ON THE NATURE AND APPLICATION OF EDUCATIONAL THEORY:
A STUDY IN SOCIAL THEORY AND EPISTEMOLOGY

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ABSTRACT

This thesis is concerned with the nature and application of educational theory. In particular, it will examine the contribution social theories can make in guiding educational practices which are intended to achieve specific educational aims.

Recent social theories relevant to education have focused, primarily, on the relationship between school and society under capitalism. Such theories have been developed in order to illuminate two central questions, "to what extent are schools independent of the class structures and ideologies of capitalist society?" and relatedly, "to what degree, under capitalism, can schools develop the critical social awareness necessary for personal autonomy?". In this thesis it is argued that a number of recent theories fail to help in providing answers to these questions because they do not offer convincing explanations of the school-society relationship. The reason for this is that they are guided by inadequate, epistemological methodological and metaphysical assumptions. In particular, they have been guided either by a naturalist view of social theory predicated on a Logical Positivist view of natural science or by an anti-naturalist view. This latter view typically asserts that explanations for social action must necessarily make reference to concepts such as rules, meanings, goals and purposes. And it is noted that these concepts can have no place within a Logical Positivist account of science. However, I argue that neither the guiding assumptions of naturalists or anti-naturalists, who have accepted a Logical
Positivist view of natural science, can enable the construction of theories which capture significant dimensions of schooling under capitalism.

In this thesis a number of Liberal and Radical theories of the school-society relationship, which have been influenced either by the guiding assumptions of Logical Positivism or by its anti-naturalist contrasts are critically examined. It is argued that while Radical theories such as those of Young, Freire and Bowles and Gintis have made a contribution to an understanding of the school-society relationship, their explanations of this relationship are inadequate. Consequently, they fail to guide educational practice by not showing how a pedagogy aimed at developing the critical social awareness necessary for personal autonomy is possible. On the basis of the criticisms of these Radical theories an alternative theory of the school-society relationship is advanced, one which is guided by the tenets of a Realist theory of natural science suitably qualified to apply to social theory. Through the development of this Realist social theory it is possible to explain how relevant aspects of educational practice can be guided, by the alternative social theory developed, in order to fulfil the aim of personal autonomy.
INTRODUCTION

This thesis is concerned with the nature and application of educational theory. In particular, it will examine the contribution social theories can make to guiding educational practices which are intended to achieve certain educational aims.

Recent social theories relevant to education have focused, primarily, on the relationship between school and society under capitalism. Such theories have been developed in order to illuminate two central questions, "to what extent are schools independent of the class structures and ideologies of capitalist society?", and relatedly, "to what degree, under capitalism, can schools develop the critical social awareness necessary for personal autonomy?". The issue of the degree to which educators are free to pursue their chosen aims and the extent to which they are effective in their pursuit, has assumed prominence as a result of the failure of the Liberal educational reforms implemented in the late sixties and early seventies. Liberals wanted to develop a meritocratic society in which the rewards of status and wealth were to be distributed according to a person's cognitive ability and level of motivation. Such a theory was regarded by Liberals as being both just and rational because it would be based on values concerned with equality of opportunity and the full development of the individual's potential. And with respect to the latter personal autonomy came high on the list of Liberal educational aims. The task fell upon schools to provide the foundations for the meritocratic society by giving
each child an equal start in life and by encouraging personal qualities such as those of autonomy and creativity. In believing that schools could provide the foundations for the just and rational society, Liberals made two fundamental assumptions about the school-society relationship.

Liberals assumed that capitalist society and the conflicts endemic within it, had been superceded by a post-industrial, technologically sophisticated, society characterised by consensus. As such, it was considered that the educational system was being freed from the discriminatory practices found under capitalism, and Liberals believed certain reforms could aid this process. In particular, it had been found that working class and racial minority children had not reached the same cognitive standard as their middle class counterparts on entering school. It was also found that working class and racial minority families did not value education as highly as did middle class families. The implications drawn from these findings were that children from working class and racial minority homes did badly at school because they suffered from cognitive 'deprivation' and poor motivation. To remedy this problem Liberals embarked on various reforms designed to improve the lot of those from 'disadvantaged' homes. Some reforms were designed to take children out of the home environment and place them in a cognitively stimulating pre-school environment in the hope that a pre-school education would enable children from 'deprived' homes to begin primary school at the same level of cognitive ability as more fortunate middle class children. Other reforms were intended to remove selection practices which discriminated against working class
and racial minority children later in their school careers.

Underlying these reforms was the further assumption that education was relatively autonomous from other causal processes in society in two senses. On the one hand it was assumed that the curriculum and school organisation were neutral with respect to competing groups in society - that there was no built-in bias which favoured the middle and upper classes. On the other hand it was thought that the effects of working class and racial minority cultures could be cancelled by taking children from these 'deprived' cultures at an early age and subjecting them to a middle class educational environment. It was also assumed by many that early educational intervention in a working class child's life would lead, within a generation, to the demise of 'deprived' cultures and the poverty associated with them.

However, I shall argue that the failure of the Liberal reforms can only be adequately explained by viewing the above assumptions as erroneous. In particular, that while the form taken by capitalist societies has changed they are still governed by underlying structures which generate endemic conflict and discrimination. And moreover, that education is an arena for this conflict. Two specific consequences follow: firstly, various groups are systematically discriminated against in education. Secondly, educational ideologies are produced which obscure this discrimination. In sum Liberal educational reformers have been unable to achieve their aims because they have been misled by ideological theories which obscure the real nature of capitalist society and the
discriminatory practices it produces. If therefore, we are to create educational practices which are genuinely promotive of such aims as providing equal opportunities in education and the development of personal autonomy, then we need an accurate understanding of the constraints imposed by the wider society on educational practices.

A number of Radical educational theorists have attempted to provide an explanation of the school-society relationship which would account for the failure of the Liberal reforms. On the basis of these explanations, Radicals have made suggestions as to how a pedagogy concerned with the development of a critical social awareness, necessary for personal autonomy, can be initiated under conditions of conflict and oppression. Critical social awareness is important to Radical educators because it is through an education promotive of such awareness that people can become cognisant of the real relations which govern their oppression.

In connection with the aim of personal autonomy, it is important to note that the primary dispute between Liberals and Radicals is not about educational aims as such, for both typically accept the values underlying the notion of autonomy. Rather their differences centre on their respective descriptions of, and explanations for, the school-society relationship. As there is some consensus regarding the desirability of the aim of personal autonomy and because I am sympathetic to the radical view, for which the aim of personal autonomy is crucial, I shall relate my discussion of social theory to this specific educational aim.
Prominent amongst Radical theorists who have developed an understanding of education under capitalism are Young, Freire, and Bowles and Gintis. However, I shall argue their theories are inadequate in three crucial respects. Firstly, they have not been able to give an adequate account of the generation and transmission of ideology in education. Consequently they have not been able to explain how education serves to keep people ignorant of the real relations which obtain under capitalism. Secondly, they have not been able to explain satisfactorily the relationship of individuals to the social structures generated by capitalism. As such, they have been unable to accurately describe the nature of the social structures which oppress people. They have also been unable to satisfactorily explain the way in which these structures determine people's lives. Thirdly, the consequence of these descriptive and explanatory failures has been that these theorists have not been able to provide satisfactory prescriptions as to how an education promotive of autonomy can be initiated, or how such an education can help to transcend capitalist structures.

One significant reason why I believe Radical theorists have failed to capture important dimensions of schooling under capitalism is that their theory construction has been guided by metaphysical, methodological and epistemological assumptions which are inadequate. In this respect their theories share weaknesses which are also common to Liberal theories. It is possible to distinguish two broad sets of these high level assumptions which have guided both Liberal and Radical theories. Either these theories have been guided by a naturalist view
of social theory predicated on the Logical Positivist view of natural science; or they have been constructed according to anti-naturalist tenets, where the anti-naturalist contrast has been made against a Logical Positivist view of science. The anti-naturalist view typically asserts that explanations for social action must necessarily make reference to concepts such as rules, meanings, goals and purposes. Furthermore, it is claimed that concepts of this kind cannot be cited in a causal explanation. Consequently, explanations of social actions are of a different logical order to explanations of events in the natural world. It follows that a Logical Positivist theory of science can have no application to an understanding of the social world, since the methods it employs presupposes the idea of law-like causal regularities and it precludes reference to mental and teleological terms such as intention, purpose and goal. (For further discussion on these points see chapter 1.)

However, I believe a Realist theory of natural science, suitably qualified, can be profitably used to guide a social theory which can better comprehend schooling under capitalism. In particular, I shall argue that a Realist method, that of Retroductive-Hypothetico-Inferentialism (RHI), can be used to develop an understanding of the social world. And, that Realism can admit the concepts necessary for adequately explaining the social world. As such, a Realist guided social theory can provide an adequate account of the generation and transmission of ideology in education. It can also explain the specific sense in which people's lives are determined by social structures; and it can explain how those social structures
can be transcended by people coming to have knowledge of them. It thereby provides the basis for an account of how an education promotive of autonomy can be developed.

In order to establish the position I have outlined here, the thesis is divided into two parts. In Part One, I examine one prominent Liberal theory (Technological-Liberalism) and the Radical theories of Young, Freire, and Bowles and Gintis. Here, I shall show how their guiding metaphysical, methodological and epistemological assumptions limit their ability to adequately explain the relationship between school and society under capitalism. In Part Two, I develop an alternative social theory, guided by Realist epistemological and methodological assumptions and a metaphysics consistent with these, which I believe can provide a better explanation of the school-society relationship.

In the final chapter I show how the Realist social theory, I have developed, is related to educational aims and to other theories which may be used to inform and guide educational aims. I also sketch a pedagogy for change which I believe can encourage the development of personal autonomy. In a relevant sense, then, this thesis can be regarded as an examination of the epistemological and social limits and possibilities for educational theory.
Notes and References to Introduction

1. Evidence for the Radical support for Liberal aims and ideals is offered by Bowles and Gintis when they say:

"Liberalism puts forth a promise it cannot make good. The promise it extends is that of democracy, equality, liberty and personal fulfilment for all, within the context of capitalism....Socialism, should it come to pass in the advanced capitalist countries, will however have little to do with the inevitable process of advancing forces of production....Rather it will be the real fulfilment of the Liberal promise."


