# BOOKS

ESSAY REVIEW: Michael R. Matthews, *The Marxist Theory of Schooling* (Atlantic Highlands, N.J.: Humanities Press, 1981).

In *The Marxist Theory of Schooling*, Matthews attempts to establish the superiority of the Marxist view of schooling over what he characterizes as the liberal-rationalist view. His basic argument is that the epistemology, or theory of knowledge, underlying the Marxist view is consistent with scientific practice, whereas that underlying the "liberal-rationalist" view is not. Since any adequate epistemology must, as he sees it, be consistent with scientific practice, the liberal-rationalist view must be rejected in favor of the Marxist view.

In our opinion, this book merits serious consideration. Matthews is clearly knowledgeable about both philosophy of science and Marx, if less so about liberal-rationalist epistemology. The main strand of his argument is clear despite occasional loose threads. Although Matthews does not make his case, his argument raises a number of provocative questions which we believe will become foci of future debate. In this review we shall attempt to provide an outline of Matthews' argument, to point out some of its weaknesses and to indicate some of the philosophical questions which it raises.

## *Scientific Rationality*

Matthews argues that an adequate epistemology must take into account the acquisition of scientific knowledge. However, there are rival accounts of scientific rationality. Matthews evaluates three serious contenders - Inductivism, Falsificationism, and Methodology of Scientific Research Programs (MSRP). He argues that the latter is the only defensible philosophy of science, since neither Inductivism (in which rationality consists of holding just those beliefs for which there is evidence) nor Falsification (in which rationality consists in not holding beliefs against which there is evidence) can give a coherent account of why some theories are overthrown and others are not.

### *Methodology of Scientific Research Programs*

Matthews endorses Imre Lakatos' MSRP account as the most sophisticated to date of how scientific knowledge advances. As such, it provides us with criteria for the appraisal of competing research programs. Since the ideas of Lakatos are central to Matthews' argument, we feel that some elaboration of the MSRP is warranted. The claims of Lakatos which Matthews takes to be important are as follows:

1. Research programs are based upon a fundamental "hard core" of propositions which cannot be revised without destroying the program. The hard core tells us what will not be revised even in the face of negative experience (negative heuristic). In addition, research programs include a "protective belt" of propositions which can be altered in light of contrary evidence. The protective belt tells us what factors and variables to investigate in our research (positive heuristic).

2. Beliefs and concepts are given intelligibility within a larger theoretical framework. They cannot be appraised without regard to the theory in which they are embedded.

3. The proper unit of appraisal is neither a proposition nor a single theory. A connected series of theories or a *research program* is the proper unit of appraisal. "The inviolable hard core of a research program preserves an identity beneath the changing appearance of a protective belt" (69).

4. A theoretically progressive research program is one which makes novel predictions about the course of nature; it is empirically progressive if these predictions are confirmed. Correspondingly there are theoretically and empirically degenerating research programs.

5. It is not irrational to support a particular research program despite evidence against it. RP's are not suddenly abandoned because "crucial experiments" show them to be false.

6. When a particular theory is no longer consistent with newly-discovered phenomena, that theory is not given up unless there is another to replace it. In order for experimental results to bear upon rival theories, an experiment must impinge on both theories.

7. Conventions and agreements, e.g., about acceptable error rates, play an important role in scientific theory. Because these conventions can be rationally chosen, objectivity need not be undermined.

8. Progressive research programs can be specified independently of their truth content, though the succession of progressive research programs is likely to bring about greater "truth".

9. Appraisal of scientific theories involves the history of finished products, but not the history of why and how new theories emerge.

10. There is a sharp distinction between internal factors affecting the growth of science (such as the emergence of new theories and the uncovering of problems) and external factors (such as socio-political-cultural influences). The growth of science is generally explicable from within but, where not, external history can be invoked to explain the direction which science has taken (2). Matthews has some reservations about Lakatos' beliefs regarding the role of history in the growth of science and in the appraisal of scientific theories, preferring to assign a greater role to ideologies and social interests in the production and evaluation of scientific theory than does Lakatos. As a case in point, he evaluates IQ theory in light of its history as a political and ideological weapon. We find this argument curious. The external factors which initially give rise to the development of a scientific theory, though of historical interest, do not affect the appraisal of the utility of the theory in explaining and predicting physical phenomena. We suspect that Matthews' concern is a moral one - that theories which have consequences for human beings must be evaluated in light of those consequences. While we share this moral concern, we do not think it directly relevant to the epistemological soundness of RP's in the physical sciences - although it may be relevant in assessing social sciences.

