

CHAPTER 3

FEYERABEND'S INCOMMENSURABILITY AND THE PRAGMATIC THEORY OF OBSERVATION.

3.1 INTRODUCTION

In the first two chapters I have been arguing that Feyerabend is not an irrationalist: Feyerabend can be seen as arguing against a particular conception of rationality, not against the very idea of rationality itself. There are three reasons why this interpretation of Feyerabend has not been fully appreciated. Firstly, Feyerabend's rhetorical, provocative and polemical style of writing has sometimes made it difficult to separate the substantive positions which Feyerabend defends from the blatant provocation's which we sometimes find him uttering. Consequently, quick readings can produce misunderstandings. Secondly, it has often been asserted that Feyerabend's theories are inherently radically relativistic, and that this radical relativism precludes any systematic account of rationality. Thirdly, Feyerabend's thesis of incommensurability is said to make rational choice between competing theories impossible. The first point will be dealt with throughout this book. I will examine the second point in the next chapter. In this chapter I will show that the third point concerning the putative irrationality following from the admission of incommensurable theories does not, in fact, follow. Feyerabend would want to say that theories are, in fact, commensurable, in certain ways, and that changes of theory are rationally motivated. However, a 'Rationalist' account of theory comparison and inter-theory relations leaves certain types of theories incommensurable. If no other principles of rationality are countenanced other than the 'Rationalist' ones, then Feyerabend's conclusion is that the 'Rationalist' account of rationality leaves some types of theory change without the possibility of rational explication.

In this chapter I want to do three things. Firstly, I want to give an account, taken exclusively from Feyerabend's writings, of Feyerabend's notion of incommensurability. This will include where Feyerabend saw incommensurability arising; the range of applicability of the notion; and the sorts of legitimate comparisons that Feyerabend contended can be made between incommensurable theories. Secondly, in giving this account of

Feyerabend's notion of incommensurability, it will become apparent that there exist large discrepancies between standard interpretations of incommensurability and the interpretation which we find Feyerabend supporting. In this respect my primary concern is not to vindicate Feyerabend in his support for incommensurability, but simply to show that the discussions surrounding incommensurability, in the most part, do not even address Feyerabend's position. Thirdly, I want to construct a clearer picture of the impact that Feyerabend's notion of incommensurability has on the general structure of scientific decision-making.

3.2 FEYERABEND'S INCOMMENSURABILITY AS FORMAL INCOMMENSURABILITY.

3.2.1 Universal Theories.

The thesis of incommensurability is probably the most famous of Feyerabend's doctrines. There seems to be an inverse function operating here: the more famous the doctrine, the more misunderstood it is. Popular accounts of the meaning and consequences of incommensurability only have tenuous relations to what Feyerabend actually intended the meaning and consequences of incommensurability to be.

It is often contended that the thesis of incommensurability implies that any two theories cannot be compared in any way. Newton-Smith, for example, states that

the thought that theories are incommensurable is the thought that theories simply cannot be compared and consequently there cannot be any rationally justifiable reason for thinking that one theory is better than another ... taken literally it is implausible because it suggests that I could never have rationally justifiable grounds for holding any belief whatsoever ... [but] if I could have grounds for rationally preferring one ... belief to ... [an]other why could I not have grounds for preferring one theory to another? (1981, p. 148)¹

It must be asked, whose theory is Newton-Smith talking about? Certainly not Feyerabend's or Kuhn's; indeed it is not a position I have seen anyone

¹ This conception of incommensurability has been held by many philosophers, for example, Shapere, (1984) and Giedymin, (1970). Even Hooker, who in his (1991a) seems to have an adequate understanding of Feyerabend's incommensurability, shows, in an earlier paper, a similarly complete misunderstanding: "Such a view [incommensurability] fractures the history of science into a number of unrelated, and unrelatable, episodes ... it becomes impossible to understand how one could decide between rival theories" (1972a) p. 62. For more balanced presentations of incommensurability, see Brown, (1983), Couvalis, (1989) and Sankey, (1994).

defend. It is a complete dummy position: a straw man of the highest order. Feyerabend himself states that "I never said ... that *any two* rival theories are incommensurable ... what I *did* say was that *certain* rival theories, so-called 'universal' theories, or 'non-instantial' theories, *if interpreted in a certain way*, could not be compared easily". (1975, p. 114)

It is crucial that we are clear as to what exactly universal, non-instantial theories are, for, as the quote above implies, this idea is the crux around which Feyerabend builds his conception of incommensurability. According to Feyerabend, universal non-instantial theories are theories which, unlike empirical generalisations, are not directly testable via empirical experience. (1962, fn. 1) They are theories which make claims about "everything there is" (1965a, n. 5), and they are testable only after suitable initial conditions, boundary conditions, and associated empirical generalisations are added. (1962, fn. 1)²

I shall assume that the rules (assumptions, postulates) constituting a language (a "theory" in our terminology) form a *hierarchy* in the sense that some rules presuppose others without being presupposed by them. A rule R' will be regarded as being more fundamental than another rule R", if it [is] presupposed by more rules of the theory, R" included, each of them being at least as fundamental as the rules presupposing R". It is clear that a change of fundamental rules will entail a major change of the theory, or of the language in which they occur. Thus a change in the spatio-temporal ideas of Newton's celestial mechanics makes it necessary to redefine almost every term, and to reformulate every law of the theory, whereas a change of the law of gravitation leaves the concepts, and all the remaining laws, unaltered. (Feyerabend, 1965a, n. 27)

As a first approximation, we could conclude that universal, non-instantial theories, are those theories which are expressed in terms of a set of fundamental rules which do not presuppose any other rules other than the rules within the set. A theory of this sort would certainly be fundamental, but it seems that Feyerabend does not want to limit the idea of universal theories to this characterisation. In the quote above, the most fundamental aspect of Newtonian mechanics is considered to be the spatio-temporal structure of the universe: absolute, Euclidean space with an independent, absolute, temporal dimension. That may be an accurate description; however, Feyerabend contends in many places that Newtonian mechanics, understood as the three laws of motion, is a universal theory. (See, for example, 1962, pp. 52-62) This would seem to suggest that universal theories are not confined to theories at the top of the hierarchy: lower level fundamental rules can be grouped together and classified as a universal theory. This would seem to create a looming problem for Feyerabend: if the incommensurability thesis is to hinge critically around the idea of a

² Perovich, (1991), goes some way towards this distinction, but leaves it somewhat unclear.



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