The specific aim of personal autonomy is implicit in the work of all the radical theories I shall be examining and it is explicit in the theory of Liberal-Rationalism. (For a discussion of the latter see chapter 8.)
PART ONE
CHAPTER ONE

LIBERAL AND RADICAL THEORIES OF EDUCATION
AND THEIR GUIDING ASSUMPTIONS:
AN OVERVIEW

The promise held out by Liberal Educational reforms in the sixties and seventies has failed to materialise and educational institutions and aspirations are now in crisis. The premiss on which these reforms were initiated, the idea that education could simultaneously deliver greater affluence, a more just society and the opportunity for personal development, has been rejected with a vengeance by conservative governments in the West.

The failure of these reforms and subsequent educational retrenchment prompts the question of whether the theories employed to guide Liberal reforms were adequate in their representation of the school-society relationship. Education was regarded as pivotal to the realisation of the 'good society' as Liberals conceived it. What kind of society did they hope for and how would education help to bring it about?

While there were differences in emphases and priorities, according to the different theories Liberals held, the following will provide an overview of their general aims.

Economically they sought a rationalisation of the capitalist system, one where rewards would be distributed
according to merit rather than inherited privilege. The vehicle for this transition was to be a technology which would bring not only accelerated economic growth and hence affluence but in addition a society based on the principle of equality of opportunity. The latter was necessary because as production became more technically complex its management and operation would have to be given to those most competent, irrespective of their social background. Intelligence and motivation would replace the accidents of birth as the criteria for reward.

The Liberal view of society was fundamentally inegalitarian. Differentials in rewards favouring the able were needed as incentives for the long periods of training required to operate the new technology. Moreover authoritarian relationships at work were deemed necessary to promote efficiency. A production system, it was noted, is greatly speeded up by specialisation where each person has a particular function or task at which they can gain fluency through constant practice. Co-ordination of these tasks required a chain of command at the apex of which was the expert, one privileged in technical skills and knowledge. Since the experts alone understood the demands of technology it was they who were best qualified to make decisions. As these were the people who also received the highest rewards the demands of production determined the general hierarchical nature of society - a hierarchy ordered according to the distribution of technical knowledge and skills.

Fundamental to the Liberal vision was a view of society based on consensus. Clark Kerr and his associates put it in
the following way:

"The industrial society, ........ develops a distinctive consensus which relates individuals and groups to each other and provides an integrated body of ideas, beliefs and value judgements ........ In the industrial society science and technical knowledge have high values, scientists and technologists enjoy high prestige and rewards.

Taboos against technical change are eliminated and high values are placed on being 'modern' and 'up-to-date', and in 'progress', for their own sake."

Underwriting this consensus was the notion that society would be placed on a rational footing. Technology was inspired by science and the latter was considered the paradigm of rational achievement. By association, the social change prompted by technological developments was seen as rational, and the scientists and technologists who orchestrated the change as the high priests of progress.

But the 'rationality' of industrial society also extended to its ethical foundations. While there was inequality it could be justified on two counts. Everyone would have the opportunity to compete for the most prestigious positions: conveniently the demands of efficiency coincided with the ethics of equality of opportunity. While for those who failed there was the consolation of knowing that they too would benefit from the affluence the industrial society created.

Politically the marriage between ethics and efficiency found its way into Liberal conceptions of democracy. Sociologists regarded representative parliamentary democracies as the means by which an elite managed the stability and consensus necessary for industrial progress. This form of democracy was
celebrated for its low level of political activity amongst citizens whose contribution was restricted to the casting of votes once every four or five years. Elections were regarded as a means by which the political elites would compete for votes, thereby ensuring their responsiveness to the needs and demands of the people. In this way consensus was maintained with minimum political upheaval and in the interim between elections 'professional' politicians were able to get on with the business of administering industrial society.  

Philosophers also applauded parliamentary democracy as the form of government a "rational man could accept". This was because its procedures of free elections, open debates and the acceptance of a plurality of viewpoints embodied the moral principles of freedom of expression and association, equality before the law and respect for persons.  

In sum, what Liberals offered was a Whig history of Western societies in which the relative poverty and unjustified privilege of traditional societies was being replaced by affluence and rewards based on rational principles that everyone could accept. In the period between the middle fifties and middle sixties there were grounds for believing the foundations for this Liberal vision of society had been laid. There was increased affluence, a degree of social mobility and political and industrial stability.

Within this presiding ethos education assumed a prominent position as the instrument of a technologically led society.
It was seen as a means for wrenching society out of the traditional patterns of education and socialisation and training youth for the new skills of industrial society. As Burton Clark put it:

"formal schooling becomes a necessity as the home and the community became ineffectual, even incompetent, in training the young for adulthood .... the changing nature of knowledge and work brought the children of the common man into the schoolhouse and gave to the schools a greatly broadened and deepened role in cultural transmission and continuity. This basic trend of industrial society promises to continue without limit, for knowledge constantly expands, production techniques grow more complex, and educational requirements of work steadily rise."^4

The function of schools, then, was to prepare students for industrial society. They were to transmit the appropriate knowledge and skills required for work, select and promote those with ability, (while 'cooling out' those considered less able), and inculcate the relevant values necessary for the maintenance of consensus.

However, for Liberals of humanist persuasion, this view of education was too narrow and did not emphasise sufficiently the ideals of personal development. The romantic reaction of Progressives and the more sober response of Liberal-Rationalists^5 may be seen as a protest against this instrumentalist conception of education in which people were regarded as subordinate to technological imperatives.

However this humanist reaction was rapidly taken over by the events of the late sixties. By then flaws were beginning to appear in Liberal societies which, through rapid industrialisation and wealth creation, were becoming impersonal and obsessed by consumerism.
Moreover the much vaunted benefits were not in evidence: despite the increased affluence many were still living in poverty. And the privileges of an upper class background remained influential, particularly in determining educational and occupational success. The consequence of these failures was that the consensus gave way to industrial and racial conflict. In education an alienated youth expressed its dissatisfaction through protest and strikes culminating in the widespread unrest of 1968.

One response to this dissatisfaction amongst educators was to turn to radical theories to provide an explanation for what had gone wrong and a more adequate account of how desired educational goals could be brought about. In this context the work of Young, Freire and Bowles and Gintis assumed prominence.

It is an argument of this thesis that neither Liberal theories of education nor their Radical counterparts have been able to adequately theorise the school-society relationship and hence, they have not been able to effectively guide educational practice.

In the following two chapters I shall criticise a representative Liberal theory and three Radical theories to establish this argument. The Liberal theory has been chosen because it expresses a particularly influential view of the school-society relationship held by policy makers, researchers and teachers. The Radical theories have been chosen because of
the prominence they have achieved, and because each of them retains valuable insights which will help in developing a more adequate theory of the school-society relationship. These theories are:

**Technological Liberalism**

This is a thoroughgoing determinist theory in which educational processes function according to technological-meritocratic imperatives. It is the theory to which the radical theories I shall be dealing with reacted in part or in whole. The theory has produced a series of anomalies which cast serious doubts upon it, of which the failure to account for the persistence of privilege in education according to social background is the most notorious.

**Michael Young and the 'New' Sociologists of Education**

Inspired by the work of Michael Young, the 'New' sociologists of education sought to theorise the curriculum as the product of power struggle, in which it represented the imposition of a particular view of the world by dominant groups in order to produce compliance and failure among the dominated. This group was termed the 'New' sociologists because they broke with received methods of enquiry and assumptions about society made by sociologists of education at the time. They also challenged certain received views amongst analytic philosophers of education. This was because in order to mount their critique of the curriculum they assumed knowledge to be relative and determined by power struggles rather than as being established on certain epistemic foundations.
Paulo Freire, the Pedagogy of the Oppressed

Friere's work, which was derived from his experiences in South America, became popular as a model for revolutionary pedagogy in Western societies. However, it needs to be shown how his notion of pedagogy can be applied in the Western context. In one respect this thesis may be regarded as an attempt to do just that.

Bowles and Gintis, the Correspondence Theorists

These authors produced what may be considered the first comprehensive Marxist theory of Western education. In doing so they attacked the Liberal description of society as misguided and mystifying. Rather than seeing post-industrialism as having replaced capitalism they argued that the latter had entered a new phase. As such the inequalities which the Liberals could not account for could be explained through a correspondence between school and capitalist work relations, in which the inequalities of work were reproduced in the schools from generation to generation. Most significant in their criticism of the Liberals was their attack on the doctrine of 'IQism' - the claim that the persistent inequalities in education are the product of inherited intelligence rather than the transmission of privilege by social class. While these criticisms appear decisive their alternative explanation of the relationship between schools and work under capitalism presents a number of problems which suggests their theory cannot adequately guide educational practice.

I shall criticise these theories at three levels. At
the first level of empirical propositions I shall point out that the anomalies in Technological-Liberalism suggest their general view of a society powered by technology moving inexorably toward meritocracy is quite false. These empirical anomalies can be taken as discrediting their account of the school-society relationship. Because of this we would be well advised to consider alternative Radical accounts.

At the second level of substantive theory I shall criticise the theoretical commitments of Technological-Liberalism which produce the empirical anomalies. With respect to the Radical theories under consideration I shall show they cannot provide an acceptable explanation of the school-society relationship. I shall argue that an acceptable explanation is dependent upon an adequate account of the relationship of individuals to social structure: the theories under consideration do not have such an account. In addition they cannot relate ideology, particularly as it appears in the curriculum, to social structure, though their insights will be helpful in building an alternative account that can theorise these entities.

I shall show at the third and highest level of abstraction how the metaphysical, epistemological and methodological assumptions of these theories preclude their ability to adequately capture reality. In the case of the Radical theories the reason why they cannot develop a view of structure and ideology is precisely because they assume the same kind of commitments as their Liberal counterparts. What I am suggesting and what I shall show in my criticisms is that these high level
assumptions exercise a determinant influence on lower-level substantive theorising. In order to build an adequate theory of the school-society relationship these high level commitments will have to be shown to be inadequate and rejected in favour of more defensible alternatives.

It will be clear that discussion at this level assumes a critical importance for my project. I shall therefore spend some time spelling out the nature and relationships between the higher level commitments adopted by the theories under analysis. These commitments may be termed a theory's interpretive structure. They determine the view of human-nature-in-society that the theory make take, the basis on which knowledge of society can be had and the means by which that knowledge can be appropriated.

