ‘picture’ of the world in which they are rooted, or what Wittgenstein called the ‘spirit’ of a culture (CV 6).

 A central theme of Wittgenstein’s later writings is the dependence or rootedness of our actions, beliefs, and language in a ‘form of life’ or a ‘picture of the world’. The possibility of agreement or disagreement about certain beliefs or opinions is ultimately a matter of ‘agreement in form of life’ (PI §241). Later writings refer to the ‘picture’ that lies at ‘the root of all our thinking’, the ‘inherited background’ against which we ‘distinguish between true and false’ (OC §94). Such pictures or backgrounds act as the ‘substratum’ of our practices of ‘enquiring and asserting’ and a picture is ‘inherited’, rather than being accepted after one’s becoming ‘satisfied of its correctness’ (OC §§162, 94). Such pictures or backgrounds are not, however, subject to proof, testing or confirmation: they are the ‘bedrock’ at which justification is ‘exhausted’ (PI §217), where ‘testing comes to an end’ (OC §164). For any practices and criteria for proof or refutation presuppose a picture, so cannot be used to critically appraise it.

Feyerabend adopted both Wittgenstein’s terminology of pictures and forms of life and his urge that we learn to ‘realise the groundlessness of our believing’ (OC §166). As early as 1958, one finds the thought that a ‘world-picture’ comes to seem ‘absolutely true’, only because it shapes the ways that ‘our intellect is prepared to think’. The emergence of a new ‘world-picture’ is described in terms of ‘crystallisation’, shaped by ‘*ad hoc*’ events, and not as the elected outcome of a rational process of ‘corroboration’ (1981, 334, 249). Fifteen years later, he remarks that the ‘superstructure’ of modern science cannot be justified because, as the ‘source of … standards’, it is incapable itself of ‘giving reasons for the choice’ (1976, 309). Feyerabend’s later writings continue to refer to ‘forms of life’ and ‘pictures’: there ‘exist many forms of life’, some ‘explicitly dogmatic’, whose members fail to grasp that they cannot be ‘argued’ for (1987, 83, 84). There are dark warnings that the ‘picture of the world’ of modern science is ‘more opaque’ than others, since it encourages a false confidence that it is ‘well-defined’ and ‘nailed down’ (1993, 49, 272) – a remark that recalls Wittgenstein’s criticism of the ‘illusion’ of completeness built into the ‘whole modern conception of the world’ (TLP 6.371). And in Feyerabend’s very last writings, the ‘basic moves’ that ‘establish’ a picture of the world, like that of modern science, are explained as consisting in ‘asserting a certain form of life’, which, once established, make possible and compelling certain practices for its justification (1999, 79).

Although Wittgenstein never explains in detail what he means by a ‘world-picture’, it is clearly tacit and schematic, rather than an articulated set of propositions, a fact reflected in the use of terms and metaphors like ‘background’ and ‘substratum’. This point matters, since Feyerabend seems to reject talk of ‘the scientific worldview’, in a way that might seem to jeopardise my claim that we can apply to him a commitment to ‘world-pictures’ in Wittgenstein’s sense (see, eg, 1999, 159f, 165f). But a careful look at those remarks dissolves the worry. His hostility is not to talk of worldviews or pictures *per se*, but to the idea of *the* scientific worldview, construed as something unified, singular, or ‘monolithic’ (see 1999, 33f, 165f). Instead, that picture of the world is more diffuse and protean, not systematic, fixed, or ‘nailed down’ (see 1999, 33, 155). If so, then ‘pictures’ or ‘views’ of the world are best characterised less as a fixed picture, and more as a changing ‘image’ or plan (the German word, *bild*, can mean ‘picture’, in the sense of a ‘plan’ guiding work, and also a ‘picture’ of the final product).

