

BOOK REVIEW

**Between Experience and Metaphysics : Stephen Amsterdanski**

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1975 pp 193

Stefen Amsterdanski's *Between Experience and metaphysics* is a useful if not a brilliant book. First published in Polish in 1973, its English translation appeared in 1975. Yet its subject matter is by no means dated. The book surveys some major contemporary positions and controversies in the philosophy of science and can serve as a handy reference work for a one semester course in the subject.

"The central aim of this book" in the author's own words, "is an attempt to approach science from such a perspective which would replace the idea of a one-sided impact of facts on theoretical thinking, as well as the reverse notion, according to which facts are shaped by theoretical thinking, with a view of science as a game between the mind and experience, and by that token to treat science as a fragment of a larger whole — the intellectual culture of a given period." (p. xvii). And on two or three occasions the reader is invited to judge whether this aim has been realized. Let me then say straightaway that in my view the first part of the programme is carried out quite convincingly through Amsterdanski's critique of radical empiricism, conventionalism, falsificationism of the Popperian and the later 'sophisticated' Lakatosian variety and finally of Kuhn's well known account. It is the latter, constructive part of the author's endeavour, treated mainly in the last chapter, that leaves a great deal unsaid and undone and indeed belies the promise of earlier chapters.

The main thrust of Amsterdanski's attack as becomes clear rather early on, is against the view (implicit in both the positions he rejects), "that in the history of science the criteria of rationality have remained unchanged, i. e. that they have a suprahistorical character." (p. 4) as also against the view which he attributes to Kuhn, that since such criteria do not exist one is forced to espouse some form of irrationalism in one's account of the history of science.

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But since "the search for a line of demarcation is based on the assumption that it is possible to specify criteria of scientific status which have a supra-historical character, which do not change with time" (p. 28), the author is led to abandon the very problem of the demarcation between science and non-science as it appears in the literature. However, the opposite assumption, that it is not possible to specify such criteria, is equally unworthy of consideration since it amounts to a resignation from an attempt to answer the question 'what is Science.'

Amsterdanski's own answer to this question is that Science is characterized by its *function* in society of "unifying into a coherent system practical skills and cosmological beliefs, the *episteme* and the *techne*" (p. 43) and that "the understanding of mutual relations between the methodological standards of scientific activity and the socio-historical conditions in which science is practised should be considered as one of the most important tasks of the Philosophy of Science" (p. 3). Unfortunately, after these initial references in the first two chapters, the author never returns to elaborate these themes. Nor does he mention, let alone discuss, Habermas' *Theory and Practice* in which similar themes have been discussed.

Chapter III deals with the contexts of discovery and justification, Popper is properly castigated by the writer for seeking to eliminate the knowing subject from his theory of so-called 'objective knowledge'. Amsterdanski, rightly draws attention to the fact that Poppers' own view is implicitly both normative and diachronic but the logical blinkers through which he views not only the philosophy of science — he calls it 'the logical analysis of knowledge' — but his own work, prevents him from drawing the implications of these features for the development of a criterion of scientific knowledge. Lakatos' effort to save the Popperian position through his distinction between the internal and external history of science, is considered but found wanting for essentially the same reasons an insistence that any criterion of scientific rationality be supra-historical.

Chapter IV offers us very familiar fare on radical empiricism and its untenability as a philosophical position. Its interest lies mainly in references to the work of Polish authors we might otherwise not come across. This is followed in Chapter V by a discussion on conventionalism as a philosophical view of the relation between

facts and theories. Here, there is a certain lack of clarity if not downright confusion in the discussion which must be pointed out. Amsterdanski conflates the notion of auxiliary assumption present in any given piece of research with the school of conventionalism as a philosophical view regarding the very nature of scientific knowledge. I will illustrate my point with just one excerpt from the discussion. Thus Amsterdanski: "It is a convention according to which we agree to consider all of the background knowledge as unquestionable and decide to throw the theory under test at the mercy of the experiment. Thus it is apparent that no experiment can be, nor is, an *experimentum crucis sui generis*. If we decide, however to accept it as such, we do this with the force of convention" (p. 93). Yes, but not with the force of conventionalism! Still Amsterdanski's major concern, which is to demonstrate the pitfalls of clinging to the idea of a supra-historical criterion of scientific rationality, is realized. For in conventionalism, as in axiomatic systems, the ultimate justification of theoretical statements (theorems) rests on 'conventionally' selected basic statements (axioms) rather than on "historical, sociological and quite possibly, pragmatic factors of the growth of knowledge." (p. 94).

Amsterdanski's discussion of Kuhn and Lakatos is text-bookish, and hereby lies both its strength and its weakness. By which I mean there is a reasonably good exposition of the positions taken, followed by the stock criticisms of the notions 'paradigm' and 'revolution'.