One way of focusing on the interrelationships between them and the significance for theory development is to look at them through the lens of the debate on naturalism. Since the Enlightenment, at least, there have been two fundamental positions on how knowledge may be gained of the social world, that of naturalism which argues knowledge can be achieved by using the methods of the natural sciences, and that of anti-naturalism which rejects this idea.

The adoption of one or the other position will have far reaching implications since it will determine what is an admissible explanation and the appropriate evidential basis for it. Moreover, there is a close relationship between the particular view of naturalism taken and a theory's metaphysics.
For example, after the demise of Aristotelian conceptions of science in the Middle Ages it became a shibboleth that science is concerned with non-teleological explanations of causes: a view closely associated with the rise of Positivism as the dominant theory of science. Until recently when certain aspects of the Aristotelian conception of science have again found favour, it was assumed by naturalists and anti-naturalists alike, that a science of society would make no reference to the intentions and purposes of human beings and would view their behaviour as causally determined. Anti-naturalists have frequently argued their case on this issue claiming that what is distinctive of human beings is that they have goals and purposes which they systematically seek to achieve. As such explanations for social action must necessarily make reference to intentions, goals and purposes; and the meanings and rules by which they are interpreted. However, anti-naturalists argue that explanations which make reference to concepts of this kind cannot be cited in causal explanations. That is, explanations of social actions are of a different logical order to explanations of events in the natural world. Therefore, a theory of science which presupposes causal explanations in terms of law-like regularities and which precludes explanations which employ teleological concepts such as those of intention and purpose, can have no application to an understanding of the social world.

Anti-naturalists have further argued the metaphysical thesis that it is because people have systematic goals and purposes they seek to achieve that they have free-will. But a conception of science which precludes teleological concepts
also rules out the possibility that people may act according to free-will rather than having their behaviour causally determined. The epistemological view of how we achieve knowledge of society is, then, closely associated with a theory's metaphysics. In fact the relationships between them are far more complex than this brief discussion indicates and it is for this reason I shall take time to distinguish them.

A further reason for analysing these high level commitments in terms of the naturalism question is that the position I take on this issue will exercise a determinate influence on the alternative account of the school-society relationship I shall offer in Part 2 of this thesis. It will, of course be appreciated that in suggesting that these commitments exercise a decisive influence on a theory's architecture I am already committing myself to a particular view on the nature of theories. This position will be justified in chapter 4 by which time these connections will have been shown to exist through criticisms of the theories indicated.

The stance taken on naturalism depends upon the particular view of natural science which is held. In the Twentieth century the received view of natural science has, until recently, been based on theories within the Positivist/Empiricist tradition. Most notable, among these theories, is that of Logical Positivism which was developed by the Vienna Circle in the early 1920's. However, the strict version of Logical Positivism was regarded as too stringent to be defensible. In consequence the subsequent research effort was directed toward securing a more liberalised Positivist theory
of science, known as Logical Empiricism. It is against the 
tenets of these theories that contemporary protagonists of 
anti-naturalism have contrasted their position (Keat 1971, 
Giedymin 1975, Bhaskar 1979). As such, an exposition of the 
doctrines which have guided these theories is necessary for 
an understanding of the issues involved. There are, however, 
difficulties in characterising recent Positivist/Empiricist 
theories of science. On the one hand, the term Positivism has 
often been used loosely in the contemporary literature. It 
has become a general term of abuse for theories which are 
disapproved of, even though their relationship to Positivism 
may be tenuous. There is, therefore, a good case for providing 
a concise account of Positivism. On the other hand, there is 
always a danger of caricature in attempting to provide a brief 
account of a tradition such as Positivism, which has undergone 
considerable evolution in the Twentieth century.

I propose, therefore, to offer what may be called a 
strict version of Logical Positivism as the most robust and 
uncompromising theory within the modern Positivist/Empiricist 
tradition. This will enable me to make a clear contrast 
between the received view as exemplified by Logical Positivism 
and the Realist theory of science I shall subsequently advocate. 
It should be borne in mind that the doctrines that comprise the 
strict version were the subject of debate among Positivists. 
In this respect the strict version can best be viewed as a 
research programme, insofar as the major questions discussed 
by Positivists concerned the satisfactory formulation of these 
doctrines. In terms of their influence on social theory these 
doctrines may be viewed as a guiding light - the basis for
the application of a Positivist view of science to social theory construction. While I intend to offer a comprehensive list of the doctrines which comprise the strict version, it should be noted that these doctrines are independent of one another, though they dovetail into a consistent and powerful theory of science. As such it should not be expected that all the doctrines comprising the strict version will be manifest in any one social theory.\textsuperscript{10}

The Strict Version of Logical Positivism

1. Knowledge has certain, or near certain, foundations based on observations and statements of logic.

   According to this doctrine observation is regarded as epistemically and ontologically privileged. Epistemically, statements made about observations can, in principle, be established as true or false with certainty or near certainty.\textsuperscript{11} Ontologically, only that which can be observed can be said to exist. In this view, deductive logic is used as a truth preserving vehicle between hypotheses and their observational consequences and in the explanation of a phenomenon as a particular instantiation of a law (see doctrines 8 and 9).\textsuperscript{12}

   For Logical Positivists scientific theories attempt to explain and predict aspects of the observable world. Where two theories conflict in their explanations the truth of one or the other can always be established by reference to observation. In virtue of the view that observation is epistemically privileged, observation statements are taken to be neutral with respect to competing theories. Since, however,
the warrant for knowledge rests on foundations established by
observation, all theoretical statements must, in principle, be
reduced to observation statements. If they cannot, they simply
do not refer to the world: as such, they cannot be verified and
thereby fall into the realm of the cognitively meaningless.
(See the Doctrine of the Verification theory of meaning below.)

2. Theories are interpreted instrumentally.

Since all meaningful statements must be reducible to
observation statements, theories are considered as devices or
instruments which enable scientists to postulate laws and make
predictions. According to this view of theory, theoretical
entities (unobservables) have no real referents. For example,
concepts such as 'force' and 'absolute space' which are found
in Newtonian mechanics are interpreted as referring solely to
mathematical entities. They are terms in equations which
enable scientists to make predictions and no more.

One consequence of this view of theory is that, for
Logical Positivists, the world comprises a 'flat' ontology,
since only that which can be observed can be verified and
thereby said to exist.

3. Statements are considered cognitively meaningful
according to the criteria delineated by the verification
theory of meaning.

According to this theory only statements which can, in
principle, be verified by observation (sense-experience) and
logical statements are cognitively meaningful. In the former
case the meaning of a statement is the set of possible observations sufficient to demonstrate its truth. In the slogan employed by Logical Positivists, the meaning of a statement is its method of verification. Statements of the kind, "there is a cat sitting on the lawn" is taken to be meaningful precisely because there are various methods by which the truth of the statement can be checked. On the other hand the claim that, "absolute space exists as an entity in the real world" is cognitively meaningless because no method exists by which the claim can be verified by observation.

Of the two types of cognitively meaningful statement, those which can be verified by experience are called synthetic, while those which are true in virtue of the meaning of the terms contained within them are called analytic. Statements of mathematics and logic are paradigmatic of the latter kind. Insofar as ordinary language statements like "all bachelors are unmarried" can be translated into statements of truth-functional logic these too are admissible. More specifically Logical Positivists adhere to the tenets of the truth-functional logic developed by Whitehead and Russell in *Principia Mathematica*. One consequence of the view that only analytic and synthetic statements are cognitively meaningful is that metaphysics is rejected as meaningless and the task of philosophy is viewed as the logical analysis and clarification of statements. This is the doctrine of logicism.
4. Philosophy is construed according to the doctrine of logicism.

Logical Positivists define metaphysics as the study of possible objects of speculative knowledge which lie beyond the scope of empirical science (Ayer 1935). Examples would include the attempt to derive all human knowledge from premises whose truth is intuitively certain, the view that there is a reality independent of experience¹⁴ and claims concerning the real essence of things. Attempts to establish knowledge of this order are regarded as misguided and statements made about such possible objects of knowledge as cognitively meaningless. This is because statements about such possible objects of knowledge are not analytic since they purport to make empirical claims about the nature of the world, nor are they synthetic because such statements cannot be verified by experience. Consequently, Logical Positivists reject the view that philosophers should be concerned with questions of metaphysics. Rather Logical Positivists regard their task as that of clarifying the cognitive content of scientific statements by means of logical analysis and the conditions under which such statements may be regarded as meaningful. In this respect the use of the verification theory of meaning to distinguish metaphysics from science is itself an example of this kind of analysis.

As a consequence of the doctrine of logicism, and the view of philosophy derived from it, Logical Positivists also draw a distinction between the contexts of discovery and justification. The former is concerned to explain the production of knowledge claims by reference to biological,
psychological, and social processes. The latter is concerned solely with the validation of knowledge claims and is the preserve of philosophy. Feigl brings out the distinction when he says:

"It is one thing to ask how we arrive at our scientific knowledge claims and what socio-cultural factors contribute to their acceptance or rejection; and it is another thing to ask what sort of evidence and what general, objective rules and standards govern the testing, the confirmation or disconfirmation and the acceptance or rejection of knowledge claims of science."\(^{15}\)

One further consequence of 'logicism' is that Positivists draw a radical distinction between facts and values.\(^{16}\) In virtue of the verification theory of meaning ethical statements are regarded either as cognitively meaningless or they are interpreted as psychological statements which are used to express emotions or to persuade (Stevenson 1944). Again, the reason for this view is that ethical statements are regarded as neither analytic nor synthetic. For example, to say "X ought to do Y" is not a claim which can be validated by reflecting on the meaning of the terms contained within the statement, nor can it be verified by observation. In this respect Logical Positivists embrace a radical version of the doctrine of the naturalistic fallacy.\(^{17}\) This doctrine asserts that descriptive statements do not and cannot entail evaluative statements.

By stratifying knowledge and distinguishing knowledge claims from pseudo-knowledge claims in the respects outlined above, the doctrine of scientism quickly follows.
5. Science is the sole source of knowledge.

This view is embodied in the doctrine of scientism. According to this doctrine it is only by the formulation of synthetic statements and the use of truth preserving logic to connect statements, that empirical knowledge of the world can be gained. It is because of this thesis that Logical Positivists are also naturalists, since if there is to be knowledge of society it is only through science that it can be obtained. The view that science is the sole source of knowledge gives rise to a further doctrine, the idea that science and logic alone comprise the domain of the rational.