These remarks indicate several general points of agreement between Wittgenstein and Feyerabend germane to the topic of scientism. First, practices, enquiries and discourses are rooted in a ‘picture’, ‘background’, or ‘form of life’, which act as their ‘substratum’ or ‘foundation’. Second, world-pictures or forms of life with a sufficiently ‘global’ character cannot be justified, proven, or confirmed, because procedures for doing so would be drawn from the very picture or form being appraised. A picture, like the Augustinian picture of language, can be criticised if its focus is on a narrow range of phenomena, like the relation of words to things (PI §1). But a picture that is the ‘substratum’ or ‘matter-of-course foundation’ for experience, thought, and language – a *world*-picture – cannot (OC §167). Feyerabend’s way of putting this point typically tends toward hyperbole: it is not the case, as he often insists, that the privileged status of the scientific picture is ‘assumed’, not ‘argued for’, even if he was right to point to the circularity involved in trying to warrant a picture of the world by invoking standards ‘obtained’ from it (1976, 110, 112). But, stripped of the hyperbole, the point is the same. The third agreement among Wittgenstein and Feyerabend concerns the difficulties involved in coming to realise the ‘groundlessness’ of our pictures or background – a central theme of *On Certainty*, but also of *Conquest of Abundance*’s fulminations against a stultifying ‘search for reality’. Although most of these points originate with Wittgenstein, they are increasingly central to Feyerabend’s later thought.

An emerging worry, however, is that constant references to the ‘groundlessness’ of backgrounds, pictures, and forms of life precludes the possibility of their critical appraisal. Criticisms of scientism, however, constitute a criticism of pictures and forms of life marked by inflated conceptions of the scope and value of science. If so, the coherence of anti-scientism is premised upon the legitimacy of criticism of backgrounds, pictures, and forms of life. This is a live worry, since Wittgenstein and Feyerabend, at least on some readings, are committed to denial of just this possibility. In Wittgenstein’s case, the worry concerns the conservatism that runs through the insistence that philosophy ought to ‘leave everything as it is’, resisting an urge to ‘interfere’ with language, practices, and forms of life (PI §124). In Feyerabend’s case, the worry plays on his alleged commitment to an ‘Anything goes!’ relativism, a perception seemingly confirmed by remarks which suggest forms of life are ‘neither good nor bad’, but ‘simply are’ (1978, 27), whose ‘own standards’ are not to be ‘imposed on others’ (1981, 27). Since scientism is, on their accounts, an entrenched feature of modern Western culture, conservatism urges us to leave it in place, while relativism denies us the possibility of evaluating it at all.

These worries can be defused quite straightforwardly. Wittgenstein’s instruction to philosophers to leave things as they are need not be read as applying to his criticisms of the scientistic tendencies of modern culture. First, that advice was directed to philosophers keen to impose models of language abstracted from the concrete realities of our ‘language-games’. To understand language requires constant attention to – rather than abstraction away from - the practices and ‘form of life’ in relation to which it has its place (cf. PI §19). Second, the tone and content of his remarks on scientism are obviously and overtly evaluative and integrally related to his acute sense of alienation from the modern world (see Klagge 2010). In Feyerabend’s case, recent scholarship has made clear that his experiments with relativism were confined to a limited period in his career – roughly, the late ‘70s and early ‘80s, abandoned by the early ‘90s, and openly rejected in *Conquest of Abundance* (see Kusch 2016). Since anti-scientism is a central theme of that book, a willingness to criticise pictures and forms of life that distort and erode our ways of experiencing the world is wholly to be expected.

Since both Wittgenstein and Feyerabend affirm the possibility of critical appraisal of pictures and forms of life, what sort of criterion informs their critique of scientism? I suggest that it is the same for both philosophers. The scientific picture of the world we have inherited distorts our appreciation of what Feyerabend calls ‘Being’ – something ‘ineffable’, an appreciation of which ought to be encouraged. The same thought underlies Wittgenstein’s own complaint that scientism is objectionable due to its tendency to erode our sense of wonder at something ‘mysterious’ and ‘inexpressible’. I turn now to these remarks on wonder, mystery, and ineffability.

