

ALTHUSSER'S EPISTEMOLOGY: the limits of the theory of theoretical practice

Paul Patton

'Let us say that public positions must always be judged against the system of positions actually held and against the effects they produce' - Althusser, Essays in Self-Criticism (p115)

Introduction

The settling of accounts with 'Althusserianism' has been on the order of the day for some time now. The recent publication of Essays in Self-Criticism, however, makes available for the first time to English readers the author's own judgements on his earlier work (1). His view has not changed much since 1969, when the initial rectification was published as a foreword to the Italian edition of Reading Capital. What was then an 'error' in the conception of philosophy has now become a 'deviation'. The change in terms reflects the further development of the metaphor (2) of philosophy as a field of battle: the class struggle in theory. It was a deviation, though, from a line which is never straight; an 'error' in a field of theory for which truth is undefined. Overall, the view with respect to his earlier texts is that, while their argumentation may have been deviant, the positions they took up were and are correct. The 'Elements of Self-Criticism', then, contain more than an element of self-justification. Nevertheless, they are useful as a point of departure for reflection on those earlier essays.

The fundamental position was that of combatting certain theoretically and politically dangerous tendencies within marxism, with the aim of restoring its political power and status, such that it might regain its political effectiveness. Althusser sums it up as follows: 'I wanted to defend Marxism against the real dangers of bourgeois ideology: it was necessary to stress its revolutionary new character; it was therefore necessary to 'prove' that there is an antagonism between Marxism and bourgeois ideology...' (ESC, p105). The grounds on which he undertook this defence and this 'proof' were epistemological ones. Althusser sought to establish the novelty of historical materialism by defending it as a science, in the strongest sense of the word. Marx's achievement was compared to that of Galileo, who 'opened up the continent of physics to science'. Insofar as the proof of this radical novelty was undertaken on the basis of a proposed theory of the difference between science and ideology, Althusser's marxist philosophy undertook the primary task of an epistemology: the elaboration of I am indebted to members of the Radical Philosophy editorial collective, and to Alex Bellamy, for their comments on a previous draft of this paper. Wherever possible, quotations from French works are taken from the published English translations. Otherwise, the translations are my own.

1 That is, the essays in For Marx, Allen Lane/Penguin, 1969, and Reading Capital, NLB, 1970, henceforth referred to as FM and RC respectively. Essays in Self-Criticism, NLB, 1976, is referred to as ESC.

2 Metaphors are very important in Althusser's philosophy: '... in philosophy you can only think ... by the use of metaphors' (ESC, 107, n1, 140). Much of this paper is concerned with the limits of certain of his metaphors, esp. knowledge as production.

concepts and theses which would permit the demarcation of science from other kinds of theoretical discourse. Dialectical materialism, then, was thought to be the philosophical theory within which the scientific character of historical materialism could be demonstrated.

Althusser's marxist philosophy, however, was no ordinary epistemology, but an 'historical epistemology', or 'theory of science and of the history of science' (RC, p145). The defence of historical materialism as a science also rested upon certain historical claims about the beginnings of all sciences and about the epistemological break which marked the emergence of historical materialism itself. Conversely, the understanding of the new science founded by Marx, the science of history, and of the mechanism of the birth of this new science, pointed towards 'the concepts of a general theory of the history of the sciences' (RC, p153). Hence the development of this marxist philosophy was thought to lead towards 'a revolution in the traditional concept of the history of the sciences' (RC, p44); a revolution embodied in dialectical materialism itself, and made possible by the existence of historical materialism.

The original Althusserian enterprise thus embodies a dual aim, insofar as it proposes both a theory of demarcation of the sciences and a theory of their history. This duality surfaces clearly in the division of theoretical labour carried out by Althusser's rectification, a fact which might lead one to suspect that the attempted unification of epistemology and the history of science in a theory of theoretical practice represented an impossible task. After the new definition of philosophy, first announced in the essays in Lenin and Philosophy, the job of demarcating and defending science falls to philosophy itself, whereas the historical task is to be met by a theory of the 'material, social, political, ideological and philosophical conditions' of the process of theoretical production (ESC, pp124, 156). This latter, however, remains in the state of its enunciation in Althusser's subsequent work.

Whereas for Althusser himself, and French readers generally, the emphasis on epistemology was always secondary to the political and philosophical aims (3), for English readers the order is often reversed. It is the epistemological project which occupies the centre of interest. Thus, for example, Glucksmann, in her book on Lévi-Strauss and Althusser, begins her discussion of the latter with the claim that 'the project of Althusser and his collaborators in For Marx and Reading Capital is to establish a Marxist epistemology as a basis for a scientific theory of society and history, or historical materialism'(4).

3 See, for example, Pierre Raymond, '... et la théorie dans la lutte des classes', Dialectiques, 15/16, automne 1976, p138: 'His (Althusser's) interest in epistemology was always singularly subordinated to his option of materialist philosophy; in other words, there was never an althusserian epistemology, since Althusser never preached any specialization in an epistemological neutrality, but a relation, constitutive of philosophy, between all philosophy and the sciences, which has nothing to do with epistemology.'

4 M Glucksmann, Structuralist Analysis in Contemporary Social Thought,

Not that it is my intention here to decry the epistemological reading of Althusser's essays from the standpoint of the 'real', political Althusser. Rather, since it has been one of the unfortunate effects of those essays in English to raise the spectre of a Marxist Epistemology, it is against that particular phantom that this paper is directed. Secondly, this difference of effects needs to be explained by reference to the different theoreticopolitical conjunctures in which they were written and then read in English. It may, perhaps, be related to the fact that Marxism's exclusion from serious intellectual consideration in English-speaking academic circles was for so long defended on the grounds of its unscientific character. The influence of Popper's critique in the history of that exclusion is attested to by the number of replies to it (5). Hence, there was a felt need to respond on the epistemological terrain. Reading Althusser in that light undoubtedly helped to emphasize differences at the expense of similarities. In particular, the theory of knowledge as production may have seemed to radically alter the terms of the debate. In some respects it does. Their criteria of demarcation are not the same, and Althusser's anti-empiricism, for example, is more thoroughgoing than Popper's. In other respects, however, as I shall attempt to show, their differences are less important than their similarities.

The Self-Criticism and the theory of theoretical practice

In his 'Elements of Self-Criticism', Althusser himself has taken to task the epistemological aspect of his earlier works. He singles out, in order to denounce, the project of developing a theory of scientific practice in its distinction from other practices (ESC, pp123-4). This project was central to what he now calls an 'erroneous tendency' or 'theoreticist deviation' (ESC, p105), which consisted of reducing the historical process of Marxism's emergence from its pre-history to a simple theoretical fact, the 'epistemological break', and of interpreting Marxism's opposition to bourgeois ideology as a form of the rationalist opposition between truth and error (ESC, p106). However, he has not explained how that 'reduction' was possible within the terms of his former theoretical apparatus, a reduction which is all the more surprising when one remembers that the elaboration of a marxist theory of the history of science was part of the original project. Secondly, whereas he has explained the role played by his ambiguous use of the term 'ideology' in making the opposition of marxist theory to bourgeois ideology appear to be merely a form of the distinction between science and non-science, he has never questioned the notion of science at work in his early texts. Indeed, despite the reservations expressed as to the modality under which Marxism was presented as a science in RC, the notions of 'science' and 'ideology' still figure in Althusser's philosophic discourse, as do familiar themes such as the objectivity of scientific knowledge. The former, Althusser now says, function as philosophical categories, not as concepts, and if marxist philo-

London, Routledge and Kegan Paul, 1974. Cf. also, for example, T. Coughlin, 'Epist. and Science - Feyerabend and Lecourt', Economy and Society 5, no. 1, 1976, p86: 'Althusser's project developed in RC and FM was concerned with the production of an indigenous marxist epistemology', and A. Callinicos' book, Althusser's Marxism, where this tendency is also evident, the question of Marxism's scientificity becoming a central problem of the Marxist philosophical tradition (London, Pluto Press, 1976).
 5. eg M. Cornforth, The Open Philosophy and Open Society, London, 1968. W. A. Suchting, 'Marx, Popper and "Historicism"', Inquiry 15, 1972. Karel Williams, 'Facing Reality - A Critique of Karl Popper's Empiricism', Economy and Society 4, no. 3, 1975.

sophy includes a certain number of theses on the sciences, they are in no way the beginnings of a theory, but simply the 'necessary minimum of generality' (ESC, pp112-16) in order to be able to grasp a concrete object. Nevertheless, this continuity, in the context of the failure to examine the conceptual apparatus with which he formerly sought to distinguish science and ideology, might suggest that only the terms have been changed, and that the conception of science which underlay Althusser's original project persists.

