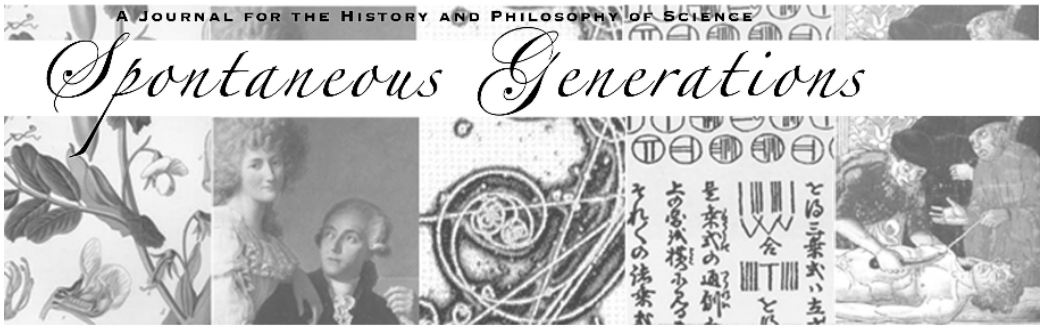

REVIEW: Paul Feyerabend, *The Tyranny of Science*

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Reviews

Paul Feyerabend. *The Tyranny of Science*, ed. Eric Oberheim. xii+153 pp. Cambridge, UK: Polity Press, 2011.[*]

Daniel J. Rozell[†]

In early May of 1992, Paul Feyerabend delivered a series of four public lectures at the University of Trent, Italy. Feyerabend edited the recorded transcripts the following year and the work was published posthumously in Italian in 1996. It wasn't until 2011 that the lectures were published in English as *The Tyranny of Science*, largely due to the efforts of the editor Eric Oberheim.

In the introduction, Oberheim explains that Feyerabend starts with an apology to the audience because the lecture series is a condensed version of a semester-long course he developed over thirty years while at University of California, Berkeley. The theme of the lectures is a discussion of how modern scientific rationalism arose in Western society and why we should question its claims of epistemological superiority. In accordance with his skepticism of systematization and our ability to know the "truth," Feyerabend prefers to present his lectures as "fairytales woven around events that are vaguely historical" (p. 13).

At a midpoint in the lectures, Feyerabend summarizes his main ideas in four propositions: (1) pluralism is necessary for science despite the objections of many scientists; (2) world views may take a long time to yield useful results; (3) the importance of any particular theory varies by community; and, (4) history shows that it is perfectly rational to propose theories that contradict the currently accepted world view (p. 43). Throughout the lectures, Feyerabend cites ancient Greece as the starting point for various prevalent ideas in contemporary science. For example, scientists are compared to the ancient Gnostics (pp. 10-11) for their shared beliefs in an eternal and stable objective reality and that our everyday lives are illusory. This idea is tracked through history starting with Thales's theory of water as the first principle, Xenophanes's theory of a single divine being, and Parmenides' theory of Being. Feyerabend's description of the Parmenides connection to modern theoretical physics is particularly compelling (pp. 38-39). Because Parmenides separates all of reality into Being and not-Being, it logically follows that reality is unchanging because Being never becomes

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not-Being and vice versa. While this argument sounds vaguely foolish to modern ears, Feyerabend points out that today's scientists generally believe that basic scientific laws should not contain space-time parameters and are, thus, built on the very same assumption of unchanging reality. Einstein is given as an example when he wrote in a letter to the sister of his departed friend Michele Besso: "For us who are convinced physicists the distinction between past, present, and future has no other meaning than that of an illusion, though a tenacious one" (pp. 39, and 140). Of course, within the physics community, there is a wide range of philosophical positions on the nature of time. While J.M.E. McTaggart and, more recently, Julian Barbour, are true eternalists in the tradition of Parmenides, the majority of physicists (of those that bother to consider the issue at all) primarily focus on the inconsistency between the human experience (i.e., the forward flow of time) and the fact that the major theories of physics—Newtonian mechanics, electrodynamics, relativity, statistical mechanics, even quantum mechanics—are all time-direction invariant (e.g. Albert 2000).

While examining the claims that science embodies objective knowledge and should be respected because of its accomplishments, Feyerabend argues that scientific materialism is only one of many world views and that it is idealistically portrayed. He points out that, despite a long-held belief that empiricism, in the tradition of Aristotle, is the foundation of science, the heliocentrist trio of Copernicus, Kepler, and Galileo were able to achieve considerable success by abandoning the very rational, natural and experiential assumption that the earth was stationary (pp. 49-54). A nice example of the tenuous assertion of rationality in science is described in a debate between Newton and Leibniz regarding discrepancies in Newton's law of gravitation to explain the orbits of Jupiter and Saturn (p. 41). Newton invoked the hand of God to keep the planets in their proper place, while Leibniz argued that God, being perfect, would never design a system that needed his constant attention. Given the supposed rationality of the scientific world view, it is indeed surprising to see two revered scientists arguing purely theological positions.

The practical implications of Feyerabend's skepticism are a main theme of the third lecture, titled "The Abundance of Nature." Because scientists require considerable funding for research that they suggest will lead to solutions to societal problems, it is important for the taxpayer to understand what can be realistically expected. Feyerabend contends that experience and traditional skills in fields such as engineering and medicine have been pushed aside by theory to the detriment of society. Decomposing problems and then recomposing solutions has some success in simple situations, but in complex problems (e.g., ecological systems), the method is likely to fall short. Instead, the hard-won practical knowledge of history and local experience should be consulted with as much deference as current scientific theory.

It can be difficult to criticize Feyerabend's methods. He, more than

anyone, realizes the limitations of any method and liberally spreads caveats and warnings throughout his discussions. Nonetheless, some have criticized Feyerabend's ideas based on his interpretation or selection of historical events or his seeming very lack of method. However, assuming a traditional Popperian world view of science and rationalism, falsification of a theory is possible, but proof is not. Since Feyerabend is trying to show that history disproves an objective, successful and standard scientific method, his falsification case is the easier case to make than those trying to prove that science is epistemologically superior.

For those familiar with Feyerabend's previous works, one potential criticism of *The Tyranny of Science* is that it does not propose any substantially new ideas, retractions, or conversions. Of course, that was not the intent of the lecture series on which the book was based. Another objection can be lodged regarding the rather disorganized format of the book. Topics are revisited after long tangential discussions and ideas are reiterated in subsequent lectures. Again, this is an artifact of the book as a representative transcript of a public lecture. Conversely, for others, this style will be seen as an asset. The many ruminations, minor points, and asides contain original thoughts in various stages of development that make the book well worth reading. In particular, each lecture ends with a question and answer session. While the topics often diverge from the main theme of the lectures, they are no less enlightening than the lectures themselves and show Feyerabend to be an extemporaneous storyteller of the highest caliber. And, of course, throughout the book there is plenty of classic Feyerabend warmth and wit for both Feyerabend enthusiasts and newcomers to his work to enjoy.

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