**4. ‘Being’ and ‘the background’**

An obvious criterion for criticism of a world-picture or form of life is that it obscures truths about the nature of reality. Both Wittgenstein and Feyerabend, however, rule out this possibility. A picture of the world that acts as the ‘substratum’ or ‘foundation’ cannot be appraised for its truth or correctness, nor subjected to testing or proof. Wittgenstein is clear that to criticise a form of life for being ‘wrong’ is merely to use our own as a ‘base’ from which to ‘combat’ another (OC §609), while Feyerabend warns that it is ‘simply a mistake’ to identify one’s ‘manifest reality’, or picture of the world, with reality itself (1999, 214). An alien form of life might seem ‘rather silly’ (2011, 15), but that is a product of our unreflective confidence in our own picture, not the discovery of the falsity of theirs. Such pictures are ‘groundless’, so cannot be appraised in terms of their truth or falsity, but what did Wittgenstein and Feyerabend propose instead?

 An intriguing possibility for a criterion for the critical appraisal of pictures or forms of life that relates to a critique of scientism is offered by David E. Cooper. He argues that a form of life or picture can be criticised to the extent that it erodes or excludes an appreciation of the ‘conditions of its own possibility’ (1997, 121). This appreciation gradually came to take the form of a sense of ‘wonder’ at the very existence of the world – of ‘the miracle of the existence of the world’ (LE 295), as realised in ‘the essence of the contact between language and reality’ (BT 274), which, as the ‘background’ for all our experience and discourse, is ‘inexpressible’ and ‘mysterious’ (CV 16).

Although in the *Tractatus*, the sense of wonder or ‘the mystical’ is directed towards the world as a ‘limited whole’, that marks the limits of language, in later writings it is spread across the whole complex array of our experience, thought, and language – so what is ‘wonderful’, says Wittgenstein, is really ‘life itself’ (CV 4). A sense of wonder is ultimately inspired by and so directed at there *being* a world, as experienced, cognised, and described by human beings. But since these intelligible ways of encountering the world have as their condition of possibility this ‘background’, they cannot be used to describe or conceptualise it. Human life, then, is ultimately *mysterious* because it consists of forms of life or ways of experiencing and describing the world that presuppose and so cannot explain their own conditions of possibility. Any attempt at this, Wittgenstein warns, only generates a ‘feeling of helplessness’ as one encounters the limits of what can be ‘expressed by language’ (BT 274-5). Cooper argues that if this is correct, what is really ‘wonderful’ – even ‘mystical’ – is a sense of ‘the mystery of the contact between language and reality in our forms of life’, on which we are ‘dependent for our kind of existence’ (1997, 114, 117).

I save for now the task of explaining how Wittgenstein relates a sense of mystery or wonder to a critique of scientism. The outstanding job for now is to show that Feyerabend incorporates a similar sense of mystery and wonder at human existence. If not, then their criticisms of scientism, despite initial similarities, part company. I want to show that such a sense is evident in Feyerabend’s later writings, even if they are not articulated in a similarly sophisticated fashion. As usual, he was more inclined to put ideas to work – attacking scientism, say, or promoting pluralism – than providing systematic accounts and supporting arguments (see Oberheim 2006, Part III). But in the case of scientism, I want to show that his account of the ‘ineffability of Being’ becomes most compelling when considered in relation to Wittgenstein’s remarks on the ‘inexpressibility’ of the ‘background’.

The theme of mystery only emerges in Feyerabend’s very late writings, and mainly in *Conquest of Abundance*. Throughout this period, one finds consistent claims that ‘reality’ is ‘ineffable’, since attempts to ‘grasp it directly’, in thought and language, end in ‘darkness, silence, nothingness’, a ‘feeling’ that it is ‘unfathomable’ (1999, 233, 241). ‘Being’ is, continues Feyerabend, the ‘ineffable’ and ‘mysterious’ background to human life and experience, the ‘really fundamental … ground’ of human life (1999, 214, 54), not separate from but ‘entangled’ with our forms of life (1993, 270). Pictures of the world, like that of modern science, constitute ‘manifest realities’, but cannot describe ‘ultimate reality’ itself, ‘Being’. A picture cannot be appraised for its truth or correctness: ‘questions[s] of what is real and what is not … not only lack an answer but cannot be answered’ (1999, 210). In such remarks, one has an account of the dependence of human experience and life on a mysterious, ‘ineffable’ ‘background’ – ‘Being’ – running throughout, and increasingly central to, Feyerabend’s later writings.

