

# Paul Feyerabend And The Monster 'Science'

Ian James Kidd introduces an iconic iconoclast of the philosophy of science.

Paul Feyerabend (1924-1994) was not a conventional philosopher – a fact he delighted in and took great care to maintain. He trained as an opera singer and a physicist, and only came to philosophy by accident, as he freely admitted. He disliked academia and was consistently critical of the philosophy of science, once describing it as “a subject with a great past.” Feyerabend was also unwilling to confine his research to the bounds set by academic convention. His writing makes generous appeal to Hesiod and Homer, to Renaissance art and sculpture, and he moves easily between Platonic epistemology and astrology, quantum mechanics and the history of witchcraft. His personality is also evident in his use of rhetoric, provocation, humour and anecdote in his writing.

For these reasons then, it is interesting to find that Feyerabend was also an eminent and influential philosopher. He became one of the ‘Big Four’ philosophers of science of the last half of the twentieth century, alongside Karl Popper, Thomas Kuhn and his close friend Imre Lakatos. Lakatos suggested that he and Feyerabend set down their opposing views on science in a volume they intended to call *For and Against Method*. Sadly, Lakatos’ death in 1974 put paid to this idea; but Feyerabend pressed on, the result being his iconoclastic classic *Against Method* (1975). This book was, he emphasised, a ‘collage’ of earlier papers, spiced up with challenging rhetoric.

## Against Method

*Against Method* made the radical argument that a single ‘scientific method’ does not exist, and that successful scientific research does not and cannot conform to the idealised models designed for it by philosophers. Here, Feyerabend had the Logical Positivists particularly in mind. Anticipating the emphasis of later philosophers of science such as Nancy Cartwright and Ian Hacking, Feyerabend insisted that instead, philosophy of science should remain close to scientific practice and the history of science. For this reason, he praised the philosophical physicists of the early twentieth century – men like Ernst Mach and Niels Bohr. They could also augment their experience as practical scientists with a keen awareness of the philosophical ramifications of their research.

Mach is a good example of the sort of philosophically-conscious scientist that Feyerabend admired. Mach, he says, was a scientist, but was also familiar with psychology, literature and the arts, and the history of science and of ideas. Mach was also dissatisfied with the scientists of his day for their lack of critical reflection. Their science, says Feyerabend, following Mach, “had become partially petrified”

and “used entities such as space and time and objective existence but without examining them.” (*Philosophical Papers*, vol. 2, p.80.) Mach insisted on pursuing the philosophical implications of scientific research not merely as a tangential and perhaps idiosyncratic interest on the side, but as a necessary component and corrective to scientific thought and practice. The history and the philosophy of science should be indispensable parts of scientific practice, and whenever they are not, stagnation and dogmatism is the inevitable result, he said.

There are close parallels here with Feyerabend’s own criticisms of science. (Indeed, Feyerabend admitted that many of his ideas were simply observations he had taken from scientists and reapplied for the benefit of the philosophers of science who, it seemed to him, had not thought to listen to them.) Like Mach, Feyerabend abhorred the lack of critical reflexion among scientists and insisted that scientific progress demanded the constant

Feyerabend asked, **Would we sacrifice all traditional relationships with the natural world for a monolithic scientific worldview?**





examination and questioning of its theories and even the methods of research. Otherwise, he warned, science would ossify into a standard set of uniform ideas which would inhibit the freedom and experimentalism that characterised progressive research. "Successful research" argued Feyerabend on the first page of *Against Method*, "does not obey general standards; it relies now on one trick, now on another."

The pluralism and opportunism this implies means that actual scientific practice is far more complex or 'anarchistic' than philosophers of science had been willing to admit. This means that the monistic 'scientific method' to which philosophers of science had pointed in their attempts to establish the special authority of scientific knowledge didn't exist.

The idea of a unique and distinctive scientific method had been the foundation of the special status of scientific knowledge as compared with other forms of inquiry, such as magic, theology or mythology. The scientific method was supposed to ensure that scientific knowledge, unlike other forms of knowledge, was objective, reliable and free from the contingencies of idiosyncratic beliefs, values and prejudices. However if scientific method, at least as traditionally imagined, turned out to be chimerical, and if scientific research was in fact an erratic combination of formal techniques, opportunism, *ad hoc* manoeuvres and so forth, then the special status of science and scientific knowledge became far more difficult to establish.