The limitations of Althusser's self-criticism, in fact, become most apparent in his treatment of the central concept of his earlier epistemology, theoretical practice. In FM, he defined the marxist philosophy which it was his aim to constitute as 'the theory of theoretical practice' (RM, pp166-68), and the defence of historical materialism as a science, we thought, turned around the question of the specific character of Marx's theoretical practice. In ESC, on the other hand, he admits that this definition represents the 'clearest and purest expression' of his 'theoreticist deviation' (ESC, pp68, 124). However, while he relentlessly denounces the 'idealism or idealist connotations of all epistemology' (ESC, p124, n19), 'theoretical practice' itself is criticised only to the extent that 'in the existing context, it tended to reduce philosophical practice to scientific practice' (ESC, pp124, 147). Elsewhere, he suggests that the conception of theory as a practice produced positive effects, firstly, in justifying the political autonomy of theory, in opposition to all forms of pragmatism, and secondly, in recalling the material character of theoretical 'production', in opposition to the idealism of pure theory (ESC, pp147, 169). Without wishing to dispute those claims, it should be clear nevertheless that one effect of the fact that Althusser's rectification of his former positions has taken principally the form of the elaboration of a new conception of philosophy is that his former texts are only criticised from the standpoint of this new conception of philosophy, and not from the point of view of anything which might replace the 'theory of science' and of the history of science. The notion of 'theoretical practice' is not criticised in terms of its function in his former theory of science, nor is its role in producing the 'theoreticism' of that theory explained.

The notion of science developed in RC is announced in the following thesis: '... we must completely re-organize the idea we have of knowledge, we must ... conceive knowledge as a production' (RC, p24). Given the earlier definition of 'practice', which was based on Marx's notion of production-in-general, this thesis serves to make explicit what was implied in the claim that theory is a specific form of social practice, theoretical practice. As it stands, however, the thesis is ambiguous, as a result of the familiar process/product ambiguity to which such words as 'production' and 'statement' are subject. A 'production' may be either a product, something which is the result of a production process, or it may be the process itself by which one creates something, in the sense, for example, in which one talks of a theatrical production. In the last essay in ESC, Althusser recognizes this ambiguity, and the fact that he played on it to give a double sense to the thesis:

I was directly and literally inspired by Marx, who several times uses the concept of the 'production' of knowledge, to argue my central thesis: the idea of knowledge as a production. I obviously also had in mind an echo of Spinozist 'production', and I

drew on the double sense of a word which beckoned both to labour, practice, and to the display of truth. (ESC, p189) (6)

He does not, however, elaborate on the effects of this play on the two senses of 'production' in his earlier texts. To anticipate briefly what I shall attempt to establish in what follows: the process of which one can say that knowledge is a product is different in kind from the process of the 'display of truth', which Althusser also assimilates to a process of production. On the basis of this conceptual confusion, he was able to have two quite distinct notions of 'theoretical practice' function in his early texts, one 'Marxist' and one 'Spinozist' notion, all the while covering the second notion by the first. Since, as I shall argue, these two notions are not only distinct but incompatible, unravelling this particular play goes a long way towards explaining both the internal incoherencies of the theory of theoretical practice, and its failure to fulfil the historical and epistemological tasks it set itself. Secondly, it enables us to recognize the mis-reading that is involved in taking Althusser to be operating with only one of these notions of theoretical practice. In general, English language critics and commentators on Althusser have seen only the 'Marxist' notion, and hence taken him to be proposing only a theory of what I shall call 'historical' theoretical practice. Finally, it enables us to uncover the concept of science effectively at work in the text of RC, and to criticize it as a conception of science.

Historical theoretical practice

We are thereby obliged to renounce every teleology of reason, and to conceive the historical relation between a result and its conditions of existence as a relation of production, and not of expression. (RC, p45)

If one takes the knowledge-as-production thesis to involve the 'product' sense of 'production', then its force is to emphasize that knowledge is a matter of systems of concepts which are never simply given, either by experience or by God, but which are always the result of working on other concepts, intuitions or sense-impressions. In this sense, 'knowledges', or systems of concepts, will be the results of a process of production in the same way as any use-value, and what Althusser calls the 'process of knowledge' will be this process of elaborating and systematising new concepts.

One of the many passages in RC which support the idea that the object of dialectical materialism, or the theory of theoretical practice, is in fact the historical process by which one obtains new concepts and theories, occurs in the section in which he discusses Marx's theoretical revolution and Engels' account of it in the preface to *Capital* Vol.II. Althusser claims, for example, that 'the process of production of a knowledge necessarily proceeds by the constant transformation of its (conceptual) object' (RC, p156), and that this incessant transformation of the object of knowledge, which is a precondition for the deepening of the knowledge of the real object, involves 'a labour of theoretical transformation' (ibid). To illustrate, using Engels' example; Lavoisier would have revolutionized chemical theory in this matter: taking Priestley and Scheele's dis-

covery of 'de-phlogisticated air' as the point of departure, he re-examined the entire system of concepts of phlogistic chemistry and transformed them, thus formulating the theoretical discovery of a new element, oxygen, and a new theory of chemical composition. Lavoisier, then, 'produced' a new theoretical object for chemistry, in Althusser's terminology. In the same way, to continue Engels' analogy, Marx's theoretical practice in respect to *Capital* would have been the process of his critical working over of the system of classical political economy on the basis of the latter's internal contradictions, and his transformation of that system into the new concepts articulated into a new theory which we find in *Capital*. A little further on in the same passage, Althusser insists that the study of this mutation in both problematic and theoretical object, which together constitute Marx's theoretical revolution, belongs to 'the discipline which reflects on the history of the forms of knowledge and on the mechanism of their production: philosophy' (RC, 157).

On this account, then, 'theoretical practice' is an essentially historical process. It concerns the genesis of theories, the process whereby new objects of discourse are created. Because of this, and because it is a process of real transformation of conceptual or perceptual raw material into a theoretical product, it can readily be assimilated to a process of production in Marx's sense of the term. Althusser does this in two ways: Firstly, by referring to Marx's 1857 Introduction in talking about it (e.g. in the passage referred to above, RC, p156), thereby suggesting that it is this process Marx has in mind when he talks about the 'assimilation and transformation (verarbeitung) of perceptions and images into concepts' (7). Secondly, by making suggestions towards a theory of this practice modelled on his anti-humanist reading of Marx's theory of economic production. So, just as the labour of individuals in the latter is assigned by the structure of relations of production of which they are bearers, theoretical practice too will be conceived as an objective practice which proceeds according to rule and conditions independent of the individual 'theoretical labourers'. Theoretical practice will thus be conceived as a process without a subject, and Althusser distinguishes it from the 'personal theoretical practice' of the scientist in a way which closely parallels Popper's distinction between the 'second world' of individual beliefs and experiences and the 'third world' of problem-situations, theories and arguments (8). The theoretical practice of which *Capital* is the product, then, will not be a matter of Marx's personal mode of investigation, but of the 'objective' process which resulted from putting to work a certain apparatus of criticism, using concepts drawn from Hegel's philosophy and the socialist movement, on the theory of classical political economy.

