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Feyerabend Letter: Some Thoughts on the Two Context Distinction

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The thesis that scientific and artistic discovery is amenable to rational analysis has not enjoyed much popularity with philosophers of science. This is due to two factors: a romantic belief in creative genius and the influence of logical empiricism in the early twentieth century which ruled that logic of science is strictly logic of justification. Consequently, scientific discovery was held to be of interest only to historians, psychologists and sociologists, and excluded from the topics which demand logical analysis by philosophers. Against this view it can be argued that the processes of discovery and creativity are fit subjects for philosophical analysis and that there is no qualitative distinction between the contexts of discovery and justification.

A full examination of responses to the two context distinction lies outside the scope of this letter but further details can be found in Lamb. [1] We shall briefly examine here the positions taken by Popper and Feyerabend with regard to the two context distinction.

[1] David Lamb, **Discovery, Creativity and Problem Solving**, Avebury, Aldershot 1991.

Popper

According to Popper it is only the context of justification (or falsification) where completed hypotheses are presented which are of interest to the philosopher. There can be no question of analysis of the creative process. Popper's discussion of the logic of discovery is summarised here:

> [...] the work of the scientist consists in putting forward and testing theories. The initial stage, the act of conceiving or inventing a theory, seems to me neither to call for logical analysis nor to be susceptible of it. The question how it happens that a new idea occurs to a man — whether it is a musical theme, a dramatic conflict, or a scientific theory — may be of great interest to empirical psychology; but it is irrelevant to the logical analysis of scientific knowledge. This latter is concerned not with questions of fact (Kant's *quid facti*?), but only with questions of justification or validity (Kant's *quid juris*?) [...] Accordingly, I shall distinguish sharply between the process of conceiving a new idea, and the methods and results of examining it logically. As to the task of the logic of knowledge — in contradistinction to the psychology of knowledge — I shall proceed on the assumption that it consists solely in investigating the methods employed in those systematic tests to which every new idea must be subjected if it is to be seriously entertained [...] my view of the matter, for what it is worth, is that there is no such thing as a logical method of having new ideas, or a logical reconstruction of this process. My view may be expressed by saying that every discovery contains "an irrational element", or "a creative intuition", in Bergson's sense. In a similar way Einstein speaks of the "search for those highly universal laws [...] from which a picture of the world can be obtained by pure deduction. There is no logical path", he says, "leading to these [...] laws. They can only be reached by intuition, based upon something like an intellectual love (»Einfühlung«) of the objects of experience". [2]

Feyerabend

Whilst Feyerabend appears to share Popper's argument that discovery involves an irrational element, he indicates an affinity between the history of science and the logic of science, arguing that the latter, as it is currently understood, cannot deal adequately with philosophical problems arising out of the practice of science. He is scornful of philosophers who have employed the two context distinction to exclude studies in the history of science and interest in what are tradi-

[2] Karl R. Popper, **The Logic of Discovery**, Routledge, Taylor and Francis, London — New York 2005, p. 7–9.

tionally described as extra-scientific factors. He cites the following remarks as representative of the two context distinction.

> The model of the DNA molecule worked out by Crick and Watson stands on its own merits [...] The [...] story of how the DNA model was achieved, humanly fascinating as it may be, has little relevance for the operational concept of science. [3]

Feyerabend acknowledges that "most philosophers of science would agree" that only "the context of justification explains its content and reasons for accepting it". [4] Nevertheless, he insists that science is not autonomous with respect to either the genesis or justification of its products. Knowledge, he argues, is an open ended "living discourse" which is exemplified in recent pure mathematics where workshops, conferences and seminar meetings "do not merely add information to the content of textbooks and research papers, they explain this content and make it clear that it cannot stand on its own two feet". [5] For Feyerabend there is no essential difference between discovery and justification because "anything goes" in either stage. Thus:

> Galileo prevails because of his style and his clever techniques of persuasion, because he writes in Italian rather than Latin, and because he appeals to people who are temperamentally opposed to the old ideas and the standards of learning connected with them. [6]

But despite Feyerabend's rejection of the logic of falsification he nevertheless shares Popper's irrationalist concept of discovery.

> It is clear that allegiance to the new ideas will [...] be brought about by means other than arguments. It will [...] be brought about by irrational *means* such as propaganda, emotion, and ad hoc hypotheses, and appeal to prejudices of all kinds. We need these "irrational means" to uphold what is nothing but blind faith.[7]

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[3] Salvador S. Luria, **A Slot Machine: A Broken Test Tube**, Harper Collins, New York 1985, p. 125.

[4] Paul K. Feyerabend, **Farewell to Reason**, Verso, London 1987, p. 110.

[5] Feyerabend, **Farewell to Reason...**, p. 111.

[6] Paul K. Feyerabend, **Against Method: Outline of an Anarchistic Theory of Knowledge**, New Left Books, London 1975, p. 141.

[7] Feyerabend, **Against Method...**, p. 154.

Whereas Popper locates faith and inclinations in the context of discovery, Feyerabend proclaims their centrality in both contexts.

> What our historic examples seem to show is this: there are situations when our most liberal judgements [...] would have eliminated an idea or a point of view which we regard today as essential for science [...] The ideas survived and they can now be said to have been in agreement with reason. They survived because prejudice, passion, conceit, errors, sheer pigheadedness, all the errors which characterise the context of discovery, opposed the dictates of reason. Copernicanism and other "rational" views exist today *only because reason was overruled at some time in their past* [...] Hence it is advisable to let one's inclinations go against reason in many circumstances, for science may profit from it. [8]

According to Feyerabend scientists normally behave, and ought to behave, at all times in the manner which Popper attributes only to the context of discovery. A methodology which actually embraces requirements for the context of justification would, if seriously implemented, strike a death blow to scientific research:

> A determined application of the methods and criticism and proof, which are said to belong to the context of justification, would wipe out science as we know it — and would never have permitted it to arise. [9]

Rejecting the theory-observation distinction, which was once the cornerstone of logical empiricism, Feyerabend's espousal of the theory-loaded character of data rules out the distinction between discovery and justification. Observation is determined by a theory whose criteria of justification and proof are self-determined. To put it more explicitly: conceptual advances in science contribute to a transformation of criteria for justification, and it is these advances which determine the relevant justifying observations. Thus Galileo's belief in the observational reliability of the new telescope was co-emergent with the new theory it was intended to prove. Each new conceptual standpoint provides confirming criteria of justification and proof. Radically new theories transform both observational terms and objects simultaneously with their theoretical counterparts. Discovery and justification are simultaneous.

Yet despite his refreshing destruction of restrictive methodologies and con-

[8] Feyerabend, **Against Method...**, pp. 155–156.

[9] Feyerabend, **Against Method...**, p. 166.

cepts of rationality Feyerabend has little to say with regard to the genesis of new ideas. He did not produce a theory of how discoveries are made. His case studies and arguments show how they are not made; that is, new ideas do not develop — nor could they survive — within the requirements of creative conjecture and refutation.

David Lamb

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