Moreover, the pluralistic nature of science ('now one trick, now another') meant that the outcome of that research was in fact contingent, not inevitable. Different combinations of methodology, opportunism and conjecture will result in different results, and so in a different set of 'scientific knowledge'. Feyerabend hence asked the question, "*What's so great about science?* – what makes sciences preferable to other forms of life, using different standards and getting different kinds of results as a consequence?" ('On the Critique of Scientific Reason' in *Essays in Memory of Imre Lakatos*, p.110.) This question, I think, came to occupy him for the remainder of his career.

### New Old Pathways

Unfortunately, Feyerabend's work after *Against Method* attracted much less attention. Many philosophers were upset and offended by the book and its mode of presentation. It was criticised for being aggressive and antagonistic, and for its apparently hostile rhetoric and mocking humour. Feyerabend was disappointed and stung by these criticisms, and responded in kind. He complained that his reviewers had failed to understand the book and described them as 'illiterates'. Afterwards, he seemed to retreat from mainstream academia, about which he had always been rather reticent. Although he remained a professor at Berkeley and Zurich until his retirement in 1991, and continued to publish and teach, he was no longer a visible frontline philosopher of science.

Indeed, his interests had moved in other directions. True to his pluralistic and opportunistic inclinations, he had always enjoyed wide interests, but in the 80s and 90s he began to explore the consequences of his criticisms of the special status of science. In particular, he asked the question, 'If science is not quite as privileged as we think it is, what will be the implications for our treatment of non-scientific beliefs and prac-

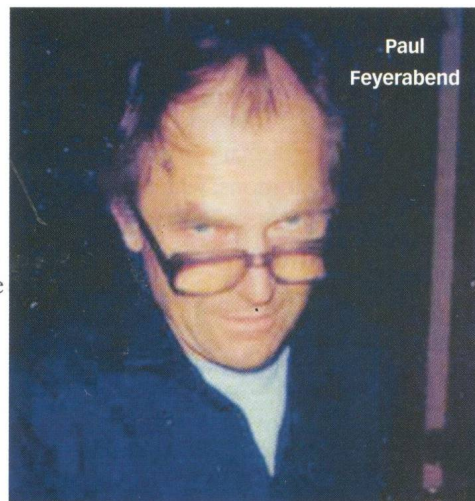
tices?' Science, at least in the Western world, generally commands absolute authority as a source of knowledge.

Physics, medicine, psychology and the other physical and life sciences provide an articulated description of the universe and our place within it, confidently tack-

ling questions of cosmology and human nature that were previously the domain of mythology, religion or other traditional beliefs. Usually, the replacement of these prescientific worldviews by science is depicted as a positive development – the Triumph of Reason. But, says Feyerabend, if science, the vehicle for Reason, cannot assume the special authority it claims to have, then we must reassess the credentials of magic, mythology and traditional beliefs and practices. In particular, this reassessment must begin with our current Western attitudes towards indigenous ways of life.

Once we abandon the scientific assumption that 'science knows best', or that science has unique license to describe the world and the best way of living within it, indigenous ways of thinking must come to be seen in a new light. Feyerabend is emphatic and passionate in his insistence that paternalistic attitudes towards indigenous peoples must give way to sympathetic acknowledgement of the efficacy and merits of their ways of life. "People all over the world," he says, "have developed ways of surviving in partly dangerous, partly agreeable surroundings. The stories they told and the activities they engaged in enriched their lives, protected them and gave them meaning." (*Against Method*, 3rd ed, p.3.) Despite the efficacy of such ways of life serving the spiritual as well as the material needs of the cultures which employed them, under the banner of Reason, Western cultures "destroyed these wonderful products of human ingenuity and compassion without a single glance in their direction." Thus, the indigenous cultures of the Andes, the Amazon, the African savannah, Southeast Asia and the South Pacific islands had sophisticated worldviews and ways of life that met their needs and described their world and their place within it, but these ways of life were trampled by Western cultures, initially through soldiers, merchants and missionaries, and recently through development agencies and educational programs, who tend to operate under the presumption that Western culture and specifically science knows best. Feyerabend was vigorously opposed to these destructive and parochial attitudes, and worked to develop forms of philosophical relativism which could sustain his critique of them.