If Wittgenstein and Feyerabend both affirm a mysterious background to human life, they also agree on three related points. One is that this ‘mysteriousness’ should be taken in a strong sense: no amount of enquiry, no matter how intensive or sophisticated, could dispel it, at the pain of those feelings of ‘helplessness’, ‘darkness’, ‘silence’. Enquiry presupposes the possibility of experience, thought, and language, which lose their sense if applied to something outside of themselves. ‘Ineffable’, as used by Feyerabend, is therefore meant in its strict sense – unsurprising, given he was inspired to use it through a study of Pseudo-Dionysius the Areopagite, founder of Christian mystical theology (see Kidd 2012a).

Second, a sense of wonder or mystery is something valuable, such that its atrophy or erosion is to be regretted. This is clear in the fact that Wittgenstein and Feyerabend *criticise* pictures or forms of life that they feel erode a sense of wonder at the ineffable, ‘mysterious’ background to or ‘grounds’ for human life. Cooper argues this is central to Wittgenstein’s criticisms of scientism: a picture or form of life can be criticised if it ‘disguises the conditions for its own possibility’, and ‘excludes appreciation’ of what is really ‘wonderful’ – the ‘many ways of revealing and encountering things’, as ‘manifested in the variety of forms of life’ (1997, 121, 113). Cooper’s claim about the legitimacy of this sort of appraisal equally applies, I suggest, to Feyerabend: or, at the least, it is the best way to interpret the anti-scientism underlying his later philosophy. Certainly it chimes with his delight in the diversity of ‘forms of life’, the many ways, developed by human beings, of conceiving of the world and comporting themselves within it—to which we ought respond with ‘a sense of spontaneous tolerance’, coupled to ‘a quieter, more wondering attitude’, at the ‘richness’ and ‘abundance of Being’ (1999, xi, xii).

The third and most important point on which Wittgenstein and Feyerabend agree is that pictures and forms of life are differentially open or receptive to cultivation of a sense of mystery and wonder. Although some build in such a sense, others militate against it, making it difficult for that sense to emerge or take root in the experience of those who inhabit that form of life (see Kidd 2012b). Those forms and pictures are manifestations and engines of what Feyerabend calls the ‘conquest of abundance’, the dissolution of the plurality of ways of conceiving of the world, and, worse, the subsequent loss of a sense of the possibility of such plurality. I suggest that, for both philosophers, the modern scientific picture of the world is peculiarly hostile to the cultivation of this sense. Indeed, that is the heart of the criticisms of scientism, shared in common by Wittgenstein and Feyerabend.

**5. Explanation, pretence, and hegemony**

Throughout their writings, Wittgenstein and Feyerabend target a variety of specific forms of scientism, within philosophy, science, and society, but these are all rooted in the dominance, in the modern world, of a scientific picture of the world of which they are deeply critical. In fact, ‘critical’ may be too weak a word, for their tone and language is much stronger. Though Wittgenstein initially reported lacking ‘sympathy’ with the ‘spirit’ of modern technological culture, he later warned that the ‘age of science and technology’ may be ‘the beginning of the end for humanity’. Indeed, the end of that ‘age’ could be welcomed as ‘the destruction of an evil’ (CV 56, 49). Similarly, Feyerabend decried the ‘crisis’ resulting from the ‘steady expansion’ of ‘Western science and technology’ (1987, 6-7), which may be a ‘grandiose mistake’, since its effects are to ‘devalue human existence’, leaving us ‘disoriented and aimless’ (1999, 246, 16).

 Although the language is potent, the specific criticisms are unclear. Why might the ‘age of science and technology’ be the ‘beginning of the end’, and an ‘evil’ to resist? How does it ‘reduce abundance’ and ‘devalue’ our existence? How do these complaints relate to the theme of mystery and wonder, which is obviously central to their criticisms of scientism? If their criticisms are not to be mere rhetoric, such questions must be answered. Certainly, many of their complaints can be grounded in other sorts of concerns, including moral ones, but these obviously do not cover the full content of Wittgenstein’s and Feyerabend’s anti-scientism.