Matthews believes that Marxist epistemology takes into account scientific rationality as outlined by Lakatos whereas liberal-rationalist epistemology (which, he believes, is represented in the field of education by analytic philosophy of education - or 'APE' as he endearingly calls it) does not. He maintains that "with a little stretching" (75) the MSRP can be applied to rival programs in philosophy, his plan being to establish through application of Lakatos' criteria that the Marxist research program in education is progressive whereas that of the liberal-rationalist is degenerating. Although Matthews seems to think it obvious how one applies the MSRP to rival programs, it is not self-evident to us. We take it, however, that a research program that is theoretically and empirically progressive in Lakatos' terms (see item 4) is superior to one that is not. Matthews' claim that APE constitute "an imposing research program" in philosophy of education is questionable. He identifies its negative heuristic as:

> Philosophy is a second order activity; it is concerned with reflective questions about scientific, religious, moral and other first order activities. Other disciplines do the running; philosophers do the watching and analyzing (159).

According to Matthews, proponents of this RP are thus to eschew substantive matters, i.e., the study of history, economics or sociology of schooling. The so-called positive heuristic of APE is, "Go out and analyze concepts in educational discourse" (158).

Identification of APE's hard core does little to clarify how it might be construed as a research program. Matthews does not explain in what sense APE is a connected series of theories, what would count as counter evidence to the hard core as he describes it or how the protective belt might be altered to protect the hard core. Nor does he give us any idea how we would identify novel predictions. Establishing that APE counts as a research program is very important to Matthews' argument, yet he fails to convince us that only a little stretching is required to conceive of APE as a research program.

## *Marxist Epistemology*

According to Matthews, both the rationalists such as Plato and the empiricists such as Hume have tended to regard the important epistemological question to be, "What is required in order for an *individual* to lay claim to knowledge?" Their picture of a Crusoe-like figure gaining knowledge independently of others has led them to endless examinations of the beliefs of individuals and how their perceptions correspond with reality as well as to a fruitless quest for a core of self-evident knowledge upon which further knowledge claims might be based. Matthews maintains that the important question is not how an individual can lay claim to knowledge but, rather, how knowledge advances. According to Matthews, knowledge predates any individual's coming to know. Individual subjective beliefs of people are parasitic upon theories which exist independently of the beliefs of any particular person. The norms, customs, ways of thinking and knowledge of any society limit the knowledge that any individual can attain. Matthews refers to this as the "objectivist" account of knowledge - a view that knowledge is independent of any individual. This account, he believes, allows us to avoid problems of subjective states of individuals. Moreover, it does not require a core of self-evident truths on which to base knowledge claims. Such claims are justified, rather, in terms of the theory in which they are embedded and, therefore, on the merits of the RP of which the theory is a part. His argument raises the issue of the nature of the appropriate focus for epistemology - how knowledge advances or how individuals come to know. While we appreciate his stress on the former, we believe *both* must be addressed - as indeed must the question of how individual knowledge is related to what *society* knows.

Recognizing the need to bridge the gap between objective knowledge and the actual doings and thinkings of individuals, Matthews tries to supply the link with the "production model" of knowledge.

### *The Production Model*

Matthews adapts the Marxist production model (raw materials + labor and productive forces —> products) as a model of how knowledge is created. The "raw materials" consist not of real objects and events but of theoretical objects of science - formulae, descriptions and observations (all observations being theory-laden). Scientific labor, technologies and instruments comprise the "labor and productive forces". The "products" are new concepts, higher laws, and theories, i.e., knowledge. Matthews sees *historical materialism*, the idea that practice or conscious human activity mediates between mind and matter, as essential to Marxist epistemology. "Consciousness arises out of and is shaped by practice and, in turn, is judged in and by practice" (86). Theoretical production is one form of practice.

As Matthews puts it, Marx believed that

> men make their own history, but they do not make it under circumstances chosen by themselves, but under circumstances directly found, given and transmitted from the past (78).

Matthews claims that this is also true of the knowledge people produce.