6. Science and logic comprise the domain of the rational.

It follows that if scientific and logical statements are the only cognitively meaningful statements then rational discussion must be tied to them, since only that which is meaningful can be part of rational discourse. In this respect the verification theory of meaning can be regarded as delineating the criteria between the rational and the irrational. I shall argue shortly that this view of science, logic and rationality fits in well with the Liberal emphasis on technology, progress and the elevated position of the expert in society. For the moment, though, it is worth pointing out that the significance attributed to technology in Western society is underpinned by the following doctrine.
7. Science, logic and rationality are, in principle, independent of social processes.

In virtue of the doctrine that knowledge is grounded in the certainty or near certainty of observation, the truth of any claim can be established independent of any cultural or social influence. Knowledge is not relative to particular social formations.

It will be appreciated that a conception of science which raises itself above the contingencies of the social world will acquire considerable kudos. And I would conjecture that it is not an accident that Western Liberal societies dominated by the notion of the 'expert' found epistemological support for this idea in Logical Positivism. For one who derived his/her expertise from science was, by implication, also above the influence of the social world. Since, moreover, questions of value, especially those associated with politics are seen as cognitively meaningless, they tend to be transformed into technical questions, arrogated by experts. And, as Habermas (1971) has noted, under these conditions democracy is transformed into government by experts.

The close relationship between science, technology, progress and the expert is established by the rejection of metaphysics, on the one hand, and by two further ideas central to Logical Positivism - the idea that science progresses through the inexorable accumulation of knowledge and the idea that prediction is central to the scientific enterprise. I shall deal with these points in turn.
In rejecting metaphysics Logical Positivists renounce the idea that science has the function (amongst others) of relating particular features of the world to a coherent worldview. Fundamental questions such as, "what kind of world is this?", "how do we fit into the world and how did we come to be?" demand descriptions and explanations which are regarded as meaningless. By ruling out these fundamental questions, science is left the technical task of establishing causal regularities between discrete events, on the basis of which future events can be predicted. What links this view of science to technology is the emphasis on prediction and the possibility of control it allows, since these are both necessary features of modern technology. That the ability to predict and control is a central aim of science according to Logical Positivists is clearly stated by Ayer when he says:

"the only test to which a form of scientific procedure which satisfies the necessary condition of self-consistency is subject, is the test of its success in practice. We are entitled to have faith in our procedure just so long as it does the work which it is designed to do - that is, enables us to predict future experience, and so to control our environment."  

This close relationship between technology and science is supported by the idea that science progresses through the accumulation of knowledge on certain or near certain foundations.

8. Science progresses through the accumulation of knowledge.

According to Logical Positivists the corpus of knowledge is ever expanding on the foundational base of observation through the postulation and verification of increasingly abstract laws which may subsume lower level laws. The means
by which laws are established is through the hypothetico-deductive method. By this method scientific theorising is initiated by the proposal of a hypothesis which takes the form of a law statement from which, in turn, observational consequences may be deduced. These consequences are then checked and if the predicted events occur the hypothesis is verified. After repeated checks the law is deemed to have been established. Prediction, according to this view, assumes a central place in scientific method, it being the means by which the epistemic respectability of a hypothesis is determined. Given the reasonable assumption that what can be predicted can also be controlled, it is possible to see how the Logical Positivist view of scientific progress is allied to the notions of technological and social progress. Science progresses through the development of increasingly abstract laws; these laws form the basis for the prediction and control of events in our environment. But it is precisely the ability to predict and control such events which form the basis for modern technology. In turn, as I suggested earlier in the chapter (see also chapter 2) technology is seen as the motor of social progress. By association technology is legitimated as the agent of rational social change precisely because it is the offspring of science, which is the only source of rationality. 20

This relationship between science and technology is buttressed by Positivists' espousal of the Covering Law model of explanation with its emphasis on the logical symmetry between explanation and prediction; and by the Humean view of causation.
9. Explanation is viewed according to the Covering Law model of explanation.

This model of explanation takes the form of a deductive argument in which the event to be explained, the *explanandum* is deduced as a conclusion from two premisses: the statement of a general law, or more typically a set of general laws, and the statement of the antecedent conditions. These two premisses are termed the *explanans*. This form of explanation can be expressed as follows:

\[
\begin{align*}
\text{explanans} & : (L_1', L_2' \ldots L_n' \text{ Laws }) \\
& (C_1', C_2' \ldots C_n' \text{ Antecedent conditions }) \\
\hline
\text{explanandum} & : E \quad \text{Conclusion}
\end{align*}
\]

The above diagram represents a typical case where the *explanandum* is deduced from a number of laws with a series of antecedent conditions. However, to illustrate this reasoning process I shall make the simplifying assumptions that an event can be explained from premisses which cite one law and one antecedent condition. Suppose we want to explain an everyday occurrence like that of the lights in a house suddenly going out, we can depict the reasoning process involved as follows:

**Always, if there is a break in the electric circuit the lights go out.**  (Law)

There is a break in the circuit.  
(\text{Antecedent condition})

Therefore the lights went out.
There are three further points to note about this type of explanation. The example I have used casts the explanation into deductive-nomological form. As such, one of the premisses from which an event is explained is a universal law (that is the force of the 'always' which prefaces the hypothesis). However, it is possible to employ this model to explain an event where the law premiss is replaced by a statistical generalisation of the form 'if there is an A then there is a statistical probability that B'. In either deductive or statistical version a Humean view of causation is assumed. (See the next section.) One consequence of this account of explanation is that there is a formal or logical symmetry between explanation and prediction. Continuing with the example, if we know of the law concerning the break in electric circuits and we know the conditions under which such a break will occur, we can predict the lights will go out.

As a final point it is worth noting that critics of this mode of explanation have argued that while it enables us to make predictions it does not provide a satisfactory account of why an event occurred. As Keat and Urry put it:

"The inadequacy consists in confusing the provision of grounds for expecting an event to occur, with giving a causal explanation of why that event occurred. The premisses which, for the positivist, constitute the explanans may often be such that they only give us good or conclusive, reasons for believing that the explanandum event will or did occur. They do not necessarily tell us why that event did or will occur." 21

I think this criticism reinforces the point made earlier that Positivism views science as fundamentally concerned with the ability to predict and control, rather than with why things
occur. One of the arguments I shall develop in this thesis is that a Realist theory of science is concerned with the search for important explanatory truths. That while prediction may be desirable it is not necessary to scientific method (see chapter 4). This argument will contribute to an understanding of how a Realist view of science can have application to the social world.

I now turn to a discussion of the final doctrine of Logical Positivism concerning the view of causation which is taken. Here we shall see how the positivist notion of causation supports the Covering Law model of explanation.

10. Causation is based on the Humean model.

In this model causation is viewed as a constant conjunction of observable events, where cause and effect occur between two events under the following conditions: (i) A is contiguous with B, (ii) A is temporarily prior to B, and (iii) whenever an event like A occurs an event like B occurs. The first condition establishes that there is a point of contact between A and B; the second that A precedes B thereby demonstrating that A is the cause and B the effect; and third that the two events are of the kind such that one can plausibly be said to have effected the other. In sum, causation is regarded as a regularity between discrete, atomistic events. Positivists construe laws as comprising universal or statistically probable sequences of such constant conjunctions. As such the latter, when cast into a law statement, form the first premiss in the Covering Law model of explanation. In this respect Positivist models of
explanation and causation dovetail together.

This, then, completes the account of Logical Positivism and I shall now go on to examine some of the implications of this theory of science for social theory.

Some Implications of the Assumptions of Logical Positivism for a Naturalistic Social Theory.

Logical Positivism presupposes a mechanistic view of the social world in which human beings are regarded as passive and their behaviour accordingly determined. This position is generated by Logical Positivism's concepts of law, explanation and causation and the thesis that only that which can be observed is an object for knowledge.\(^2\)

The aim of science, according to this theory, is the accumulation of knowledge through the establishment of laws. Laws in turn are construed as universal causal regularities. Applied to human beings it presupposes their behaviour is such that it can be explained by reference to law-like regularities. But there is a formal symmetry between explanation and prediction: what in principle can be explained can be predicted. It is assumed, then, that behaviour is predictable, determined by a causal chain which it is the business of the social scientist to discover.

The determinist presupposition about the nature of the social world is supported by the ontological and epistemic privilege ascribed to observation. The reason for this is that the privilege ascribed to observation proscribes reference
to unobservables, in this context those referring to internal mental processes and states of mind. And while there have been attempts to provide an observational interpretation of mental concepts it has been forcefully argued that these attempts are inadequate.\textsuperscript{23} They cannot provide the basis for a satisfactory conception of psychological science. In addition, because Logical Positivism rules out proper reference to intentional states of mind, the concepts necessary for a characterisation of free-will or autonomy, in particular those of intention, purpose and goal and the abilities of self-reflexive monitoring associated with these are precluded.

It has, I think, been well established that these mental predicates are required for any explanation of autonomous action.\textsuperscript{24} The possibility of such actions can only be considered if the individual is furnished with the ability to initiate, monitor and appraise actions. But for Logical Positivists the individual is viewed as a 'black box' subject to a chain of stimuli and responses. It may well be that some explanatory notion of monitoring, whereby behaviour is self-adjusted, can be entertained without reference to internal states of mind, but it cannot be of the kind which distinguishes human beings. For what is distinctive of them is not that they can monitor their actions (animals can do that) but that they can rise to the meta-level to assess the methods by which their actions are executed. The vocabulary by which this form of meta-cognition is understood must make reference to mental predicates, in particular those of reflection, understanding and appraisal, where their objects are the first order concepts of intentions, goals and purposes.
I am not asserting a priori that human beings have free-will and are therefore capable of autonomous action: it is quite possible to argue that citing unobservable mental predicates is necessary for explaining actions without believing human beings choose their goals or aims. But I am arguing that an adequate metaphysics would use those concepts which allow the possibility of autonomy. In other words, a metaphysics of human actions should be sufficiently flexible so that it does not rule out a particular range of human possibilities.