However, there occurs in this chapter a most curious passage which claims that "...the questions 'what is the cause of revolutions in science in general?' and 'what is the cause of revolutions within specific disciplines?' are not completely synonymous...as they refer to two culturally different phenomena; the *first* happens in science almost everyday, the other very rarely". (p. 124 italics mine). General revolution in Science *everyday*?

I will pass over the author's discussion on Suszko's attempt to formalize the relationships of successive scientific theories with the aid of a diachronic logic that analyses the degree of formal correspondence between their concepts. Though this exercise has some independent interest for logicians and perhaps semanticist I tend to agree with Amsterdanski's own statement: "In any case, in the argument as to whether a scientific revolution does or does

not mark a break in the correspondence between theories, it is certain that it is not formal correspondence which is at issue." (p. 155) This chapter could perhaps have appeared as an Appendix.

Real surprise and disappointment comes however in the last chapter. It starts well enough with a reiteration of the author's pet theme, that the disjunction between a supra-historical criterion of rationality and irrationalism is not exhaustive, that there exists a rational account of the transitions and revolutions in the history of science in terms of the sociological, historical and pragmatic factors obtaining at a given period. But rather early on in the chapter, this insight is lost sight of and in the remaining pages of the book the author confines himself to emphasizing 'world perspectives', 'cosmological visions of the universe', 'new ontologies' and 'new conceptions of man as a knowing subject'. In a sentence, Amsterdanski's conclusion now appears to be that "global revolutions in science are characterized not only by the introduction of a new order into the sphere of human experience but also by changes in the cognitive outlook of man upon the universe and upon himself : in other words, both a new vision of the universe and a new conception of the cognitive experience" (p. 168).

All very well — but surely what Amsterdanski's self appointed task must be is to connect these new visions with relevant sociological and historical factors. Instead he says (p. 167) "whatever are the sources of the modifications in ontology, they in turn cause disturbances etc. etc." hardly the kind of statement one has been keyed up to expect! Surely there is deep connection between metaphysical assumptions and the development or lack of it of scientific theories —but whence the metaphysical assumptions? Whereas Kuhn's book abounds in examples connecting world views with socio-historical conditions, Amsterdanski does not even refer approvingly to these, leave alone offer some of his own.

I cannot end this review without expressing my disappointment at the carelessness with which the book one in the prestigious series—Boston Studies in the Philosophy of Science — has been published. Since it has been translated into a language not the mother tongue of the translator (neither Amsterdanski nor Michalowski who translated it are native speakers of the English language) one can possibly forgive occurrences of bad English here and there, phrases such as "according to his opinion . ." (p. 163), use of the

preposition "by" for "with" ("faced by a problem"), "should not we...instead of the spoken 'should we not..' 'to the contrary for' 'on the contrary' etc. But there are apart from this, a number of serious editing lapses (they can't all be printing errors), definite articles missing : "particular aspects of phenomenon under study.., (p. 2) unnecessary indefinite articles added "no such a statement can satisfy" (p. 80) 'autothetic' for 'authotelic' (p. 30) 'then' for 'than' (p. 175) question marks at the end of statements (p. 165) which are less easy to condone.

When all this is said, there is much value in Amsterdanski's discussion. The book serves a definite purpose as I indicated earlier and contains an impressive bibliography.

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### BOOKS RECEIVED

- (1) Geeta The Song of the East : Atul Chandra Chakraborty : Publishers : Ajay Chakraborty 26/A, Ramchandra Bagchi Lane Calcutta — 700 035 First Edition 1981 pp iv + 56
- (2) God in the thought of St. Thomas Aquinas and Sri Madhvacharya : Ignatius Puthiadam : Dialogue Series, Arul Anandar College of Karumathur 626573, Madurai — pp II + 86.
- (3) Liberated Life : Ideal of Jivanmukti in Indian Religions, specially in Saiva Siddhanta : Chacko Valiaveetil : Dialogue Series Arul Anandar College of Karumatur 626 573 : Madurai — pp xv + 204
- (4) Perceptual Knowledge : An Analytical and Historical study : Georges Dicker : Dorecht : Hollond : Boston : U. S. A. London : England : pp ix+227
- (5) Problems of Mysticism : by Nils Bjorn Kvastad : Scintilla Press : 1980 : pp 363.
- (6) Prolegomena To An Understanding of Semiosis And Culture: Ashok R. Kelkar : Central Institute of Indian Languages Manasagangotri Mysore— 570006 : First Published 1980 : pp x + 115.
- (7) Towards Purity of Morals : R. K. Gupta : Pragati Publications, 9906 Library Road, Delhi : 1981 : pp V + 158.
- (8) Quantification in the History of Political Thought : Towards a Qualitative Approach : Robert Schware : Green Wood Press 88 Post Road West Westport Connecticut 06881 : May : 1981 pp 168 :