Although he views knowledge as a product with social and historical dimensions, Matthews does not want to claim that all knowledge is biased, as some adherents of the sociology of knowledge have maintained. (If the claim that all knowledge is biased is true, then the claim itself is biased and thus not worthy of attention. If the claim is not biased, then it is false.) He wants to maintain the notion of objective knowledge.

If we understand him correctly, Matthews means by "objective" the social as contrasted with the personal and subjective. While we grant that we do acquire our concepts and beliefs within a way of life, we do not agree that we are thereby forever restricted to the beliefs typical of that way of life. Indeed, one would suppose that the Marxists think "they" have more than the local beliefs of a particular social order. On this point Matthews is vague, referring only to the necessity of replacing ideology with science.

In praising the Marxist epistemology because he thinks it improves upon Lakatos' view of the role of history in science, Matthews reopens the external/internal debate. As Matthews sees it, the supply of raw materials (formulae, etc.) and the application of the knowledge produced is largely determined by external factors, such as specific interests and social forces, but the process itself is basically a cognitive enterprise, driven by the logic of ideas, or internal factors. Assessment of a theory thus involves consideration of both types of factors.

Matthews tries to establish that the Marxist epistemology he has outlined is more or less consistent with Lakatos'account of the growth of scientific knowledge and argues that the Marxist program is a progressive research program. We should note that its consistency with Lakatos does not *ipso facto* establish it as an adequate epistemology. It is at least an open question whether other criteria might need to be met for an epistemology to count as adequate. For example, we might want an epistemology to account for moral knowledge or aesthetic knowledge.

### *APE as a Degenerating Research Program*

As we have seen, Matthews regards APE as the educational representative of the liberal-rationalist view. Further, he regards APE as a degenerating research program - its degeneration due both to external and internal factors. He asserts that Sputnik, massive unemployment, concentration of capital into fewer hands, and the need for the state to apply coercive measure

> might all be factors in the elimination of liberal-rationalist practices in the school system and subsequently of the philosophy which advocates those practices. (161) 2

If these are the external factors contributing to APE's degeneration, there are corresponding internal factors, according to Matthews. These include weaknesses in what he takes to be the major components of APE:

1. the methods of ordinary language analysis,
2. a conception of schooling as initiating students into worthwhile knowledge, and
3. an epistemology - embodied in Hirst's "forms of knowledge" theory.

Let us look at each in turn.

### *The Methods of Ordinary Language Analysis*

Matthews argues that the three high cards of APE - that ordinary language analysis is the proper method of philosophy, that there is a distinction between science and philosophy, and that analysis is ethically and politically neutral - have been trumped, for a variety of reasons. Analysis across theories is ill-conceived, Matthews maintains, because many terms, such as "intelligence", have specialized meanings in various theories. But even if one assumes that this is the case, analysis would still be useful within theories. In any event, we believe Matthews is wrong - analysis is useful even across theories.

No doubt in dealing with questions of physics ordinary language "is" primitive. The special languages of physicists are more sophisticated, precise and useful than ordinary language in dealing with questions of physics. But nothing remotely like this holds for the psychological or social sciences. And where the explanation, interpretation or prediction of human activities are concerned, the basic theoretical set of ordinary languages is solidly teleological - ordinary languages assume that people are purposive creatures whose behaviour is best understood by coming to understand what it is the people in question are trying to do. And this assumption is absolutely fundamental - even for Matthews' own account. He, too, has to assume that he and others are essentially purposive creatures. What many of the 'isms' of psychology, sociology, etc. do is argue that this may not be the whole story. Only behaviorism, in its more radical versions, wants to deny the validity of the teleological stance in its entirety. Freud, Marx and others adopt a fundamentally teleological stance, but want to interpose a second (third or fourth?) level of 'purposes' - in Freud's theory a level created by unique psychological circumstances, in Marx's theory created by the class system. And there is clearly some truth in either theory. We do sometimes discover that our beliefs about the intentions of ourselves or others were mistaken - and we do recognize that some of these mistaken beliefs are a product of, for example, our social status or class. But we can only recognize them *as* errors because we can

contrast them with fully teleological actions. In brief, the semantic closeness of the languages of the social sciences to ordinary language makes analysis of the concepts of ordinary language not only relevant but essential for a proper understanding of the social sciences.