Such an attitude of tolerant pluralism would of course require that Western cultures abandon, or at the least retract, their belief in the universal authority of scientific knowledge. Science and the technological ways of life it sustains may suit Western





cultures, but cannot be uniformly applied to all cultures everywhere. One should, says Feyerabend, approach other cultures with humility, offering one's own ideas and beliefs and practices in a spirit of cooperation and exchange. Unfortunately, such an attitude would be difficult to introduce into our contemporary international institutions, which assume and act on the superiority of Western values and ways of life – scientific medicine, liberal democracy, market economics and so forth. Any cultures which do not recognise the desirability of these things are demeaned by Western ideologues as 'under-developed' and as needing social, economic and political 'development'.

### Farewell To Reason

In *Farewell to Reason* (1987) Feyerabend argued that cultures ought to be left to their own devices, living and acting according to their own beliefs and customs. However he later retracted this on the grounds that this tended to imply that cultures were static and isolated entities, and would prohibit interaction with and moral criticism of other cultures. So into the 1990s Feyerabend argued that cultures are in fact fluid and mutable, and that, for better or worse, they change through interaction with others: "potentially every culture is all cultures." This interaction would allow the members of each culture to pursue their own ways of life, whilst also allowing them to change and develop through internal action and external stimulus. However, even if all cultures are potentially all cultures, there is the constant danger that one culture (or set of allied cultures) will conspire to transform all the others into its image.

Feyerabend says this is a general trend in world history since the Enlightenment, and *Farewell to Reason* is largely devoted to a defence of cultural pluralism against the tendencies to uniformity encouraged, he claims, by shifting confederations of philosophers who consistently maintain that "there exists a right way of living and that the world must be made to accept it." (*FTR* p.11.) Although differing in their values and ideals, these philosophers all insist that their particular view of the ideal way of life is best for everyone, and strive to legitimate their monolithic prejudices by describing themselves as 'rationalists'. The consequence is that "a collection of uniform views and practices [are] being imposed [in the culture of origin], exported and again imposed [upon indigenous peoples]." (p.2.)

It's clear that Feyerabend has now moved considerably beyond the philosophy of science. His motivations here, as he explains, are 'humanitarian, not intellectual', since his concern is not with the pursuit of knowledge or with intellectual values such as truth, but instead with human well-being. As he once explained to Thomas Kuhn, "I judge the importance of a topic from the influence a specific solution of it may have upon the well-being of mankind... which derives, among other thing, from the exercise of one's imagination, from the full development of human faculties, and from spiritual happiness." (Quoted in Hoyningen-Huene in *Studies in History and Philosophy of Science*, 37, pp.613-614.) Thus to Feyerabend, human well-being now becomes the primary criterion in the assessment of theories, methods, world-views and ways of life – not abstract standards such as 'truth' or 'knowledge'. If one puts such abstractions ahead of human well-being, then one has lost sight of the purpose both of science and of philosophy, which should be our servants, not our

masters. As Feyerabend said, "I am totally opposed to any attitude which says: 'I am out to find the truth, come what may'. What truth? And why? would be my question." (*Ibid.*)

Thus, having begun with a critical study of scientific methodology, Feyerabend gradually found himself questioning the role science has played in the expansion of Western cultures since the Renaissance. Anticipating later postcolonial theorists and the anti-globalisation movement, he criticised the relentless imposition of Western values and practices throughout the world, and the homogenising effects that such cultural imperialism inevitably brought (and brings) with it. Rich and diverse cultures are being erased because they do not conform to Western intellectual ideals, out of a philosophical ideology which presumes that a single way of thinking and living is best for all. In the face of this culturecidal imperialism conducted through a powerful rhetoric of liberation and development, Feyerabend argued passionately and persuasively that "diversity is beneficial while uniformity reduce our joys and our intellectual, emotional, and material resources." (*FTR* p.1.)

Today Feyerabend's work has a new significance. Despite the growing hostility to mass Westernisation and corporate hegemony, and new concerns for the gradual disappearance of languages, cultures and peoples, science still enjoys an unequalled authority. But if we are to address the global concerns, then the role of science in our society will need to be reevaluated. As Feyerabend said, perhaps it is time to confront the monster 'science', and take steps towards ending its tyranny over us.

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