 The claim made by Cooper, which I endorsed, is that the ‘evil’ of the prevailing and entrenched scientific picture of the world lies in its ‘suppression of mystery, wonder, and appreciation of human existence’ (1997, 118). By eroding our capacity for wonder at the mysterious background against which our experience, thought, and language proceeds, we are denied the possibility of an authentic appreciation of human existence. This was not a criticism of some inevitable feature of a scientific world-picture, but rather of what has come to be the ‘spirit in which science is carried on nowadays’ (CV 5) – a point reflected in Feyerabend’s efforts to tell a history of the ‘conquest of abundance’ to determine when and how, as it were, things went wrong. It is because the suppression of wonder is a contingent feature of our history and culture that Wittgenstein can urge people to ‘awaken to wonder’, by resisting the hegemony of science, which is ‘a way of sending [us] to sleep again’ (CV 5).

 Within Wittgenstein’s writings, Cooper identifies three main ways that the dominance of a scientific picture of the world, within our form of life, erodes or dampens a sense of mystery and wonder. Each applies to Feyerabend, too – to be expected, if, as I argued, both subscribe to a similar conception of the harms of scientism – though his articulation of these ways differs. In his writings, it takes the more sanguine, less gloomy form of his calls on us to cultivate ‘a quieter, more wondering attitude’ toward the ‘abundance of Being’.

 The first is the tendency of science, at least in its more confident forms, to explain away or derogate a sense of mystery and wonder. Typically, such a sense is stifled by an insistence that such a sense is both symptom and product of ignorance and superstition, of the sort one sees in the ‘narrowness’ of Sir James Frazer’s explanations of ‘primitive’ religion and in his account of magic as a ‘false physics’ (RF 5, 4). More charitably, a sense of wonder could be affirmed, but only as a feature of a transitory stage in the history of enquiry, destined to pass once proper scientific explanations of the world are inevitably in place. This attitude is rooted in a certain picture of the world, argues Wittgenstein, and only recognised as ‘curious’ by those not in its grip (CV 46). Feyerabend is no less impatient with dismissals of the sense of wonder as ‘rather silly’, a judgment that would only be legitimate if critics had succeeded in ‘finding a “foundation” or form of discourse’, ‘superior to everything’ (2011, 14, 96). Indeed, the celebrations of aboriginal forms of life, of ‘religion, and … ancient traditions’, is surely partly a reflection of their incorporating and honouring a deep sense of mystery and wonder. But such celebrations, and our capacity to ‘learn’ from them, are nullified if their sense of wonder and mystery is ‘explained by’, and so assimilated to, a scientific picture of the world, according to which they are derided as ‘primitive’, superstitious, or ‘silly’.

 A second way a scientific picture can occlude a sense of mystery is by its pretence to offer complete explanations of phenomena, in a way that removes the possibility for a sense of a mysterious ‘background’ or ineffable ‘Being’. Wittgenstein perceived this as early as the *Tractatus*: one thing ‘the ancients’ registered, in their talk of ‘God or Fate’, was a sense that explanations have a ‘terminus’, or come to an end, in something mysterious. But this is lost within the ‘modern system’, that tries to make it look ‘as if *everything* were explained’ (TLP 6.372; cf. CV 69-71ff). In later writings, the same hostility is still there: to the ‘modern urge’ that ‘drives us’ to push our theoretical explanations well beyond their legitimate limits (RPP i. 909); or in the lament, in a 1933 note, that the ‘disastrous thing about the scientific way of thinking’ is that it pushes us to ‘respond to every disquietude with an explanation’ (in Klagge 2010, 129).

A similar hostility to science’s explanatory pretensions is there in Feyerabend’s work, although he employs different strategies. In earlier writings, the argument is that a confidence in the explanatory power of science is sustained by the ‘myth’ that science has a special method – a confidence that ought to collapse once that myth is exposed. But in the later writings, Feyerabend’s strategies align with Wittgenstein’s. Science has come to be driven by a ‘yearning’ for a total explanation of the world, a finally ‘nailed down’ account. This is a tendency that ought to be resisted by ‘making clear what the dangers are’ of such attempts to extend a single set of concepts and methods, however internally diverse, to the ‘abundance’ of the world and of human life (2000, 167, 165). These dangers include a failure to grasp that the ‘rich and varied … landscape’ of human life and experience ‘disappears’ when subjected to methods of ‘analysis’ that, although useful in specific contexts, have important limits. A myopic reliance on scientific methods alone means that only certain phenomena show up for investigation and description, ‘taken away’ or ‘blocked off’ from the ‘totality’ from which they are ‘abstracted’ (1999, 12, 5).