It might also be noted that ordinary language analysis is *a* proper method of philosophy, if not *the* proper method. As John Austin long ago pointed out, analysis is not the last word, only the first word.

Matthews is, we believe, correct in arguing that there is no clear borderline between science and philosophy - but derives an invalid conclusion from this truth. The claim that science is talk about the world whereas philosophy of science is talk about talk about the world cannot be upheld since scientific and philosophical work do interpenetrate. However, the fact that there is no clear dividing line does not imply that the general distinction is untenable. Analysis done by physicists is still analysis.

Matthews charges that, far from being ethically and politically neutral, APE serves to cement the political choices, class interests and ethical prejudices contained in everyday language. However, as Coombs points out:

> The point of explicating the ordinary concept of [a word] is not to uphold the status quo with regard either to the way we talk about [that word] or to how we think about [it] and the programs of action we adopt. It is, rather to disclose the decisions we have to make in order to arrive at a sensible answer as to what should be done... (1982)

Analyzing the ordinary meaning of a word does not thereby cement the implicit ideology behind it; in fact, it may serve to expose that ideology.

Matthews assumes that Hirst and Peters are representative of virtually all practitioners of APE. He quotes Peters as saying that our current political and cultural institutions embody the very values of civilization which teachers should be striving to uphold and create, and as replying to the charge that his position was loaded with middle-class assumptions with, "All I can say is, thank God somebody has got it right" (160).

Of course, the fact that Peters, Hirst and Oakeshott defend a liberal world view does not mean that all analytic philosophers of education uphold this view. As a case in point, James E. McClellan is a well known radical practitioner of APE. And though Matthews disparages those who would uphold the status quo (which he believes is presently liberal-rationalist) it is, ironically, the principle of liberalism which undergirds the ethics of Marxism to make it the persuasive doctrine it is. The principle of liberalism identifies the point of social, including political undertakings. The state does not exist for the sake of society; it is justified only because there are individuals for whose welfare it exists.

*Competing Conceptions of Schooling*

According to Marx, ideology belongs to the non-economic "superstructure" of the society - living in families, legal and ethical systems, and the like. It is "thought which refuses to understand itself as historical" (118); that is, it fails to view language, everyday theory and common sense as historically contingent and politically and economically determined. Although science itself is not entirely free of ideology it is, in Matthews' view, centrally a cognitive and thereby a non-ideological enterprise. The job of critical thinkers is to replace ideology with science. The Marxist tries to show how what appears to be the case generates illusions about what is the case, and then tries to develop a rival account which adequately explains the facts. This is what Matthews attempts to do in the case of the liberal-rationalist view of schooling - to expose how appearances have created illusions about schooling and to provide a Marxist account which adequately explains the facts.

The liberal-rationalist conception of schooling is that schools function primarily to initiate the young into worthwhile forms of life and only secondarily to train and select people for labor. Matthews charges that these primary and subsidiary functions are the reverse of what is the case in the world. The danger in the liberal-rationalist view of schooling, Matthews argues, is that such a view, used as a raw material in producing knowledge, inhibits or misdirects research. The liberal-rationalist view is unrealistic if meant as a normative theory, according to Matthews, and false if intended as an account of what is the case. He offers a rival account of schooling based upon Marx's writings.

His Marxist thesis is that schools are (and, in order for society to survive, must be) concerned with the production and reproduction of labor power in society, and this in a manner that ensures the stability of the present productive relations. According to Marx, there must be some connection between the schooling process and work characteristics in a society. Matthews draws a parallel between schools and the mode of production in a capitalist society, arguing that control of production is out of the hands of the worker, just as control of the learning process is out of the hands of the learner, that both the production and learning processes are technically fragmented, that rewards for both worker and student are inequitable, that rule conformity is highly valued in both cases, etc. We find this argument to be unconvincing. Because there are parallels between the capitalist mode of production and capitalist schools does not establish that the primary purpose of schools is to maintain the labor force. Other important parallels, such as concern for profit and the idea of exploitation through surplus value, cannot be drawn. Moreover, it would seem that schools in communist countries are much like ours: indeed, they are perhaps more regimented and concerned with respect for authority than are our own.