For a Logical Positivist, of course, questions of metaphysics are irrelevant to scientific theory, so at the cost of foreshadowing my later argument I should point out why the issue of metaphysics is important. Firstly, in the social sciences the metaphysics we hold has certain consequences for practical action. If we believe people's behaviour is determined, that people are not responsible for their actions, then this has a significant bearing on how they are regarded both morally and judicially. In Western societies punishment is typically predicated on the assumption that the act to be punished was committed voluntarily, that the person who committed the act was in a relevant sense responsible for his/her actions. Hence, if in a court of law a plea of diminished responsibility is accepted, the court is likely to consider the person who committed the act as mentally ill rather than as criminal. And the person will be treated accordingly. Secondly, I shall argue that questions of metaphysics are important for theory appraisal both in the natural and the social sciences. Thirdly, the metaphysics of a theory does have a determinate bearing on the theory's structure as I shall show in the following chapters.
It is for these reasons metaphysical issues are important in the understanding of human beings.26

In addition to presupposing a determinist view of human nature, Logical Positivism also limits the possibility of its own application in practice. The reasons for this are partly conceptual and partly practical and centre on the crucial role of predication. I pointed out in my exposition of Logical Positivism that this theory strongly emphasises the role of prediction as a means of controlling nature (and society when applied to the social world). It is not surprising, then, that Logical Positivism builds prediction into its formal theoretical structure. As I noted in the exposition, explanations are deduced from laws which have been established through the verification of their predicted consequences. As such there can be no explanation without prediction. In addition, I also noted that prediction shares a formal similarity with explanation so that what can be explained can be predicted should the same set of explanatory premisses (the law plus the antecedent conditions) occur again.

A practical consequence of building the notion of prediction into the concept of science is, as many have observed, that when applied to society it has met with little success; very few predictions based on law-like regularities have been established. This is not to deny that certain low level predictions can be made successfully (Thomas 1979) but these predictions have not been able to provide the basis for the accumulation of knowledge in the social sciences in the sense in which they have enabled the accumulation of knowledge
in the natural sciences.\textsuperscript{27}

Naturalists argue that this is a practical objection and does not affect their case in principle. They point out the social world is complex and that it is only through experimental conditions, such as those which are produced in the natural sciences, that the relevant variables can be isolated and the predicted observational consequences of hypotheses tested. Without this process, they argue, laws and successful predictions deriving from them cannot be established.

The problem with this retreat behind the barricades of 'principle' is that science, in this view, is rendered practically irrelevant in guiding our actions and understanding. We may have to wait a very long time before means are found by which laws of society may be established. But the aim of seeking laws, universally construed, encounters a further difficulty because one of the characteristics of the social world is that it is not stable relative to the natural world. In the social world the objects of investigation are subject to faster rates of decay. Moreover the problem is complicated because it appears that some social phenomena decay far more rapidly than others. For example, the education system in Britain has undergone rapid change in the past twenty years while capitalism has endured for over two centuries.

If these features of Logical Positivism present problems for its application to society, then there is an aspect of the social world it cannot comprehend but which is nevertheless fundamental for an understanding of society.
Anti-naturalists have pointed out that the concept of 'behaviour' cannot capture a significant dimension of the social world, namely that meanings are constitutive of actions. The concept of behaviour is not sufficient for differentiating what people do because two sequences of behaviour which are similar may be undertaken for quite different purposes. Clapping one's hands may be a gesture of approval or it may be a means of demanding attention. We distinguish between the two sequences of behaviour according to their meaning. In this respect meanings are constitutive of actions for in performing the action of clapping hands the particular meaning the action has is implicit in it. By clapping my hands I either mean to register approval or demand attention. In order to describe an action, therefore, we need to make reference to a person's intentions and also understand the context in which the action takes on a specific meaning. The practice of clapping hands for attention in Japan may be considered appropriate but in the West it is an unusual way of drawing attention.

Meanings, as such, are not observable nor can they be reduced to the 'verbal behaviour' of individuals (Taylor 1971) for they are a part of language which cannot exist for individuals but only for a community in which it is inter-subjectively understood and transmitted. And, meanings are rooted in practices which we can only make sense of within the context of other social practices. In this latter respect meanings presuppose an holistic view of society, which is at odds with the typical assumptions of Logical Positivism which takes as its data the behaviour of individuals.
There are two reasons why Logical Positivism typically presupposes individuals are its object of investigation. As May Brodbeck puts it:

"Philosophically, the holistic assumption that there are group properties over and above the individuals making up the group, their properties, and the relations among them is counter to empiricism (positivism). For the latter holds that all terms must ultimately refer to what is observable, directly or indirectly, and that what we observe are people and their characteristics not supraindividuals and their characteristics." (my parentheses)²⁸

In addition, the press toward explaining social phenomena in terms of the behaviour of individuals is reinforced by a view of causation as a set of regularities between atomistic events. Whereas individuals and the events they cause can be relatively clearly defined and individuated through observation this is not the case with explanations which presuppose holistic entities. For example, structural-functional explanations make reference to the sub-systems and structures of society which are regarded as subject to causal determination. These holistic entities cannot be individuated by observation and they do not produce atomistic events. However, while Positivism may find its natural object of research in the behaviour of individuals some Positivist doctrines can have application within theories which cite holistic entities in their explanations of the social world. It has been argued, for instance, that structural-functional explanations, such as those used by Technological-Liberal theory, conform to the Covering Law model of explanation. The reason why all Positivist doctrines do not necessarily take individuals as the object of their explanations is that while Positivist doctrines are mutually consistent they are also independent of one another. Therefore, while
theories which are guided by Positivist doctrines will typically make reference to individuals in their explanations, for the reasons Brodbeck gives, it is not inconsistent to find some Positivist doctrines embedded in theories which cite holistic entities in their explanations.

The problems I have raised here concerning Logical Positivism, have only emerged in the past twenty-five years with the mounting criticism of it as a theory of science. But in the fifties there was a genuine belief that a science of society according to Logical Positivist tenets was just around the corner. For example, in 1959 the doyen of Sociology Talcott Parsons could say:

"In the sciences of human behaviour, attainment of what I think the most essential of all the ingredients of a mature science, adequate systematic theory, is a goal close enough to be carefully and deliberately worked for ......

And no less optimistically B.F. Skinner pronounced:

"Nothing stands in the way but cultural inertia ....... We are on the threshold of an exciting and revolutionary period, in which the scientific study of man will be put to work in man's best interest. Education must play its part. It must accept the fact that a sweeping revision of educational practices is possible and inevitable. When it has done this, we may look forward with confidence to a school system which is aware of its tasks, secure in its methods, and generously supported by the informed and effective citizens whom education itself will create."  

As we now know Skinner's confidence was misplaced both in his own theory and in the Positivistic view of science which guided it. Despite the mounting criticisms against Positivism there were still those in the mid-seventies who argued that an educational theory, if it were to be scientific, had to conform
to its tenets (O'Connor 1973, Mounce 1976). But they also recognised that extant 'educational theory' was, by these lights, merely a "courtesy title".31

Others, such as Hirst, accepted significant elements of a Positivist view of science. This is clearly brought out in one of Hirst's replies to O'Connor:

"The social institution of education in which we are interested is not, of course, a natural object and what makes it the thing it is, cannot be set out merely in terms of its observable features....if the delineation of education requires an understanding of human purposes, we can say right away that the study of education must involve more than a study of relevant sciences.....Explanations in terms of beliefs and values, of reasons as well as causes, seems to me logically necessary, and explanations of this kind do not to my mind fall within the pattern of explanation in the sciences — by means of universal generalisations."32

Just as the contrast between naturalistic and non-naturalistic enquiry Hirst adopts here is mistaken, so equally, is Hirst's view of educational theory, as I have argued elsewhere (Lauder 1979).

The net consequence of the failure of educational theory to live up to the standards set by Logical Positivism, or for an adequate anti-naturalist alternative to be articulated, was that of those discussing the nature of educational theory a number came to reject the possibility of any systematic theory which could guide education.33 Their preferred alternative was a reliance on common sense (Lloyd 1976) and on the individual educator's resources. This retreat from 'theory' reached its clearest expression in Dunlop's assertion that:
"We shall have to recognise that what we have to rely on is our own rationality, our own mental powers – including the power of rational judgement – not the rationality of a theory in any form." 34

In what follows I hope to restore confidence in the value of theory in guiding educational practice. Indeed I believe it indispensable.

The contrast between naturalistic enquiry guided by the Logical Positivist view of science and an anti-naturalist view which asserts the necessity of meanings and intentions for an acceptable social theory is misleading. Logical Positivism is not a defensible theory of the natural sciences, as I shall show in chapter 4, consequently there is no justification for using it as a model for social theory. Once its inadequacies have been exposed the way is open for me to argue for an alternative Realist account of natural science which can have application to the social world: one which can meet the objections raised by anti-naturalists to Logical Positivism.

For the benefit of the subsequent discussion I shall clarify the terms of the argument by summarising the objections to a Logical Positivist account of social theory. I shall then advance the criteria necessary for a qualified Realist alternative. Finally, I shall discuss the criteria by which the school-society relationship can be adequately comprehended.

The objections to a Logical Positivist account of a science of society are:
1. It presupposes an inadequate metaphysics of human beings-in-society. In particular it presupposes an a priori determinist view of human beings.

2. Moreover, because it cannot theorise intentions and purposes, it cannot comprehend an important dimension of human interaction - that meanings are constitutive of practices.

3. Logical Positivism cannot provide theories which can guide practice because such theories are necessarily dependent on being able to make successful predictions. The latter are not a typical achievement of social science.

4. In addition, the aim of science, in this view, is to develop universal laws of society. But social phenomena are likely to decay more rapidly than their natural counterparts, thereby making universal laws a highly problematic aim for a science of society.

In contrast, an acceptable science of society would:

1. Allow the possibility of viewing people as agents who seek to fulfill certain intentions and purposes.

2. At the same time view people as determined by certain causal processes where determination is understood as designating the causal limits and possibilities of actions. These may be termed 'structures' which underlie human activity. The relatively enduring nature of these structures can account for continuity in social life, over a period of time, while also
explaining the more transient nature of other aspects of the social world.

3. Acknowledge the importance of meanings as objects of social enquiry.

4. Reject the concept of prediction as necessary to science, and with it the associated Logical Positivist notion of an universal law.

This view of a science of society aims to acknowledge the criticisms of anti-naturalists. It also attempts to steer a middle course between the determinist view of human nature presupposed by Logical Positivism and the voluntarism of some anti-naturalists. It is a Realist theory of social science since it admits intentional states of mind and underlying structures as essences or theoretical entities.