The third way in which the predominance of a scientific picture of the world within our form of life occludes a sense of mystery lies in the fact that it has, almost if not fully, attained hegemony. Confidence in science, says Wittgenstein, is due not to deliberation, but to our form of life being ‘bound together by science and education’ (OC §298). As a result, people come to think that ‘scientists exist to instruct them’, others only to entertain or ‘give them pleasure’. The thought that anyone other than scientists could ‘teach’ them anything serious, or distinct from the scientific picture, ‘does not occur to them’ (CV 36). The arts, tradition, and everyday experience are pushed out. Feyerabend, too, criticises the tendency to ‘transfer’ to science ‘sole rights’ for ‘dealing in knowledge’, such that alternatives are ‘ruled out of court’ – where the worry is no longer just the bogus methodological credentials invoked to justify this, but also its driving out of other ways of conceiving and experiencing the world (1993, 11). This tendency is manifested not only among the public, but also in the intruding scientism of much of modern academic and educational culture (see Kidd 2013). It is, says Feyerabend, ‘very difficult nowadays’ to raise critical ‘questions’ about science in the ‘right spirit’, for it dominates our ‘institutions and forms of life’ (1981, 142). The educated public, alongside scientists and academics, increasingly evince a refusal or inability to ‘participate in [other] ways of seeing the world’—they instead ‘stick with’ scientific ways of thinking, even ‘to the exclusion of everything else’ (1987, 306, 123). Indeed, a sense of there *being* alternatives – ‘other ways’ – is increasingly lost, and ‘abundance’ is thereby ‘conquered’.

These ways in which a scientific picture of the world can erode or occlude a sense of mystery and wonder, of the sort Wittgenstein and Feyerabend prized, can occur individually. In the modern world, however, they are mutually reinforcing, conspiring to effect a further result: a loss of a sense of ‘the very possibility of there being other mature and intelligent forms of life’, as Cooper puts it (1997, 120), or what Feyerabend calls the ‘conquest of abundance’. A perception of pre-scientific pictures and forms of life as ‘primitive’ or ‘superstitious’, to be anthropologically documented at best, or disdained or destroyed at worst, is one aspect of this. Another is the loss of the sense of mystery and wonder that, if properly cultivated, acts as a check against hubristic confidence in any one picture of the world. Another still is the conviction that the displacement of alternative forms and pictures is constitutive of ‘progress’, an attitude both Wittgenstein and Feyerabend detested (see CV 9, 72; 1987, 3). Feyerabend’s argument that the ‘ineffability of Being’ forever prevents us from identifying any particular ‘manifest reality’, or picture of the world, with reality itself, is surely intended, in large part, to preserve our sense of the ‘abundance’ of actual and possible ways of experiencing and cognising the world.

A more important point, fundamental to both Wittgenstein’s and Feyerabend’s anti-scientism, is the worry that, if left unchecked, a sense of ‘wonder’, ‘abundance’, and so on is liable to become *irretrievably* lost – not just eroded, but eradicated. Wittgenstein’s judgment that the ‘possession’ of the ‘whole world’ by scientism is ‘evil’ is connected with a worry that it might become perpetual—hence the urgency of his calls upon us to ‘awaken to wonder’, not to be ‘put to sleep’ by science, and so on. Similarly, Feyerabend perceives a risk of deep dogmatism in our zeal for science, that by ‘driving out’ alternatives, and simultaneously stifling criticism of its own status, it will irreversibly ‘narrow people’s vision and ways of being in the world’ (1999, viii). If such consequences obtain – if we are ‘put to sleep’ by science, without anything or anyone else to ‘awaken’ us – then retrieval of a sense of wonder might prove impossibly difficult. If so, the ‘age of science and technology’ would be, as Wittgenstein worried, the ‘beginning of the end’, for in such a world, with science ‘finally nailed down’, then, in Feyerabend’s dramatic warning, ‘only miracles or revelation could reform our cosmology’ (1993, 272).