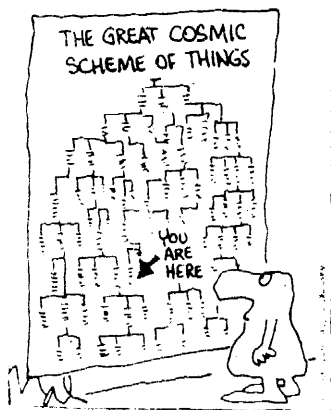
Continuing the analogy with economic production, Althusser suggests that the key concept in regard to the theory of this practice will be that of a theoretical mode of production. That is, an 'historically constituted apparatus of thought' which is composed of 'a structure which combines (verbindung) the type of object (raw material) on which it labours, the

7 This is the N I Stone translation of Marx's phrase. It has been more recently translated by T Carver (*Karl Marx: Texts on method*, Oxford, Blackwell, 1975) as 'the working up of perception and conception into concepts'. The phrase is variously translated in Althusser's text as the 'labour of transformation of intuition and representation into concepts' (RC, 42), or 'the work of elaboration by which thought transforms its initial intuitions and representations into knowledges or thought-concretes' (RC, 86). The nuances in the translations seem to correspond to the different notions of 'theoretical practice'.

8 K R Popper, *Objective Knowledge*, Oxford UP, 1972, Ch. 3

6 See also the following remark, ESC, 137: 'Once he has set aside the (idealist) temptations of a theory of knowledge, Spinoza then says that "what is true" "identifies itself", not as a Presence but as a Product, in the double sense of the term "product" (result of the work of a process which "discovers" it), as it emerges in its own production.'

theoretical means of production available (its theory, its method and its technique, experimental or otherwise) and the historical relations (both theoretical, ideological and social) in which it produces.' (RC, p41). Theoretical practice, then, will be determined as to its form and direction by a theoretical mode of production, and will proceed by the constant interrogation and resultant transformation of its conceptual object. Within a given discipline, this process may be continuous and gradual, when theoretical production is merely bringing to light new aspects of a pre-existing theoretical object, or it may be discontinuous and revolutionary, as in those moments of its history when a radically new theoretical object is produced. It will be necessary, therefore, to make a distinction between theoretical practice of the former kind, which proceeds on the basis of an already constituted and more or less coherent set of objects and means of theoretical production, and theoretical practice of the revolutionary kind, where it is a question of the combination of disparate theoretical elements in the production of a new theoretical mode of production. Within an already constituted science, the determining element of the process of



theoretical production is the problematic, or system of fundamental concepts of the science. It is this which constitutes the theoretical matrix of both the questions posed to the theoretical object, and of the conceptual and methodological means by which answers may be produced.

The reason for spelling out at length this reading of the theory of theoretical practice as a theory of the historical process by which theories are 'produced' is twofold: Firstly, in order to be able to contrast it with Althusser's 'Spinozist' notion of theoretical practice, and secondly, because it is in this sense that it has been interpreted by most English commentators on Althusser. This reading is evident in the early, influential article by Geras (9), which, after an exposition which simply reproduces Althusser's ambiguities with respect to the notion of theoretical practice, takes up the important question of the relation of Marxist theory to the interests and struggles of the working class in terms of 'the theoretical practice by which Marxist theory, as such, was founded and developed' (ibid p84). It continues to dominate Callinicos' recent book on Althusser, wherein we are told that, for Althusser, 'Marxist philosophy, the theory of theoretical practice, concerns itself with the question of the mechanisms that result in the emergence of theoretical formations that are scientific...' (10). Undoubtedly, the assimilation of Althusser's epistemology to certain themes in recent Anglo-American

an philosophy of science played a role in imposing this reading. This certainly seems to be the case with Callinicos, for example, in whose text there is more than a trace of the work of I Lakatos (11). Leaving aside the prescriptive aspect of Lakatos' theory, that is, its claim to provide methodological rules for the appraisal of competing theories, his 'methodology of scientific research programmes' involves claims about the theoretical conditions of theory change in the history of the sciences. The site of the proposed demarcation of science is the historical process of the modification and replacement of theories. Hence Althusser's notion of a theoretical mode of production may be assimilated more or less closely to Lakatos' 'research programme', and the notion of a 'problematic' to Lakatos' 'theoretical hard-core' of a research programme. Both of these latter notions may be taken to refer to the conceptual means by which new theories are generated from old ones. Alternatively, and with due regard to important differences, Althusser's notion of a 'problematic' may be assimilated to Kuhn's 'conceptual scheme' or 'theoretical framework', which also refers to the system of concepts and techniques forming the basis of a period of theoretical elaboration in the history of a science, and which is one of the ways in which he initially used the term 'paradigm'.

Whatever the details of the connections made, one ends up with a variant of the view that the 'theory of theoretical practice' is a theory of the historical process of the production and elaboration of theories. However, to interpret the theoretical practice of which Althusser proposes to give us the theory solely in this way would be to overlook the points in the text where he is careful to distinguish questions about the historical process of theory production from questions about 'theoretical practice'. While it is true that he proposes to consider this historical process as a process of production (witness the quotation at the beginning of this section), it is also true that on occasions he seeks to differentiate the theory of this process by describing it as the theory of the 'conditions of production of theoretical practice' (RC, p43), or the 'theory of the history of theoretical practice' (RC, p61), phrases which would seem redundant were it not for the fact that it is a quite different conception of 'theoretical practice' which dominates the text. Read in the light of this conception, the 'theory of theoretical practice' is not concerned with the phenomenon of theory-change, it is rather an attempt to theorise discourse as a 'production' in order to pose the question of the differential nature of scientific discourse (RC, p69). It is not, therefore, a question of the succession of organized structures of concepts in the history of knowledge, but of the succession of statements within a text.

Spinozist theoretical practice

'When ... I "defined" knowledge as "production" and affirmed the interiority of the forms of scientificity to "theoretical practice", I based myself on Spinoza...' (ESC, p138)

Reading Capital begins with the question: what is it to read? The answers to this question depend on the conception of the object of the operation, written discourse. Althusser argues that Spinoza and Marx, in providing us with a new conception of history,

9 N Geras, 'Althusser's Marxism: An Account and an Assessment', *New Left Review* 71, Jan-Feb 1972, reprinted in *Western Marxism, A Critical Reader*, NLB, 1977

10 Callinicos, *Althusser's Marxism*, pp58-9. Cf. also p33

11 Imre Lakatos, Popper's successor as Professor of Logic at LSE. See esp. his 'Falsification and the Methodology of Scientific Research Programmes' in *Criticism and the Growth of Knowledge*, ed. I Lakatos and A Musgrave, Cambridge, 1970

provide us also with the possibility of a new conception of discourse (RC, p17). For Marx, the rejection of the 'religious myth' of the transparency of history took the form of a rupture with the Hegelian conception of the real as an expressive totality whose essence may be 'read' in its surface manifestations. For Althusser, the rejection of the 'religious myth of reading' takes the form of a rupture with the conception of discourse which sees it as the transparent expression of the truth. The new conception of discourse is advanced in the form of the thesis that knowledge is a production (RC, p24). 'Knowledge' here is equated with theoretical discourse, and the sense in which it is a production is the second of the two senses mentioned above. That is, knowledge, or discourse, is to be considered as a process of production (12).