The theories I shall discuss in the following two chapters, cannot, I argue, meet all these criteria, and cannot thereby theorise adequately the school-society relationship.

The central questions regarding the school-society relationship turn on the issue of autonomy. To what degree do extra-school processes determine what goes on in schools; what influences do they exert on the avowed aims of educators and on the consequences, intended or unintended, of what they do?

Any theory aimed at answering these questions must, I think, satisfy three criteria. Firstly, it must explain
the relationship between the structure and organisation of schools and the wider society. Secondly, it must explain the relationship between school content (both the hidden and official curriculum) and the wider society. Thirdly, it has to explain the impact of school organisation, structure and curriculum on educational outcomes.

Each of the theories under discussion will interpret these criteria differently but I shall argue that each produces significant anomalies which suggests that they cannot meet these criteria on their own terms.

In each case whether the theory is determinist or voluntarist it cannot adequately capture the 'space' for autonomous action. The determinist theories, guided by Logical Positivist and/or Functionalist tenets (Technological-Liberalism, and the Correspondence Theory of Bowles and Gintis) allow the school no autonomy; they are thereby unable to theorise examples of autonomous action. The voluntarist theories (Young, Freire), on the other hand cannot adequately theorise the constraints on autonomous action.

A more progressive\(^ {35} \) theory to these will, I suggest be able to meet these criteria and explain the anomalies of competitor theories.

I begin by examining a Positivist guided Liberal theory, Technological Liberalism.
Notes and References to Chapter One


5. This is the theory of the 'London School' of philosophers of education. I discuss this theory in chapter 8.

6. In particular those of the 'London School' for a discussion of their view of knowledge see chapter 8.

7. I mean by this that level of theory which makes substantial commitments about the nature of the world in contrast to the minimal but significant commitments made at the metaphysical level. The difference between these levels is one of degree not one of kind. I use the term 'substantive' in this sense throughout the thesis.

8. The debate between anti-naturalists and naturalists on this issue has come to be known as the 'reasons/causes' debate. A review of the issues involved can be found in Keat and Urry (1975) and Bhaskar (1979). These authors take a qualified Aristotelian view and argue against the mutual exclusivity of reason and causal explanations. The correctness of the arguments developed by these authors is assumed in this thesis.

10. In this respect Positivism is best viewed as a cluster of doctrines. It is the presence of several of the doctrines of the strict version which will determine the degree and nature of the Positivist influence on a theory. Consequently, an assessment of the impact of Positivism on a theory will be a matter of careful analysis. It is simply not possible to "read off" the degree to which the nature of a theory has been determined by its Positivist commitments from a check list.


12. While the system of deductive logic developed by Whitehead and Russell in Principia Mathematica was a fundamental influence on Logical Positivists, they also sought to develop inductive logics as a means of validating the credibility of empirical hypotheses. For an introduction to the issues involved in developing an inductive logic see the discussion of the prominent works of Reichenbach and Carnap, in J. Passmore, A Hundred Years of Philosophy, Duckworth, London, 1957, chapter 17.

13. For a discussion of the influence of the truth-functional logic developed by Whitehead and Russell in Principia Mathematica, on Logical Positivism and Logical Empiricism, see, H. Brown, Perception, Theory and Commitment, University of Chicago Press, Chicago, 1979. Brown shows how the use of truth-functional logic determined in significant part the nature of the anomalies generated by the Logical Positivist research programme, and the methods by which attempts to solve the anomalies were made. By this demonstration he is able to show, interestingly, that the nature of the research programme in philosophy is of a similar structure to that in the natural and social sciences. See chapter 4 of this thesis for a discussion of the nature and structure of research programmes.

14. For a discussion of the Positivist position vis-a-vis Realism, see, M. Schlick, 'Positivism and Realism' in Ayer (1959), pp82-107, and R. Carnap, Philosophy and Logical Syntax, Kegan Paul, Trench, Trubner, London, 1935. This monograph sets out clearly a number of the tenets of Logical Positivism and could be regarded as a manifesto in this respect.

16. This point applies only to non-naturalised theories of value. On the one hand Positivists attacked the latter kind of theory as cognitively meaningless, on the other, they set out to show that the study of ethics, properly conceived belonged to the domain of psychology.

17. It is noteworthy that in viewing ethical statements as cognitively meaningless Logical Positivism denies its own value presupposition — namely that there is an intrinsic value in the pursuit of knowledge. This ethical presupposition is consistent with the view, I discuss shortly, that science is independent of social processes. Logical Positivism also denies its own metaphysical presuppositions, I discuss the latter with respect to social science in the following section of this chapter. However, when applied to the natural world Logical Positivism also retains metaphysical presuppositions. One would be "the world is such that it yields causal regularities which can be observed" (see the discussion of doctrine 10). In denying these metaphysical and value presuppositions have cognitive meaning Logical Positivism is built on foundations it denies are possible.

18. These questions are taken from N. Maxwell's, 'Science, Reason, Knowledge and Wisdom: A Critique of Specialism', Inquiry 23, 1980, pp19-81. Maxwell argues in this paper that the goal of science should be oriented to four fundamental questions; the other two are: "What is of most value in life and how is it to be achieved?" and "How can we help develop a better human world?" In his view the justification for the knowledge produced by science is grounded in science's ability to contribute answers to these questions, rather than viewing the development of knowledge as having intrinsic worth — the unstated view of Logical Positivists.

19. A. Ayer, Language, Truth and Logic, Gollancz, London, 1936, pp47-48. This passage implies that the aim of science is that of control of the environment, rather than the accumulation of knowledge for its own sake. With either aim, however, the values it presupposes are denied. M. Schlick, 'The Foundation of Knowledge' in Ayer (1959) argues that the ability to make predictions was "originally a means in the service of life" but that now, "it no longer serves the purposes of life, is not sought because of its utility. With the confirmation of prediction the scientific goal is achieved the joy in cognition is the joy of verification." (p222). This
passage brings out the two possible candidates on which a justification for science is smuggled in and it provides a very clear contrast with the kind of basis on which Maxwell believes science should be justified.

20. For further discussion of the connections between Positivism, technology and control which provides an exposition of the Habermasian thesis within the terms of analytic philosophy see B. Fay, Social Theory and Political Practice, George Allen and Unwin, London, 1975.


23. For criticism of the attempt to provide an observationalist interpretation of mental predicates, particularly in Ryle's work, see J. Fodor, Psychological Explanation, Random House, New York, 1968.


25. For example, R. Bhaskar, The Possibility of Naturalism, Harvester Press, Brighton, 1979, argues that P. Winch in his classic, The Idea of a Social Science, Routledge and Kegan Paul, London, 1958, anti-naturalist tract has an oversocialised (e.g. determinist) view of human beings as rule-followers.

26. In the following two chapters I demonstrate the connection between metaphysics and substantive theory; in chapter 4 I give a formal account of the role of metaphysics in guiding theory construction. In chapter 6 I discuss the criteria for an adequate metaphysics of human action.

27. I should stress that I am not referring to localised statistical generalisations (i.e. those tied to a specific time period and for a local population) but rather to universal laws be they of a fully determinist or statistical nature.
28. M. Brodbeck, 'Methodological Individualism: Definition and Reduction' in M. Brodbeck (ed.), Readings in the Philosophy of the Social Sciences, MacMillan, New York, 1968, p283. Empiricism will be used synonymously with Logical Positivism as I have defined it throughout the thesis, unless otherwise stated. The same will apply to the term Positivism.


34. Dunlop, (1977), p89.
35. I am using the term 'progressive' here in the Lakatosian sense. See the discussion in chapter 4 on the notion of progressive as it is used by Lakatos.
CHAPTER TWO

A POSITIVIST GUIDED LIBERAL THEORY OF EDUCATION:
TECHNOLOGICAL-LIBERALISM

Technological Liberalism, alternatively called
Technological-Functionalism, represents the determinist wing
of Liberal thought in the period from the middle fifties to
the middle sixties. The theory has not previously been
systematically presented, in the following therefore I, recon-
struct its major propositions. However, testimony to the
prevalence of its ideas may be derived from the many references
Various acknowledged contributions to aspects of the theory
are to be found in Clark (1962), Blau and Duncan (1967) and
Kerr et al. (1973). In addition most standard sociological
texts of the period make reference to some of its central
ideas. ¹

I begin by looking at the social context in which the
theory was developed and found popularity. One of the argu-
ments I shall advance is that social theories are determined
by the social structures of which they are a part. A brief
discussion of the context in which Liberal theories have found
favour is apposite since it provides some explanation for the
appeal of theories which I shall subsequently suggest are
ideological in the sense that they obscure the real relation-
ships within society. Under such conditions an explanation
of why they have proved attractive is required.
I then turn to an elucidation of Technological-Liberalism's interpretive structure: its metaphysics, epistemology and method. This is followed by a discussion of its substantive propositions and their implications for education, and the teacher's role in particular. Finally, I critically evaluate the theory.

The Social Context

Technological-Liberalism attempted to account for observed changes during the 'Liberal era': the increase in affluence, the prominence of social mobility and the increased specialisation of institutions and roles in terms of the one explanatory principle - technology determines social change.

In addition to articulating the perceived relationship between technology, education, social justice and affluence referred to in the previous chapter, a further major reason for the theory's popularity was that if offered some answers to the problems posed by the Cold War, of which it was a product. For technology was required not merely to create wealth but to protect western Liberal democracies from a hostile Soviet Union by affording superiority in weaponry. Burton Clarke could see technology as a blessing - at home because it led to increased equality of opportunity, while it was instrumental in turning back "the expanding thrust of totalitarianism abroad".

However, in the dark days of the Cuban missile crisis Technological-Liberalism brought a message of hope - which
went by the name of the 'covergence thesis'. This asserted that, by token of the common demands of technology, totalitarian and democratic societies would converge in outlook, interests and social structure. The Cold War was but an unhappy step toward an assuredly happy ending. The rationality inherent in technology would mark the end of the fundamental irrational and increasingly obsolete ideologies of capitalism and communism.