 I suspect that neither Wittgenstein nor Feyerabend perceived this as an inevitable scenario. Both offer at least two related strategies for resisting those scenarios, something that would be pointless if our being ‘put to sleep’ were something inevitable. One is to emphasise the historical contingency of pictures and forms of life, of how science and culture are affected by what Feyerabend calls ‘idiosyncratic historical developments’ (1999, 144) – an emphasis evident, too, in Wittgenstein’s later writings (see Cooper 2017). Another is to criticise scientism in its many manifestations using styles of criticism adapted to different concerns and targets. I think that Wittgenstein and Feyerabend are best read as experimenting with various ways of conceiving of and challenging scientism. Underlying their efforts is a hope that a combination of philosophical criticism, cultural change, and historical contingency might ensure that the ‘age of science and technology’ does not endure, at least in its current form. Wittgenstein is more pessimistic, whereas Feyerabend is more optimistic. A main reason for describing the ‘conquest of abundance’ is to enable us to perceive its nefarious effects and work to retrieve a happier sense of the ‘richness of Being’. Although Wittgenstein would likely not assent to that specific claim, given its metaphysical connotations, he would agree on a more general point. The sense we are urged to retrieve – whether characterised in terms of mystery, wonder, or ‘abundance’ – will be quite different from a scientistic attitude that urges ‘discontinuation’ of ways of experiencing and understanding the world incompatible with a scientific picture of the world.

**6. Conclusion**

I suggest that Wittgenstein and Feyerabend, during their respective later periods, can be seen to share a common doctrine of anti-scientism. At its heart is the conviction that pictures of the world and forms of life are differentially receptive to the recognition, appreciation, and cultivation of a sense of wonder at the mysterious background to experience, thought, and language – that is, to human life. Scientific forms of life and pictures are peculiarly hostile to this sense, due to a potent combination of their structural hostility to it, and their unrivalled power and privilege in the modern world. If so, then Wittgenstein did indeed have an enduring influence on Feyerabend, and it is most apparent in their shared anti-scientism.[[4]](#endnote-4)

**References**

Collodel, Matteo (2016) ‘Was Feyerabend a Popperian? Methodological issues in the history of the philosophy of science’, *Studies in History and Philosophy of Science* 57: 27-56.

Cooper, David E. (1997) ‘Wittgenstein, Heidegger, and humility’, *Philosophy* 72: 105-123.

Cooper, David E. (2017) ‘Superstition, Science, and Life’, in Jonathan Beale and Ian James Kidd (eds.), *Wittgenstein and Scientism* (London: Routledge), 28-38.

Dupré, John (2001) *Human Nature and the Limits of Science* (Oxford: Clarendon Press).

Feyerabend, Paul (1976) ‘On the Critique of Scientific Reason’, in R. S. Cohen, Paul K. Feyerabend and M. W. Wartofsky (eds), *Essays in Memory of Imre Lakatos* (Dordrecht: Reidel), 109-143.

Feyerabend, Paul (1978) *Science in a Free Society* (London: New Left Books).

Feyerabend, Paul (1981) *Problems of Empiricism: Philosophical Papers* vol. 2 (Cambridge: Cambridge University Press).

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

Feyerabend, Paul (1991) ‘Concluding Unphilosophical Conservation’, in Gonzalo Munévar (ed.), *Beyond Reason: Essays on the Philosophy of Paul Feyerabend* (Dordrecht: Kluwer), 487-527.

Feyerabend, Paul (1993) *Against Method*, 3rd ed. (London: Verso)

Feyerabend, Paul (1995) *Killing Time: The Autobiography of Paul Feyerabend* (Chicago: University of Chicago Press).

Feyerabend, Paul (1999) *Conquest of Abundance: A Tale of Abstraction versus the Richness of Being*, edited by Bert Terpstra (Chicago: University of Chicago Press).

Feyerabend, Paul (2000) ‘Last Interview’, conducted by Joachim Jung, in John Preston, Gonzalo Munévar, and David Lamb (eds.), *The Worst Enemy of Science: Essays in Memory of Paul Feyerabend* (Oxford: Oxford University Press), 159-168.