It is worth remarking in passing on one of the ways in which Althusser's play on the two senses of 'production' produces confusion in his language, in this case the ambiguity of his use of 'knowledge'. For while it is here used as a synonym for theoretical discourse, following the 'product' sense of the knowledge-as-production thesis it refers rather to the static body of concepts 'expressed' in discourse. Hence the possibility of his use of it as a count-noun, in the plural, 'knowledges', or with the indefinite article, 'a knowledge'. This difference in use corresponds in fact to the earlier distinction he tried to make between 'theory', scientific theoretical practice, and "'theory'", the theoretical system of concepts of a particular science at a given time, except that in RC, 'knowledge' is not restricted to only scientific theories or discourse (FM, p168).

In order to see what kind of 'production' is involved in the thesis that discourse may be regarded as a process of production, it is useful to take a detour through Spinoza. Althusser's debt to Spinoza was rarely commented on by critics of his early essays. 'Structuralism' or 'neo-Kantianism' were much more common charges, and Bachelard was thought to be his master in epistemology (13). Perry Anderson seems to have been almost alone in recognizing the extent of Althusser's transposition of Spinoza's system and categories into Marx. Even so, with regard to 'theoretical production', Anderson simply comments that Althusser's 'general essence of production', common to both thought and reality, was his translation of Spinoza's thesis that the order and connection of ideas is the same as the order and connection of things. He does not comment on the precise nature of this 'production'.

Spinoza's model of true theoretical discourse was that of classical geometry. It was the geometrical method which provided men with a 'rule of truth' other than that which consisted of projecting their own relation to the world onto the world itself, and thus conceiving it as ordered by a divine will in ways designed to satisfy His ends (14). Hence, Spinoza's analysis in the *Ethics* proceeds according to this geometrical method. He begins with the

nature of God and shows his His properties follow from His nature with the same necessary connection by which the properties of a triangle follow from its nature. The model of explanation in fact, takes on an ontological significance, since, according to proposition 16, Book 1, the principal characteristic of God is to be productive: From the necessity of the divine nature, infinite numbers of things in infinite ways must follow. Furthermore, since this characteristic applies equally to the attributes of thought and extension, the order and connection of ideas being the same as the order and connection of things, ideas too are governed by this same rule of necessary productivity. Ideas are thus themselves effects, and produce as their effects other ideas. Since God is the supremely powerful being, from whose power all else follows, so nature may be regarded as the 'production' of God. In the same way, the idea of God will be the supremely powerful idea, and the adequate knowledge of God or nature will consist of its 'production' of the system of ideas which are the concepts of His necessary properties. 'Production', that is, in the sense in which the proof of a theorem might be said to be the 'production' of that theorem according to the formal and semantic rules required by the theory. It is a production 'which seems to signify making manifest what is latent, but which really means transforming (in order to give a pre-existing raw material the form of an object adapted to an end), something which in a sense already exists...' (RC, p34). In this sense, then, the ordered exposition (following the necessary connections) of the entire system of adequate ideas will be the process of 'production' of the complete and adequate knowledge of God or nature.

So it is with Althusser and Marx's theoretical 'production' of the knowledge of the capitalist mode of production and exchange. In this sense, Marx's theoretical practice with respect to *Capital* is not a matter of the historical emergence of the theory, but of its exposition in a theoretical discourse which is at once both the 'proof' and realisation of the theory, the 'display of truth'. Hence, for example, Althusser talks of the 'production' of the theoretical object of *Capital* by Marx's analysis: 'The order in which the thought-totality (*Gliederung*) is produced is a specific order, precisely the order of the theoretical analysis Marx performed in *Capital*, the order of the liaison and 'synthesis' of the concepts necessary for the production of a thought-whole, a thought-concrete, the theory of *Capital*' (RC, p48 - my emphasis). The process of theoretical production with which Althusser is here concerned is nothing other than this analysis itself, as it is practised in the discourse of *Capital*, the 'working' of the concepts in Marx's exposition. That being so, Chapter 3 of Marx's 1857 Introduction, where it is precisely a question of the mode of exposition, may be taken for the Discourse on Method of the theory of theoretical practice: '... it is the only systematic text by Marx which contains, in the form of an analysis of the categories and method of political economy, the means with which to establish a theory of scientific practice, i.e. a theory of the conditions of the process of knowledge, which is the object of Marxist philosophy' (RC, p86). It is worth noting, however, that if this use of Marx's text is undoubtedly based on a correct interpretation of its object, it is nevertheless inconsistent with the use of the same text in support of theses about the historical process of 'production' of theories, as Althusser does in the passage referred to above (RC, p156).

Obviously this 'Spinozist' theoretical practice is

12 Cf. P Macherey, *Lire le Capital*, IV, Paris, Maspero, 1973, p12: 'Science is as such a process of thought. It defines therefore a form of exposition which is not to be confused with the real process, nor with the process of investigation of which it is the result.'

13 See, for example, M Glucksmann, *ibid*, p99: 'Althusser's epistemology was very largely based on the ideas of Bachelard.' The charge of Kantianism seems to have originated with A Glucksmann's article 'Un Structuralisme Ventriloque', *Les Temps Modernes*, no. 250, 1967, reprinted in *NLR* March-April 1972, and in *Western Marxism, A Critical Reader*, *ibid*. For remarks on Althusser's Spinozism, see the introduction to Glucksmann's article therein, and Perry Anderson, *Considerations on Western Marxism*, *NLB*, 1976, pp64f. Although written in 1974, this book was only published last year.

14 Spinoza, *Ethics*, Book I, appendix

of a quite different nature to 'historical' theoretical practice. Not only are they distinct practices - the existence of the theoretical object as a result of the historical process is both a logical and historical pre-supposition of the analysis practised in Capital - but the 'dialectic' of the two processes is not the same. The discoveries of surplus-value and the distinction between labour and labour-power are not reproduced in the course of the exposition, and it is at best a metaphor to suggest that the exposition involves a process of real transformation of concepts in the sense required by Marx's notion of production. The status of Althusser's central thesis, then, is rather like that of claiming that grammar is a production, where this is intended to mean both that grammars are historical products, and that grammars function in producing, or generating, sentences. Problems would only arise if one tended to confuse the production of grammar with grammatical production. Precisely such problems do arise in Althusser's text, since, while he claims that knowledge is a production in both senses, he never draws attention to the fact that it is not the same 'production' in each case. Worse, he attempts to minimise the differences in theorising both of these 'productions' in the terms of Marx's analysis of economic production.

Firstly, he attempts to attribute to both the form of a process of production in Marx's sense. In For Marx, Althusser elaborates a general schema of theoretical practice, modeled on Marx's analysis of production-in-general: this involves the operation of what he calls Generalities II (theoretical and methodological concepts) on Generalities I (intuitions and representations) to produce Generalities III or 'knowledges' (FM, pp183-4). This schema, however, remains indeterminate with respect to the difference between 'historical' and 'Spinozist' theoretical practice. Thus, on the one hand, in his essay 'Marx's Relation to Hegel', Althusser applies this schema to the historical process of Marx's discovery. He suggests that Capital may be regarded as the result of Hegel (GII) being put to work on English political economy and French socialism (GI's) (15). On the other hand, however, he also suggests that it may be applied to the 'process of theoretical practice' which is Marx's exposition in Capital (RC, p90). This suggestion is taken up in Macherey's contribution to Reading Capital, where the metaphor involved in assimilating the process of exposition to a process of production in Marx's sense is extended to its utmost limit (16).