The Interpretive Structure

Technological-Liberalism adopts a functionalist mode of explanation which is consistent with Logical Positivism's Covering Law model (Hempel 1965), and also assumes that the only objects of knowledge are those derived from observation. In virtue of its functionalist explanations and its adoption of the two Logical Positivist doctrines just referred to, it has a thoroughgoing determinist view of human behaviour. It therefore regards people as passive: explanations of their actions may be reduced to the roles they are allocated and the norms and values implicit in them. This is because explanations are couched in terms of the structures and functions of social systems rather than at the level of individual action. Menzies makes the distinction as follows. Systems theory:

"is (a) fundamentally different type of programme to action theory and involves a positivistic-behaviouristic definition of concepts. Action theory focuses on the individual actor and the meanings he attaches to his actions and builds up an analysis of society from this starting point. Systems theory starts from a different point. Everything is described in terms of relationship to the system of which it is a part."
I now set out the major explanatory variables:

System.

This is regarded as homeostatic. A key notion of functionalist explanations is that of equilibrium; changes to the system under analysis are explained as being functional or dysfunctional for the maintenance of equilibrium.

Structure.

This refers to a stable pattern of action designed to meet adaptive needs (in this case those of technology). According to the Positivist stricture that only observables can be known, structure in this theory is not to be confused with the sense in which it shall be used later, to denote an underlying entity which is explanatory for a range of observable social phenomena. Within this theory the notion of structure has no explanatory power. Hence it refers to patterns of action which are determined by the functional requirements of the system.

Function.

This is the prime explanatory variable. Functions refer to the contribution of each sub-system to the promotion of equilibrium. Equilibrium is that point at which the system's needs are met. Where sub-systems fail to meet the needs of the system they are referred to as dysfunctional.

Differentiation.

According to this type of explanation, structures change
in response to the functional demands of the system by means of differentiation. In the case of this theory it means social structures change under the impact of technology. Technological rationality demands increasing specialisation and this is reflected in the case of education through its increasing differentiation from the functions of the family and community, as was suggested in the previous chapter.

These then comprise the main elements of the interpretive structure of the theory and I now turn to its central substantive propositions.

The Central Propositions

Technological-Liberalism derives its core view of society from that of Functionalism. The latter was the dominant research programme in sociology during the fifties and sixties. It utilised a functionalist mode of explanation but in addition held a particular core view of society which it shared with Technological-Liberalism. The difference between the two is one of emphasis; Functionalism acknowledges the importance of technology as a major causal influence of social change\(^5\), Technological-Liberalism elevates it to the position of the primary cause of social change.

The core view of society which the two theories share can be extracted from Davis and Moore's classic paper of 1945\(^6\). It can be expressed in the following propositions:

1. In any particular form of society certain occupational positions are functionally most central to the operation of the social system.
There are two aspects to these positions. 
(a) They require a particular kind of skilled performance, and (b) they must be filled with persons adequate to the skills demanded if the system is to be maintained.

2. The ability to fill these positions and/or the motivation to acquire the necessary training is unequally distributed amongst the population.

3. Inequalities of rewards in wealth and prestige are functionally necessary to ensure that the supply of persons with the relevant ability and/or training meshes with the structure of demands for skilled performance.

To these, Technological-Liberalism adds the propositions which assert that technology is the primary causal agent in society:

4. Technology determines social change in industrial societies.

5. The skill requirements of jobs in industrial society constantly increase because of technological change. Two processes are involved: (a) the proportion of jobs requiring low skill decreases and the proportion requiring high skill increases. (b) the same jobs are upgraded in skill requirements.

6. There is a limited pool of talent capable of filling the functionally central roles in a technological society.

7. In order to draw on this pool there can be no ascribed positions (i.e. social barriers of class, race, sex, etc). All positions must be achieved according to merit.

These two sets of propositions dictate the functions of education in society, which are:

8. Education as a sub-structure of an evolving technological society is increasingly differentiated from the functions of the family and community by concentrating on three specialist tasks requisite to the needs of society:
(a) Training individuals in the relevant technical skills.
(b) Selecting those with ability for the functionally most important positions in society.
(c) Socialising pupils into the norms and values accepting of a meritocracy.

These, then, constitute the core propositions of Technological-Liberalism. From them three empirical claims of particular significance can be derived:

(A) Just so long as there is technical advance there will be educational expansion. This claim can be derived from propositions 4, 5, 8a.

(B) There is a close causal connection between educational content, job skills and technological advance. This claim can be derived from propositions 1, 5 and 8a.

(C) As the impact of technology on society increases there will be greater social mobility determined by intelligence and motivation, since the barriers to those in the working class and racial minorities will be reduced. The increase in technology will produce a corresponding drive to equality of opportunity (meritocracy).

These empirical claims are significant because they represent the major testable propositions of the theory, and they will be discussed in my criticisms of it.

Technological-Liberalism has global aspirations, which is to say that it seeks to explain all facets of society. In the case of education it is possible to derive from these core propositions a series of further propositions regarding the role of the pupil, the teacher, and the educational researcher.
I shall discuss the particular view it takes of these roles in some detail to indicate how wide ranging the theory is. Moreover I believe the theory is widely influential still, insofar as the beliefs educational practitioners hold about their roles are consistent with those delineated by the theory. I am not suggesting they explicitly hold this theory as a guiding description and justification of their work, but I do believe that they hold a similar set of assumptions, albeit in a more fragmentary form. I begin with the role of the pupil.

The Role of the Pupil.

The cognitive skills of each pupil are regarded as a community resource in which the community must invest. The assumption being that there is a tight connection between individual cognitive skill and technological and industrial advance (compare propositions 6 and 7). Insofar as these raw cognitive abilities are trained for technological production, then education is an investment for technological advance and economic growth. It is this reasoning which underlies theories of Human Capital. By the same token, since the individual stands to benefit from education in terms of greater wealth and status (proposition 3), then he/she should regard participation in education as a form of self-investment.

The Role of the Teacher.

The teacher has three primary functions. (a) acting as a selector, sorting those with the ability for further education and training from those who are less able; (b) transmitting cognitive and practical skills appropriate to
a technological society; (c) transmitting the universalistic values of a meritocracy. This conception of the teacher's role is derived from the total 'picture' of society presented in propositions 1-8. As such, the teacher may be regarded as central to this theory's view of society, since the teacher is pivotal in inculcating the relevant norms, values and skills for the perpetuation of the system. The teacher is guardian of the meritocratic heritage; on this see the class paper by Parsons (1959).

The Role of the Educational Researcher.

The educational researcher has three primary functions in maintaining the efficiency of the system: (a) establishing a measure of those abilities requisite for a technological society; (b) developing a theory of learning appropriate to the technological society; and (c) identifying those aspects of the educational system which are 'problematic' or 'dysfunctional', and proposing solutions to remedy them. Three major sets of problems are perceived by Technological-Liberalism: student alienation, role strain for teachers and inefficient school organisation and selection procedures leading to a lack of social mobility and inequality of opportunity. I shall deal with (a), (b) and (c) in turn.

(a) The Measurement of Ability. Clearly, if students are to be selected and promoted through the educational system so that those with the highest ability may be trained for the most centrally important positions in society, some form of measurement of ability is required, where the ability
measured will be of the same kind as that which is required in order to do the functionally most central jobs. In particular it will be a measure of ability to operate with technical systems. The measure used has become known as the IQ test. For our subsequent discussion it is worth noting that the nature/nurture controversy which raged in the late sixties and early seventies can be firmly situated within the Technological-Liberal problematic. This is nowhere clearer than in Jensen's (1969) paper where the assumption of meritocracy provides the context for his discussion. What theorists like Jensen, Herrnstein and Eysenck argued against was not meritocracy as such but against the possibility of a meritocracy characterised by considerable social mobility. For they claimed IQ was largely genetically determined, with the result that bright upper class parents would produce bright kids who would do well at school and subsequently return to the class of their parents. In a significant sense they may be viewed as latter day Platonists. But whereas Plato merely speculated children of gold parents were likely to be made of gold themselves and bronze parents were unlikely to produce gold children these latter day Platonists claimed the authority of science for their views.

(b) A Theory of Learning. Essential to a psychology of learning for the technological society was the idea that children should learn how to learn. In other words instead of seeing them according to the traditional model as containers to be filled with a stock of 'facts' and a traditional body of lore, they were to be seen as information processing machines, since
what characterised the modern world was rapidly changing knowledge. As such, children had to learn to intelligently process information rather than merely store it.

(c) Dysfunctions Within Education. There were three dysfunctions which loomed large on the Technological-Liberal research agenda: student alienation, role conflict and blocks to social mobility. The concept of alienation as it was interpreted within this problematic provides some interesting insights into the general nature of the theory.

Alienation was a significant dysfunction because of the prevalence of student unrest and a growing discipline problem in schools. It was conceived as a social-psychological concept predicated of individuals. There were two related reasons why it was thought alienation might be experienced. Firstly, schools were bureaucratic and necessarily so, since it was their business to socialise students into the universalistic norms of meritocratic society. What this meant was that students were trained to accept the impersonal but rational standards by which they would be sorted and graded according to ability. It was appreciated that this impersonal ethos would create strain and disaffection in students but it was argued that this central aspect of school life was necessary for the processes of selection and socialisation. This being the case, the best researchers could offer would be some means whereby the sense of alienation was ameliorated.

Secondly, the sense of alienation would be exacerbated
because students came from a family environment which emphas-
ised particularism. By this was meant that within the family
children were singled out for special attention and affection
by parents and this contrasted with the universalistic nature
of school life. Consequently there was a tension between what
was experienced at home and in the school.

Alienation was, then, viewed as the product of an
inevitable tension between the functions of different sub-
systems which produced role conflict. The tension was inevi-
table since on the one hand schools had to transmit universal-
istic norms, the product of a technologically driven society,
while on the other the particularistic environment of the
family was necessary to produce emotionally stable individuals.

We can see from this example how the individual was
regarded as no more than the product of his/her role. For
what caused alienation was not some inward sense of dissatis-
faction inspired by a critical appreciation of the direction
industrial society was taking but the tensions between roles.
In the light of the student unrest in 1968 and their clearly
articulated demands for more democratic social arrangements
this explanation for alienation is surely impoverished.

The research into alienation and the consequent attempts
at amelioration provide an interesting example of the use of
Logical Positivism as an instrument of policy, and the relation-
ship of theory to practice it presupposed. While the
Functionalist research programme sought to establish high level
laws concerning the nature of society analogous to those postulated by Newton for physics\textsuperscript{8}, the attempt to establish lower-level laws in the service of social engineering was also a significant aspect of the research effort.\textsuperscript{9}

For Technological-Liberals the universalistic function of schools was given. Inevitably this meant schools would tend toward the bureaucratic. For the educational researcher the major concern was to identify the particular aspects of bureaucracy which produced alienation. Once these had been established ways could be devised for softening its impact. To this end the researcher would propose a hypothesis of the following kind: 'Always, if there is a sense of alienation it is produced by bureaucratic characteristic X'.

