Menachem Fisch

# The Historiography of Rational Endeavor

Born in 1948 in Leeds, England. Left England for Israel in 1957 where he studied physics and mathematics at Bar-Ilan University (B.Sc. 1971) before joining the IDF in 1972. Resumed university studies in 1978 at Tel Aviv University where he studied philosophy (M. A. 1982) and history and philosophy of science (Ph. D. 1986). Visiting graduate at Queen's College, Oxford 1983-1984, and visiting scholar at Trinity College, Cambridge 1985. Awarded an Allon Fellowship at Tel Aviv University in 1987 and a Senior Lectureship in 1989. He has been coordinator of the Bar Hillel Colloquium for the History, Philosophy and Sociology of Science since 1990. He has published books and articles primarily on confirmation theory, rationality, early Victorian mathematics, physics and philosophy and Jewish learning in late antiquity. — Address: The Cohn Institute for the History and Philosophy of Science and Ideas, School of History, Tel Aviv University, Ramat Aviv 69978, Israel.

I arrived at the Wissenschaftskolleg with a project I regarded complete, another in the last stages of finalization, and a third for which I planned to lay the foundations during my year in Berlin.

The project to be completed was a short book (in Hebrew) on the epistemological presuppositions that inform the Jewish talmudic canon, a first draft of which I had finished a few days before setting out for Germany. The idea was to approach the talmudic texts in a way they have seldom been read, namely, as contriving intentionally to convey by detailed example a theory and methodology of humanly possible intellectual achievement. To this end I endeavored to examine the rabbis' writings equipped with the tool-kit honed on the study of the only other comparable intellectual undertaking, namely that of the historian-philosopher of science. The results were surprising. The rabbis, it turns out, keenly debated the very notion of Torah-study and dramatically ruled on the issue early in the game (circa 100 AD) in favor of a decidedly non-traditionalist approach that can be shown to have been informed by a theory of

rationality and progress intriguingly akin to that of modern science as we now understand it. During the year at the Kolleg I benefitted greatly from comments and criticisms generously offered by colleagues at the Institute for Jewish Studies at the Free University, and from the discussions following presentations of parts of the thesis both at the Tuesday seminar at the Kolleg and at a guest lecture at the Free University. At present I am preparing an expanded English version of the book for Oxford University Press provisionally entitled *Rational Rabbis: A Preliminary Study of the Talmud's Epistemological Program.*

The project I began working on at the Kolleg concerns the remarkable reform and revitalization of British science and mathematics during the first half of the nineteenth century. By 1810 or so British mathematicians and physicists, still largely preoccupied with the works of Newton, had fallen more than a century behind their continental contemporaries. The situation began to change rapidly following the foundation of the Analytical Society at Cambridge in 1811. By the mid-1840s William Thomson, D. F. Gregory, Archibald Smith, Augustus De Morgan, George Boole, P. G. Tait, William Rowan Hamilton and the young James Clerk Maxwell were at, or swiftly approaching their peaks. Current historiography largely ascribes the reform process to the sucessful import of French mathematics and primarily Scottish liberal whiggism. (Thus, for example, argue Crosbie Smith and Norton Wise in *Energy and Empire,* Cambridge University Press, 1989.) As a result the intensive self-consciously critical re-examination of the foundations of science and mathematics, undertaken during the 1830s by such writers as George Peacock, William Whewell, Augustus De Morgan and John Herschel, has gone largely understudied. It is my contention that this uniquely British phase of foundational deliberation, particularly in mathematics, was as central to the "second scientific revolution" as the scientific and political influences of Paris and Glasgow. No account of the reform of nineteenth century British science can be considered complete which fails to ask why the Analytical Society's original program came to be regarded as so problematic by the reformers themselves during the 1930s, and to attempt to explain the various ways in which they sought to put it right. The Kolleg's splendid library facilities enabled me to prepare much of the groundwork for what I hope will eventually develop into a book-length study of early Victorian algebra. As a first step I have outlined the project in some detail in a paper entitled: "`The Emergency which has Arrived': The Problematic History of 19th Century British Algebra — A Programmatic Outline" (to appear in *Annals of Science).*

To a great extent, however, both these rather specialized ventures could probably have been pursued with similar results elsewhere. On the other

hand, the unique intellectual environment of the Wissenschaftskolleg served literally to transform the project that I thought I had finished long ago. It was a paper I had written six months or so before coming to Berlin that purports to analyze the notions of rational action and progress primarily with respect to science. Drawing on the works of Karl Popper and R. G. Collingwood, the paper seeks to ground an essentially non-relativistic framework for the assessment of human endeavor on a general model of problem-seeking and problem-solving. Rational action, it argues, pertains first and foremost to an agent's contrived trouble-shooting of the means available to him in order to eventuate a desired goal. While specific goals and the means available to achieve them remain thoroughly dependent on each agent's specific context, the model offered for the trouble-shooting process itself is, I believe, sufficiently general arguably to avoid total relativism. The paper was originally written as an in-shop philosophical exercise addressed to a philosophical readership, with a view possibly to developing the model further in the future.

The extraordinary multi-disciplinary and cosmopolitan group of scholars who assembled at the Kolleg, provided a singular opportunity to discuss rationality and assessments of rational endeavor in relation to a wide variety of fields of research. Gradually a plan was formed to produce an interdisciplinary volume of critical studies in which the proposed theory of rationality and progress would be applied, tested and contrasted in a diversity of fields, and subsequently reassessed if necessary. Such a collaboration, I felt, could do much towards re-establishing the relevance of philosophy proper to other scholarly pursuits, and, perhaps even more significantly, to explore ways in which philosophical theses may be critically scrutinized other than by pure conceptual analysis. The response of my fellow Fellows was enthusiastic to say the least. Among a dozen or so potential participants Tony Long, Michael Lackner, Horst Bredekamp, Hinderk Emrich, Paul Kiparsky, Lolle Nauta, Claus Offe, Andrei Plesu and Emmanuel Terray have already committed themselves to the project. Hopefully we shall be in a position to hold a preparatory workshop (perhaps here at the Kolleg) early next summer, followed by a fully-fledged conference some time later.

Had this been all that I achieved during this wonderful year, I would have been more than satisfied.