Secondly, just as the historical process of theoretical production was conceived as having a structure analogous to that of economic production, so Althusser attempts to do the same for the discursive process. To return to the connection between the theory of history and the theory of reading: Althusser argues that Marx, in rejecting the notion of the transparency of the real, proposes a theory of history as determined by a 'structure of structures' (RC, p17). His own position, then, is to argue for the extension of this principle of the opacity of the immediate (which exists also in Spinoza) to discourse. The invisible structure which governs at once the reading and writing of a text is precisely

its problematic (17). Thus understood, the notion of a 'problematic' is the system of fundamental concepts of a theory which constitutes the basis for the 'labour' of concepts in its exposition. It is that which underlies and allows the 'production' of the theoretical object in and by a theoretical discourse.

We can see, then, how the play on the two senses of production also induces a parallel ambiguity in the notion of a 'problematic'. This is equivalent, in fact, to the ambiguity in the expression 'conditions of possibility' of a science, described by Foucault (18): In one sense, this may refer to the conditions which define the science as such, that is, which define the formal and semantic rules the observation of which is required in order that a statement belong to the science, and which govern the intelligibility of its discourse. These conditions are internal to the discourse of the science itself. To illustrate, using Althusser's principal conclusion with regard to the epistemological novelty of Marx's theory: the theoretical object of Capital, he suggests, is structured in such a way that its exposition requires a concept of the effectivity of a structure on its elements (RC, Ch.9). This exigency makes itself felt, for example, in Marx's discussion of the tendency of the rate of profit to fall, where both the tendency itself and its counter-acting influences are presented as the effects of the mode of production. Althusser's claim, then, is a claim about the conceptual conditions of the specific form of intelligibility of Marx's discourse. That is, a claim about the nature of its 'problematic' in this sense. On the



other hand, 'problematic' may refer to the conditions of historical existence of a science, which are external to it and which cannot be assimilated to the former conditions. Those criteria of the science itself cannot account for its historical appearance. Thus, for example, while it is true as Althusser claims that Marx's conception of the capitalist mode of production and exchange implies a non-Hegelian conception of the form of the social totality and its parts (i.e. Marx's 'topographical' conception), it is also true that Hegel's conception represented an essential, historical condition of the possibility of Marx's critique of political economy. It was this which provided him with a point from which to criticize the empiricism of Ricardo, for example, who, while he begins correctly from the thesis that it is labour that determines value, proceeds to attempt the immediate reconciliation of the economic phenomena with this law. Or, to take an example of a quite different kind of 'condition of possibility'

15 Althusser, Politics and History, NLB, 1972, p170

16 Macherey, *ibid*, esp. p44, where in describing the 'reciprocal labour and mutual transformation of the concepts in the opening sections of Capital, Ch.I, Macherey says: 'This labour must make them (the concepts) pass from their primitive state of ideological concepts, borrowed from more or less scientific theories (Generalities I) to the state of scientific concepts (Generalities III)'.
17 This sense of 'problematic' is clearly defined by S Karsz, Théorie et Politique: Louis Althusser, Paris, Fayard, 1974, pp34-5: 'To know a problematic is to know the mechanism of functioning of a set of texts. We call "problematic" the conditions of theoretical production, and we understand by "text" a certain kind of production.'

18 M Foucault, 'Reponse au Cercle d'epistemologie', Cahiers pour l'Analyse 9, etc 1968, translated in Theoretical Practice 3/4, 1971, see esp p124

of a science, consider the role of the so-called 'Ricardian socialists' in the history of marxism: While their theoretical criticism of classical political economy is vastly inferior to Marx's, they did nevertheless open up the possibility of a new modality of discourse, one which does not simply consider the functioning of capital in its various forms from the standpoint of the capitalist, but which considers it from the standpoint of those whom it exploits.

Insofar as Althusser's notion of 'problematic' refers both to the conditions of intelligibility of texts and to the conceptual conditions of the production of new concepts and theories, it straddles these two heteromorphous systems. Up to a point, the notion can bear this ambiguity, thus being able to serve as the conceptual hinge between the two notions of theoretical practice. Within an already constituted science, for example, the elements picked out by the term can serve both as the condition of intelligibility of the discourse(s) of the science, and as the positive heuristic for its elaboration and development. The point at which this dual function breaks down, however, is in precisely the situation with which Althusser is concerned: the 'production' of a radically new theory. The 'problematic' which enabled the historical production of Marx's theory is not the same as the 'problematic' which governs the intelligibility of the text of *Capital*. This point is important for understanding Althusser's 'reduction' of the epistemological break which marked the emergence of marxism to a purely theoretical event. Briefly, it is because the discussion remains at the level of analysing the difference between Marx's 'problematic' in the textual sense, and that of classical political economy, that the question of this rupture as a historical event is passed over.

Science and ideology

The interference between the two notions of theoretical practice which results from Althusser's play on terminology also provides the basis for a certain amount of confusion about the science-ideology distinction. On the historical interpretation of the notion of a 'theoretical mode of production', his claim that there is a difference between the mode of production of science and the mode of production of ideology (RC, p43) might be taken to situate this distinction at the level of historical theoretical practice. *Capital* would then be a scientific work in virtue of the process by which it was produced, as a result, in the history of knowledge. Callinicos seems to take just this view of the matter: 'Rather than from propositions like the Newtonian laws of motion, scientificity derives from what Lakatos called *heuristic*, the theoretical structures that made their discovery possible' (Callinicos, p54).

In fact it is on the basis of the Spinozist notion of theoretical practice that Althusser draws the science-ideology distinction in RC. He outlines at the beginning the aim of their philosophical reading of *Capital*: to determine its epistemological status, the place it occupies in the history of thought, and in particular, to determine whether it is a scientific or ideological work (RC, pp14-15). From the beginning, this epistemological question is posed in terms of the specific character of the discourse of *Capital*, and of its theoretical object, and the relation between the two: '... we posed *Capital* the question of the specific difference both of its object and of its discourse...' (RC, p14) (19). In order to see

¹⁹ See also Macheray, *ibid*, p7, where in explaining the import of his epistemological reading of *Capital*, Ch.1, section 1, he says: 'the question posed in this reading of a paragraph is very simple: "In virtue of what is

exactly how the science-ideology distinction is drawn, however, we need to consider the question of the mechanism of what Althusser calls the 'knowledge-effect'. The point of this latter notion is to circumvent the empiricist problem of knowledge, which, he suggests, rests on the idea that the specific character of knowledge, its function as knowledge, depends on its relation to the real, its correspondence to the real, for example. Instead, he proposes that this specific character of knowledge depends on its creation of an effect of intelligibility of the real, by virtue of a mechanism interior to theoretical discourse itself. In order to explain this mechanism for a given discourse, Althusser suggests, we need to take into account the operation in it of the 'forms of proof' of the theory. It is the operation of these 'forms of proof', in imposing a certain logical order in the succession of concepts in the discourse which give the discourse its apodictic character. Althusser's model here is Spinoza's system of adequate ideas, which, as we have seen, is itself modeled on the form of classical mathematical discourse. Hence, just as the mere statement of a theorem of geometry does not give it the status of a theorem, that requiring a proof according to the existing forms of mathematical scientificity, so the mere statement of Marx's theory of the capitalist mode of production and exchange cannot provide the knowledge of that real object. In order to provide an 'effect of intelligibility of the real', the thought-object must be 'produced' in an exposition governed by the 'forms of proof' internal to historical materialism. These forms, Althusser insists, are distinct from the 'forms in which the knowledge was produced, as a result, by the process of the history of knowledge' (RC, p67). Thus, in affirming the interiority of the forms of scientificity to theoretical practice, it is, as Althusser states in the passage from *ESC* quoted above, the Spinozist notion of theoretical practice that he had in mind. Furthermore, it follows that his overall position is one which sharply distinguishes the context of discovery from the context of justification, or proof, another point which his theory of science shares with that of Popper.