*Liberal-Rationalist Epistemology - Hirst's Forms of Knowledge Theory*

The epistemology underlying the liberal-rationalist view of education is, according to Matthews, Hirst's forms of knowledge theory. Hirst originally postulated that there are seven forms of knowledge (i.e., mathematics, physical

sciences, human sciences, history, religion, literature, and the fine arts) each of which could be identified by distinctive concepts, logical interrelationships, truth tests and methodologies for formulating truth claims. Arguments against these distinguishing characteristics have, Matthews holds, whittled the four down to one - that there are distinctive objective tests for each of the forms of knowledge which are assessable according to publicly accepted criteria. Such tests, Hirst explains, are best exemplified by the tests of observation in the sciences. Matthews charges that since, by Lakatos' account, there are no such tests in the sciences Hirst must either abandon the link between education and the development of rationality or "condemn the Queen of the Forms to the educational wilderness" (171).

Three points will be made against Matthews' argument. First, Hirst's apparent inconsistency with Lakatos is not a fatal flaw in his argument. Second, Hirst's theory is not necessarily the epistemology of APE. Third, Matthews does not give us a viable alternative to Hirst.

Although Matthews puts great weight on his argument that Hirst is incorrect in his account of publicly acceptable truth tests for science, we believe that this criticism is not conclusive. Because Hirst has apparently been unsuccessful in his articulation of these truth tests does not mean that there are none. Matthews himself would not want to deny that there are some acceptable criteria of objectivity.

Even if Matthews were correct in his critique of Hirst, APE would not necessarily be discredited, since many practitioners of APE themselves reject Hirst's theory. This has been a source of much recent debate. Moreover, Matthews offers us little in the way of a substitute for selecting the content to be taught in schools. He advocates a holistic approach to learning, in which students begin with a problem and acquire knowledge in the same manner as do scientists. Such an approach involves identifying research programs in terms of which students are to come to have objective knowledge, given that observation and concepts are always theory-laden. Thus, curricula must be based upon RP's. Curricula may also come from areas not sufficiently well organized to count as RP's - but, on his own grounds, the RP's are the *best* sources of knowledge we have and one would assume that curricula would, at least in part, be derived from them.

The Hirstian curriculum argument is, in general form, not new. It is, roughly, to try to find for schools a representative sample of possible subjects to be taught. What counts as representative depends on how we divide up the pie of possible types of knowledge. Hirst's analysis amounts to holding that the use of seven areas would guarantee some minimal representative coverage and we thus have at least a *prima facie* reason for including the seven.

Matthews regards as pejorative the fact that Hirst's forms of knowledge have to be recognized as distinct forms in *advance* of the application of the criteria. It seems to us that Hirst does indeed recognize rather than create general categories of research programs, the neglect of any *one* of which would mean that the student had failed to be introduced to a very significant general field of research.

If the curriculum is to be based on research programs, how are we to identify the body of research studies constituting an RP? After all, research studies do not come with RP labels on them. It seems likely that we are able to identify constituents of research programs by their concepts, logical structures, and methodologies for testing the truth of claims. In other words, identifying RP's will require much the same sort of criteria as Hirst uses to identify forms of knowledge.

Assuming that we cannot teach all current and past RP's, a further question arises. How are we to select the RP's to be studied in the curriculum? Presumably we would want to include only genuine RP's. That is, we would want to rule out such pseudo RP's as "astrological research" and "creationist science". To do this, there must be some publicly accepted standards for judging the objectivity or "truth" of RP's. Likely Matthews would want to include the Marxist RP in the curriculum, if only to be on the safe side of ideology. But this RP, too, must meet those standards which differentiate genuine from pseudo RP's.

What else would the curriculum contain on Matthews' view? An RP-based curriculum would probably include, at a higher logical level, appropriate Lakatosian reminders concerning core and protective belt concepts and the important differences among Inductionist, Falsificationist, and other general views. Presumably we would want to draw from both progressive and degenerating research programs for comparative purposes. But among those we believed to be progressive, would we not want at least one from each of the following areas: mathematics, physical sciences, human sciences, history, religion, literature, and the fine arts?

## *Conclusion*

*The Marxist Theory of Schooling* offers a plausible account of how knowledge advances and of the purpose of schooling. Although Matthews fails to establish unequivocally that APE is a degenerating research program, the book challenges the liberal-rationalist to examine assumptions often taken for granted. If this should happen, Matthews has achieved his purpose.

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