Feyerabend, Paul (2011) *The Tyranny of Science*, edited by Eric Oberheim (Cambridge: Polity).

Floyd, Juliet (2006) ‘Homage to Vienna: Feyerabend on Wittgenstein (and Austin and Quine)’, in Friedrich Stadler and Kurt R. Fischer (eds.), *Paul Feyerabend: Ein Philosoph aus Wien* (Vienna: SpringerWienNewYork), 99-151.

Kidd, Ian James (2011) ‘Objectivity, abstraction, and the individual: The influence of Søren Kierkegaard on Paul Feyerabend’, *Studies in History and Philosophy of Science*42.1 (2011): 125-134.

Kidd, Ian James (2012a) ‘Feyerabend, Pseudo-Dionysius, and the ineffability of reality’, *Philosophia*40.2: 365-377.

Kidd, Ian James (2012b) ‘Receptivity to mystery’, *European Journal for Philosophy of Religion* 4.3: 51-68.

Kidd, Ian James (2013) ‘Feyerabend on science and education’, *Journal of Philosophy of Education* 47.1: 407-422.

Klagge, James C. (2010) *Wittgenstein in Exile* (Cambridge, Mass.: MIT Press).

Klagge, James C. (2017) ‘Wittgenstein, Science, and the Evolution of Concepts’, in Jonathan Beale and Ian James Kidd (eds.), *Wittgenstein and Scientism* (London: Routledge), 193-208.

Kusch, Martin, (2016) ‘Relativism in Feyerabend’s later writings’, *Studies in History and Philosophy of Science* 57: 106-113.

Ladyman, James and Don Ross (2007) *Every Thing Must Go: Metaphysics Naturalised* (Oxford: Oxford University Press).

Lloyd, Elizabeth (1997) ‘Feyerabend, Mill, and pluralism’, *Philosophy of Science: Supplement* 64: S396-S407.

Oberheim, Eric (2006) *Feyerabend’s Philosophy* (Berlin: Walter de Gruyter).

Preston, John (1997) *Feyerabend: Philosophy, Science, and Society* (Cambridge: Polity).

Stenmark, Mikael (2001) *Scientism: Science, Ethics, and Religion* (Aldershot: Ashgate).

Wittgenstein, Ludwig (1969) *On Certainty*, trans. D. Paul and G.E.M. Anscombe (London: Macmillan).

Wittgenstein, Ludwig (1969) *Philosophical Investigations*, trans. G.M.E. Anscombe (London: Macmillan).

Wittgenstein, Ludwig (1974) *Tractatus Logico-Philosophicus*, trans. D.F. Pears and B.F. McGuinness (London: Routledge).

Wittgenstein, Ludwig (1979) *Remarks on Frazer’s ‘Golden Bough’*, trans. A. Miles (Retford: Brynmill).

Wittgenstein, Ludwig (1980) *Culture and Value*, trans. Peter Winch (Oxford: Blackwell).

Wittgenstein, Ludwig (1988) *Remarks on the Philosophy of Psychology: Vol. 1*, trans. G.E.M. Anscombe (Oxford: Blackwell).

Wittgenstein, Ludwig (1994) ‘The Big Typescript’, in Anthony Kenny (ed.), *The Wittgenstein Reader* (Oxford: Blackwell).

Wittgenstein, Ludwig (1991) *The Blue and Brown Books*, edited by Peter Docherty (Oxford: Wiley-Blackwell).

Wittgenstein, Ludwig (2003) *Public and Private Occasions*, edited by James C. Klagge and Alfred Nordmann (New York: Roman & Littlefield).

**Notes**

1. John Dupré (2001) is an explicit critic of scientism, who, interestingly, admires both Feyerabend and Wittgenstein. [↑](#endnote-ref-1)
2. See Floyd (2006, 101 and 142n2). [↑](#endnote-ref-2)
3. A detailed discussion of Feyerabend’s accounts of his relationship to Wittgenstein is given by Collodel (2016, 36f). [↑](#endnote-ref-3)
4. I offer my thanks to Matteo Collodel, David E. Cooper, Peter Dennis, an audience at Durham, and especially to Jonathan Beale and John Preston for very helpful comments and discussion. [↑](#endnote-ref-4)