However, the outline of the mechanism of the 'knowledge-effect' does not, by itself, allow us to distinguish science and ideology. It is a question only of the status of theoretical discourse as such, since Althusser treats the 'knowledge-effect' as a generic object which includes both the ideological knowledge-effect and the scientific knowledge-effect (RC, p66). The question of demarcation is posed, then, in supposing that the mechanism of this effect is different in each case, that is, at the level of the differential nature of 'Spinozist' scientific theoretical practice. Nor does the distinction rest there. For if the effect of intelligibility of the real is produced in the course of the exposition of the theory, the condition which underlies it is the hierarchised system of basic concepts of the theory, i.e. its problematic in the first sense of that term mentioned above. It is, in fact, the form of systematicity of the concepts constituting the problematic of the theory that Althusser isolates as the condition of specifically scientific discourse (RC, pp68, 84-5). Hence, in order that there can be a scientific discourse, there must be a system of concepts such that the appropriate kind of apodictic discourse is possible, a system which in fact provides 'the adequate knowledge of a complex object by the adequate knowledge of its complexity' (RC, p107). Once again,

Marx's discourse a scientific discourse?'

it seems, Althusser's model is Spinoza's system of adequate ideas, with the important difference that whereas Spinoza's metaphysics at least offers an account of what it is for a concept to be the adequate concept of its object, Althusser offers no such account. It should be clear, in any case, that the concept of science underlying Althusser's project involves no reference to the historical process of theory 'production'. Its real site is rather the form of systematicity of the problematic, where this is considered solely under its aspect of condition of intelligibility of texts. The scientificity of *Capital*, therefore, resides neither in the historical process by which it was produced, nor immediately in its exposition, but in the underlying system of concepts which make that exposition possible. Before going on to discuss the consequences of this conception of science, however, it is as well to complete the discussion of the internal problems created in Althusser's text by his failure to distinguish the two theoretical practices.

The autonomy of science

Althusser has been accused of contradiction, by Geras, for example, in maintaining both that science is relatively independent of other social practices, its development nevertheless being dependent in some degree on its relations with other levels of the social formation, and that science is totally autonomous and therefore devoid of dependence on its social and historical conditions of production (20). This 'contradiction', however, may be explained by the fact that it is not the same science, or theoretical practice, in each case. It is only with respect to science considered as 'spinozist' theoretical practice that Althusser wants to claim complete autonomy and independence from other practices. This is implied in his claims about the radical interiority of the forms of this practice so far as the sciences are concerned, as well as his claims about the socio-political limitations on ideological theoretical practice. He nowhere claims this sort of radical independence for the 'historical' theoretical practice of the sciences (which is not to say that this might not still be an autonomous practice, with its own means, raw materials and specific mechanism, not reducible to other practices).

It is not only the failure to distinguish the two notions of theoretical practice, however, which gives this 'contradiction' argument a foundation in Althusser's text. This confusion is also encouraged by the problems created by the definition of the object of dialectical materialism. This is supposed both to be simply 'theoretical practice', and to be an object distinct from the object of historical materialism. Thus, M. Glucksmann, for example, concludes on the basis of this that for Althusser, 'the history of science is independent from the history of society' (Glucksmann, p122).

The status of Marxist philosophy

If marxist philosophy, or dialectical materialism, is presented as a discipline quite distinct from historical materialism, its existence is nevertheless supposed to depend on the existence of the latter. Althusser's founding thesis in this respect is that Marx, in founding the science of history, also founded a new philosophy, the principles of

which exist in the 'practical state' in his 'theoretical practice': 'We will say that marxist philosophy exists "in the practical state" in *Capital*, that it is present in the theoretical practice of *Capital*. (21) Clearly, the principles of a theory of theoretical practice could only exist 'in the practical state' in *Capital* to the extent that this work itself constitutes a process of production. Hence, just as it is the Spinozist notion of theoretical practice which operates in the science-ideology distinction, so it is 'Spinozist' theoretical practice which embodies the principle of marxist philosophy, and so underpins the project of disengaging the latter from Marx's text. This assumption is also necessary in order to explain the 'circle' implied by this project: the necessary application of that philosophy, which involves a theory of discourse and of reading, in the reading of Marx in order to constitute and develop that philosophy itself (RC, p34).

There was, however, another argument put forward to establish the de facto dependence of dialectical materialism on the existence of historical materialism: Insofar as the former was a theory of the history of science, it was only possible after the opening up of the continent of history by historical materialism (22). This argument, however, points to the instability of dialectical materialism's claimed status as a discipline radically distinct from historical materialism, an instability for which we can now see the reason. This independent status was founded on the supposed difference of its object from that of historical materialism, and the object of dialectical materialism was 'theoretical practice'. This distinction of objects poses no problems so long as one considers only 'Spinozist' theoretical practice. However, insofar as dialectical materialism was also thought to be the theory of 'historical' theoretical practice, it becomes difficult to distinguish its object from that of historical materialism. Indeed, considered under that aspect, one cannot see why the theory of theoretical practice should not just be a 'regional theory' of historical materialism (23).

That this play on the two notions of theoretical practice should have threatened the status of dialectical materialism should come as no surprise. It is on just this point that, for the most part, the rectifications of the theory have been carried out. We can now see, however, that this instability is only the symptom of a more profound heterogeneity embedded in the very project of a theory of theoretical practice. In order to do so, we need to recall the twofold orientation of this theory as it was originally proposed: it was directed both towards a theory of the history of the sciences, the process of their creation and development, and towards an epistemological task, the demarcation of sciences from other kinds of theoretical formation. We know that the project of a unified theory of the history and epistemology of the sciences was part of the Althusserian problem-situation at the time: in a presentation to Macherey's article on Canguilhem's philosophy of science, written in 1964, Althusser wrote that marxist philosophy demands such a unified theory and, further, that 'It is precisely this unity which is today a problem and a difficulty' (24).

21 Althusser, 'Sur le Travail Théorique', *La Pensée* 132, Avril 1967, p15

22 This argument was most clearly stated in Althusser's 'Matérialisme Historique et Matérialisme Dialectique', *Cahiers Marxist-Léninistes* 11, 1966, pp112f. It is also present in RC, however: 'And if this new science is the theory of history will it not make possible in return a knowledge of its own pre-history?' (RC, 15)

23 As Geras suggests, *ibid*, p82. This is in fact how Althusser now proposes to conceive of the theory of the 'material, social, political, ideological and philosophical conditions' of the production of knowledge. *eg ESC*, 124

24 Althusser, presentation to Macherey's article, 'La Philosophie de la

20 Geras, *ibid*, pp80-84. See also M. Glucksmann, *ibid*, p125, and A. Cutler, 'The Concept of an Epistemological Break', *Theoretical Practice* 3/4, p78, for the view that 'science is absolutely autonomous, it is not part of the social formation, it is not in the superstructure.' On the 'contradiction', see also R.D. Amico, 'The Contour and Coupures of Structuralist Theory', *Telos* 17, 1973, pp86-7

The theory of theoretical practice, we may suppose, was thought to be that unified theory of the history of the sciences and their epistemology.

The internal problems of the theory of theoretical practice, however, derive from the fact that the notion of science required to fulfil the historical task, and that proposed to serve as the basis for the demarcation, were quite incompatible. At one point in the text of RC, where he is attempting to specify the question of the mechanism of the 'knowledge-effect', Althusser sharply distinguishes the theory of this mechanism from the theory of the process by which the knowledge was produced, as a result, by the history of theoretical practice (RC, p61). Here, the fundamental heterogeneity of the project emerges clearly: we see that if the theory of theoretical practice proposes to answer both historical and epistemological questions about the sciences, it does so only to the extent that it is the theory of a different 'theoretical practice' in each case. The epistemological task of demarcating science from ideology is answered in terms of 'Spinozist' theoretical practice, that is, at the level of the conditions and processes which give the discourse its apodictic character. Ultimately, this is a matter of the system of basic concepts and forms of proof considered 'synchronically', in their static internal organization. It leads, therefore, to a fundamentally a-historical conception of science. The historical task, on the other hand, is to be met by a theory of the history of the forms of theoretical practice in the former sense. That is, by a theory of the conditions and processes of the 'production' in the historical sense of a given theory or theoretical result. The latter process is external and prior to the discourse of the science. The logic of the two processes is not the same. The apparent combination of the two in the theory of theoretical practice is only possible on the basis of a conceptual sleight of hand, that of defining both the historical process of the emergence of new theory, and the process of its functioning in discourse to produce an effect of intelligibility of the real, as processes of theoretical production, and attempting to subsume them both under a general notion of 'production' derived from Marx.

Failure of the historical project

Having specified above the conception of science in terms of which Althusser proposes to distinguish it from ideology, we are now in a position to see more clearly why he should have found himself 'unable to grasp' the emergence of historical materialism as other than a theoretical event, and why the epistemological break should have been treated in terms of the rationalist opposition between truth and error. Both derive from the fact that it was the epistemological task, and the conception of science underlying it, which governed his treatment of the break.

On the indications given as to the theory of the history of theoretical practice, the historical account of that 'mutation by which a new science is established in a new problematic' (RC, p153) would have been an account of the historical 'production' of a new theoretical mode of production. Nor would this account have been restricted to the theoretical

Science de G Canguilhem', *La Pensée* 113, 1984, p51. See also D Lecourt's remark in his *Marxism and Epistemology*, *NLB*, 1975, p127: 'By making this philosophy-making theory - the "theory of theoretical practice" and by making the scientific character of this discipline, already announced by Marx, depend on the factual existence of "historical materialism", of the science of history, Althusser was able to think that he could found the unity of the Epistemology and the History of the sciences, hitherto only practised and postulated.'

elements of the historical conditions of possibility of the new theoretical formation. Considered as a product, a new science would be, in part at least, the result of extra-theoretical forces and movements, political, economic or institutional. The notion of science in terms of which Althusser proposes to distinguish marxism from ideological theoretical discourse, however, is an entirely theoreticist one. Insofar as it is specified, this concept involves no reference to anything beyond the internal, conceptual structure of a given discursive formation. It does not refer either to other discursive elements (shifts in the 'modality' of discourse, for example) or to non-discursive practices or institutions. This conception, in fact, reproduces in the domain of the history of science the distinction between 'internal' and 'external' history. Since sciences are defined at the level of their 'spinozist' theoretical practice, it follows that the history of a science is in the first instance a history of changes in the structure of that practice. That is why, for example, Althusser was able to formulate the question of the relation between 'science' and other social practices in terms of their 'articulation' of the one upon the other, that is, in terms of a relation of exteriority.

It should come as no surprise, then, that on the basis of such a concept of science, Althusser should have reduced the historical event of the emergence of historical materialism to a purely theoretical one. In fact, his discussions of the epistemological break are confined to showing the existence in Marx's works, from *The German Ideology* onwards, of a new theoretical apparatus: that is, new concepts systematically organized in a way different from both Marx's own prior works and those of his predecessors in philosophy and political economy. Thus, in RC, where the discussion of Marx's theoretical revolution never goes beyond the question of the difference between his theoretical object and that of classical political economy, Althusser's approach is limited to pointing up Marx's conceptual innovations, and the new mode of functioning of his concepts in comparison to those of classical political economy. It was never a question of putting the emergence of this new theoretical object into its political and social context, or even in the context of a broader range of discursive events. It was not, therefore, as Balibar puts it, a question of seeing how 'the class struggle, which is by no means a theoretical process, produced effects on the theoretical terrain'. (25)

Even on the purely conceptual level, however, the break was not dealt with as a process of conceptual change in need of explanation. The object of political economy, for example, is only described from the standpoint of Marx's theory. The fact that there is shown to be a discontinuity at the level of concepts and structure does not change the direction of the description, nor the fact that it amounted only to the iteration of differences between Marx and political economy, from the standpoint of the former. Whereas this procedure was essential for the 'proof' of the radical difference between *Capital* and bourgeois political economy, and hence for the defence of the former as scientific, it in no way amounted to dealing with the historical process of the rupture. It was not a question of treating classical political economy in its positivity; of posing, for example, the question of developments within it which made possible the theoretical and discursive

25 E Balibar, *Cinq Etudes du Matérialisme Historique*, Paris, Maspero, 1974, p268

positions of the subsequent critique of capital and its political economy. In short, the exigency 'to treat the ideology which constitutes the pre-history of a science, for example, as a real history with its own laws' (RC, p45) was not respected. Althusser's 'Spinozism' was not unrelated to this manner of dealing with the break: he mentions that the thesis that 'the true is the sign both of itself and of what is false' seemed to him to authorize the retrospective treatment of classical political economy (ESC, p137). It was only from the standpoint of the true (Marx) that error and partial truth (political economy), and their difference, could be described. Such a 'recurrential' history, it seems, is necessarily teleological. The only kind of question it can pose, in this case to political economy, is the question of the limits of its 'vision', why it was unable to see what Marx was able to see. In other words, in taking Marx's theory to be the truth at which classical political economy was aiming, such a history necessarily poses the question why political economy could not progress further than it did.

It should be clear, in any case, that the predominance of the epistemological aspect of the theory of theoretical practice, and the conception of science on which that rested, gave rise to an internalist and teleological account of Marx's difference from classical political economy. Althusser's approach was not, finally, one which made it possible to determine the place occupied by Capital, or any other theoretical work, in the history of knowledge.

Spinozist epistemology

Althusser's rationalist interpretation of the rupture between Marxist science and bourgeois ideology may be explained by the extent to which his characterization of that opposition takes over the terms of Spinoza's distinction between adequate and inadequate ideas. Althusser himself has explained the role played by his use of the term 'ideology' in this 'rationalist interpretation': While on the one hand he used it as a term for an element of the super-structure, characterized by its practical social and political function, he also, on the other hand, used it as a term for error and illusion in the realm of theory, in short, the 'other' of science (ESC, pp119-20). This latter usage, he admits, was not unrelated to Spinoza's 'first kind' of knowledge (ESC, pp135-6, 141). In Spinoza's terms, this is composed of inadequate ideas, which merely designate our relation to external bodies, without providing knowledge of them. Thus, in FM, Althusser talks of ideological 'concepts' as merely designating aspects of the real without giving us the knowledge of it (eg FM, p223). Similarly, in his initial presentation of the relation of Marx's object to that of classical political economy, Althusser takes over the terms of Spinoza's characterization of inadequate ideas as 'conclusions without premises': political economy, he says, is like a science of conclusions insofar as it takes as its object the domain of immediately given economic facts (Ethics, II, prop. 28, dem.; RC, p159).

There is one further effect of Spinoza, the real author of this 'rationalist-speculative drama', which Althusser does not mention. This is his identification of science with the true, in Spinoza's sense of that term. This follows from the fact that the conception of science which underlies the treatment of the break is modeled on Spinoza's system of adequate ideas, and it is the other side of the assimilation of ideology to Spinoza's inadequate ideas. For Spinoza, what is true is necessarily so, and true

knowledge, or the system of adequate ideas, is unique. This is the system of ideas which are the concepts of their objects, and it reproduces in the order of thought the order and connection of things. Spinoza's general epistemological parallelism of idea-ideatum, of which the parallelism of thought and the real is the primary instance, is taken over in Althusser's remarks on the relation between concept and theoretical object. He talks, for example, of the 'adequate' concept of a given theoretical object. The overall effect of this assimilation of science to Spinoza's system of adequate ideas is to reproduce, in the theory of science, the notion of the uniqueness of the true. For Althusser, it seems, there is only one possible scientific theory of a given empirical domain. Indeed, the assumption that this is so would seem to be necessary to make sense of his proposal that the scientificity of historical materialism be sought in the peculiar systematicity of its basic concepts. It is the only assumption which saves this proposal from the charge of formalism, in the sense that it would be consistent with there being many different systematic, and therefore scientific, theories of the same domain. Thus, the defence of Marxism as a science founded as it is on the assumed adequacy of Marx's theoretical object, takes the form of supposing that the object of Capital is the object of political economy. Marx's critique is supposed to have been also the 'construction of the true concept of the object, at which classical Political Economy is aiming in the Imaginary of its pretensions' (RC, p159), or, in another phrase, the definition of the economic instance by the construction of its concept. It is this same idea, that there is but one theory possible which could provide the scientific knowledge of a given empirical domain, which underlies the metaphor of 'theoretical continents', and the claim, which persists in Althusser's texts, that Marx opened up to science the continent of history (eg ESC, pp56, 107).

Now, quite apart from the evident circularity in Althusser's defence of Marxism as a science, this doctrine also has certain effects in the theory of the history of the sciences: it reinforces the tendency to give a teleological account, by making the pre-history of a given science the history of the attainment of the true theory. Secondly, it introduces a certain necessity into the history of knowledge. At the limit, this conception implies that, once a 'scientific' theory of a given domain is established, any other 'scientific' theory of that domain is unthinkable. Conversely, no other theory could have crossed the threshold of scientificity and 'opened up' that domain to science. This is perhaps the strangest consequence of the conception of science at work in Althusser's text, and the least consistent with a non-teleological view of history. Since we do not accept the idea of such a necessity in the history of economic systems, capitalism was not, after all, inevitable, it is difficult to see why we should accept it with regard to the history of the sciences.

Concluding remarks

If Althusser's theoreticist and absolutist conception of science is the price to be paid for the defence of Marxism as a science, then clearly the price is too high. However, the important conclusion to be drawn from all this is not merely that Althusser has failed to provide any real theoretical justification for the claim that historical materialism is a science, rather, it is the theoretical tactic itself

that needs to be put into question. For Althusser only repeats in Spinozist form the operation which is common to all epistemological theories of demarcation of science from other kinds of theoretical discourse. That is, to attempt to provide a philosophical justification for a particular social selection and hierarchical distribution of theoretical discourses, a certain 'regime of truth' in Foucault's phrase (26). This real, institutional demarcation among discourses organized into disciplines is certainly historically contingent and probably epistemologically arbitrary to the extent that, for example, a different conceptual system could have served as the basis for the physics which capitalism required in order to develop its mastery over the forces and means of production. It is also conditioned from end to end by the operations of political power. Althusser's conception of science, it seems, denies that contingency, that arbitrariness, and, insofar as he insists on the 'objectivity' of scientific knowledge, denies that it has any but external relations to political power.

Fundamentally the same operation is carried out by the empiricist alternative to Althusser's Spinozist absolutism, recommended by such diverse figures as Karsz and Lakatos (27). The proposed demarcation between science and ideology, or non-science, remains theoreticist, to the extent that it looks for differentiating features within the discourses themselves, their method or their conceptual structure. On this view, however, the difference is an empirical matter which must be formulated theoretically through the analysis of

particular sciences and particular ideologies. One is thus faced with the problem of how to conduct such an enquiry without having already a concept of the difference, and, more importantly, the question of where this prior concept comes from, if not from the existing social institutionalization, hierarchization and valuation of certain kinds of theory. This seems to have been the case with Popper, for example, who began his search for a demarcation criterion from the conviction that Marxism and Psychoanalysis were unscientific in a way that the physics of Newton or Einstein were not (28). Thus, from the standpoint of this broader perspective, Althusser's theoretical tactic of defending Marxism as a science occupies the same theoretical space as Popper's denunciation of it as a non-science some 30 years ago. The project of a theoreticist demarcation of science being common to both, Popper uses it as a weapon against Marxism, whereas Althusser simply takes up the opposing position. That is hardly a position likely to encourage reflection on the ideological role of the demarcation itself, or on that of the epistemological values claimed for those discursive formations accepted as scientific, their progressivity, rationality or objectivity. Such reflection is one of the essential tasks facing a historical, materialist theory of the sciences.

26 M Foucault, 'The Political Function of the Intellectual', *Radical Philosophy* 17, summer 1977, p13

27 S Karsz, *ibid*, p64, Lakatos, 'History of Science and its Rational Reconstruction' in *Boston Studies in the Philosophy of Science*, Vol. VIII, ed. R C Buck and R S Cohen, D Reidel Publ. Co, 1971

28 K R Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge*, NY, Harper Torchbooks, 1973, p34

EDUCATION FOR INDUSTRY

Roy Edgley

Unlike other old folk who reach such an advanced age, compulsory universal education in England has not celebrated its centenary with a telegram of congratulations from the Queen. On the contrary, the Prime Minister, to say nothing of a range of lesser luminaries from the Secretary for Education down, has suggested that the quality of our education leaves a lot to be desired. Having examined and found wanting so many of its pupils in the past, the education system is now getting a dose of its own nasty medicine: it is widely said to be failing too many in a different sense, and itself needs to be taught a lesson. Who will educate the educators? Chiefly, it seems, industry. By the standards set by industry, the quality of our education is inadequate, and only by aspiring to them will it reach the required heights.

These doubts about the quality of education have been of two general kinds, both springing from the conviction that between education and industry there is a 'gap' where there should be 'links'. On the one hand, it's said that students are not reaching high enough levels in the subjects they study, and in particular that they are falling short in both literacy and numeracy. On the other hand, the subjects they study, especially at the more advanced stages, are in many cases of the wrong sort: too much of the arts and humanities, too little science, mathematics, and technology. I shall be concerned chiefly with the former.

One fairly predictable response to this opening of 'the great debate' has been horror at the conception

of education involved in the criticism, though the reaction has for some been tempered by acknowledgement of our dire economic crisis and of society's right, as paying the piper, at least to some extent to call the tune. We should not, it seems to have been felt, dig in our heels too stubbornly against the proposed changes, provided they are recognised as a temporary and partial adjustment to meet an emergency, neither permanently nor wholly diverting education from its real ideal: knowledge and learning for their own sake, or cultivation for leisure, or the initiation of the young into our cultural heritage, or the conversion of barbarians into rational autonomous beings fit for our liberal democratic civilisation. On this view, quality in education is defined in terms of standards set not by industry, nor by any other part of the vulgar economic business of producing material goods, but by high culture, that is by pure science and mathematics, philosophy and history, literature and the arts. The standard curriculum signifies the continuing influence of the Aristotelian ideal of liberal education, the education of a gentleman, its vocational content both incidental and restricted to 'the professions', law, medicine, civil service, church, and teaching itself.

I will return to that. First, let us look more closely at the contrary claim, that an essential measure of quality in education is its success or failure in turning out people with the abilities and skills required by industry. The view I want to focus on is not directly that, but an underlying assumption