Two groups would be established, an experimental group in a school where X was taken to be present (by the relevant operational definition) and a control group where it was not. A questionnaire would then be prepared to test whether X did have the hypothesised alienating effect. Responses would be elicited and where it was found that the school with characteristic X did induce a greater sense of alienation, the hypothesis would be taken as confirmed. On this basis the school's arrangements regarding X would be altered.

There are a number of points to note about this kind of research. Firstly, the ends or point of the research was unquestioned. The aims of a meritocratic society were given. In this respect Logical-Positivism's denial of values as
cognitively meaningful lends itself to the mercenary role in which science unquestioningly serves its political masters. Secondly, this example brings out clearly the paternalistic assumptions of a Positivist guided policy science. Alienation is the product of role conflict rather than a critical evaluation of society. As such it can be regulated by manipulating people's circumstances (a change in characteristic X), thereby reducing the intensity of the conflict. Precisely because it is assumed people are passive, held in the thrall of causal regularities, any form of democratic discussion and decision making which takes into account the rationale of the social arrangement under which they live is considered irrelevant.

This example brings out the point made in the last chapter regarding Habermas' concern at the link between a social science Positivistically construed and the undemocratic rule by an elite.

If alienation was a product of the role conflict endured by students then teachers also experienced role strain from the same sources. For on the one hand they had to treat students impersonally in the process of sorting and selecting, while on the other they had some responsibility for their emotional welfare (Wilson 1962) which demanded an affective response.

The third area concerning educational dysfunctions turned on the question of the degree to which the selective mechanisms within the school system promoted or retarded efficient
selection. In this context the work of those such as Turner (1971) and Hopper (1971a) could be considered representative. They were interested in developing structural-functional typologies of school organisations between different countries. They had two aims, firstly to account for differences in organisation, since, given that the countries in question were subject to the same technological forces, explanations for differences were required. Secondly, some estimate of the relative efficiency of different educational selective mechanisms needed to be made.

In this area of research Turner's comparative study of the American and British selective systems was widely influential because America was perceived as having far greater rates of social mobility than Britain. Part of the responsibility for this was attributed to what Turner called the American 'contest mobility' model, where selection came late within a student's educational career. Whereas, in Britain what he termed the 'sponsored' system selected early (at eleven plus) with the apparent consequence that late developers, especially from the working class and racial minorities did not have a chance to prove themselves.

This, then, provides a topography of Technological-Liberalism. As a theory it was both descriptive and prescriptive, providing an account of the role those within education should fulfill and why they should do it. However, for reasons I shall now turn to, it did not adequately capture the reality of the school-society relationship with the consequence that
it could not adequately guide educational practice.

The Empirical and Conceptual Problems of Technological-Liberalism

In criticising this theory I want to bring out certain features of theories and theory appraisal referred to in the previous chapter. In particular, the point that the presence of empirical anomalies does not constitute a decisive reason for rejecting a theory on the grounds that some auxiliary hypothesis can always be advanced to explain the anomaly, given sufficient ingenuity. It is for this reason that non-empirical criteria of appraisal, including the evaluation of a theory's interpretive structure, assume significance.

Empirical Anomalies

The three empirical propositions listed earlier, the establishment of which I take to be central to Technological-Liberalism, constitute anomalies for the theory, since there are good reasons for doubting their veracity. I deal with them in order.

PROPOSITION A: Just so long as there is technological advance there will be educational expansion.

The evidence against this proposition increases daily. The introduction of the micro-chip has brought rapid technological advance, indeed some have called it revolutionary advance but it has been accompanied by educational retrenchment rather than expansion. This is certainly the case in tertiary
and secondary education in the United States, Britain, and Australasia. The contraction of education at the secondary level may be accounted for by this theory in terms of falling school rolls. But it cannot account for a similar contraction at the tertiary level since the effect of falling rolls has yet to work through to this level. In addition, the theory would predict an increase in student numbers at this level since as technology becomes more complex it is claimed students will have to be educated for longer periods and at higher levels of sophistication.

An auxiliary hypothesis along the following lines could be offered to explain this anomaly. It could be argued that the introduction of a new technology has always initially caused disruption, bringing unemployment, a lower level of economic activity and hence a reduction in educational services. However, when industry has been reorganised there will be full employment and an increase in educational services to train the necessary people for the new technology.

While it is too early to make a full evaluation of this claim there are good reasons for believing that it will not stand up. Rather than the new technology creating employment there are grounds for believing it will result in high levels of long term unemployment and static economic growth (Jordan 1981). Under these conditions educational expansion is most unlikely. Moreover, one discernable effect of the new technology has been to proletarianise work and in this respect it is consistent with past trends (Braverman 1974).
PROPOSITION B: There is a close causal connection between educational content (the curriculum), job skills and technological advance.

The rejection of (A) casts serious doubt upon the postulated connection between the school curriculum and job skills. This doubt increases when we look at the propositions which generate this connection. Proposition 5 (the skill requirements of industrial society constantly increase because of technological changes), has been severly criticised by Collins (1971, 1979). He points out that only 15 per cent of jobs in the U.S.A. in the twentieth century have required increased educational credentials as a result of a shift in occupational structure (a decrease in the proportion of jobs with low skill requirements and an increase in the proportion of jobs with high skill requirements). The remaining 85 per cent of jobs have been upgraded in terms of increased demand for educational credentials. In other words the increased demand for educational qualifications is a function of credential inflation.

Collins points out that the presumed connection between the school curriculum and the training for job skills is tenuous. Firstly, he casts doubt on the idea that better educated employees are more productive. Secondly, he cites evidence to show that most training for job skills takes place informally on-the-job. The exception to this is training for the professions, but this takes place specifically at the tertiary level and not at secondary school. He concludes that beyond the provision of mass literacy there is little evidence
to suggest the strong fit between education and work suggested by Technological-Liberalism obtains.

Consequently he argues credential inflation is better explained by a conflict model of society in which groups vie with each other for money and prestige. Credentials are used for two related purposes, firstly, by increasing the credential requirements for an occupation; a professional body or work organisation can reduce the supply of entrants to the occupation thereby maintaining earnings and prestige. Secondly, credentials are a screening device by which suitable personalities for the occupations may be chosen. Collins argues occupations are characterised by a particular cultural style which differentiates one occupation or group of occupations from another, and creates a sense of exclusiveness. On this basis the propensity for the offspring of a particular class or occupational grouping to engage in the same occupations as the parents is explained: they are raised with the relevant personality characteristics for the kind of occupation their parents are in. School credentials, on this account, are then seen as a device for legitimating personality types and qualifying them for the corresponding occupation.

One reason for the lack of correspondence between school and work is the presence of a wide-ranging curriculum, many of whose subjects have little clear relevance to a training for the technological society: subjects, for example, like music, art and English literature. It would be expected on this theory that primacy would be given to those subjects
at the relevant ability levels, which would promote the appropriate skills for technological society, namely, maths, science, various forms of industrial craftwork and English language. The fact that these subjects do not dominate the school timetable must be counted as problematic for the theory.

The Technological-Liberal response to this anomaly is to argue that the wide ranging curriculum is a hangover from the days when a Liberal education was considered appropriate for the Aristocracy. In other words that there is a time lag between the prevailing consciousness and that required for technological society. However, since the theory claims there is a correspondence between technological change and social change it seems somewhat lame to plead a special case in this context; especially since technology is now so advanced and the days of the aristocracy, far in the past; at least according to this theory.

PROPOSITION C: As the impact of technology on society increases there will be greater social mobility, determined by intelligence and motivation.

This may be called the meritocratic hypothesis and is clearly a key claim, since should it be found that the society was not characterised by social mobility, determined by intelligence and motivation, it would cast serious doubt as to whether society was developing in the predicted way.

After considerable research, I think it is fair to say that the following general conclusions have been arrived at:
(a) there is a tightening bond between education and occupation as the theory would predict but, (b) there is a systematic bias in favour of middle and upper class students when it comes to educational and subsequent occupational success. One explanation that would account for this is that of the neo-Platonists referred to previously. The claim of researchers such as Jensen that IQ is substantially genetically determined would be consistent with this finding. However Bowles and Gintis (1976) have provided a striking refutation of this claim. For what they show firstly, is that when IQ is held constant, the years of schooling, which may be taken as a good indication of credential success is strongly influenced by social background. This is shown in the following bar graph (Bowles and Gintis (1976) p31).
If we accept the first finding that there is a close relationship between educational and occupational success we would expect in the light of the information in the first graph that there is also a strong relationship between social background and occupational success. Bowles and Gintis also found this to be the case, as they show in this graph (Bowles and Gintis (1976) p111), where income is taken as a measure of occupational success.

Differences in Cognitive Test Scores do not Explain the Association between Years of Schooling, and Economic Success.

The story these graphs tell is in strong contrast to that which ought to be told if indeed the development of technology was promotive of meritocracy. But what Bowles and Gintis establish is that social background is strongly
influential in educational and occupational success, independent of IQ. I now turn to a criticism of the theory which has generated these anomalies.

Conceptual Anomalies

Any conceptual critique will range across the epistemology, the explanatory structure and the substantive commitments of the theory, precisely because they are inter-related within a conceptual network. In this critique I will begin with the more substantive concepts and 'ascend' to the more abstract. I will not be concerned to mount a general attack on functional modes of explanation per se; that has been done more than adequately elsewhere.¹⁰ I shall therefore only attend to those problematic aspects of functional explanations which are reproduced in Technological-Liberalism which present specific difficulties for it; and which are of general concern to the argument I am presenting.

There are three criticisms of Technological-Liberalism's conceptual network I wish to make:

1. The Assumption of Technological Determinism. It will be recalled from my earlier remarks that the theory's explanatory writ extends beyond Western Capitalist states to countries like the Soviet Union. Convergence between these societies is assumed on the basis of technological imperatives, independent of the specific productive and distributive mechanisms operating in these societies. Technology is then, an exogenous variable which acts upon social relations independent of specific historical and social contexts. It is therefore assumed that
whatever the specific distributional arrangements are for matching individuals with functionally central occupations, they will be reliable. It makes the assumption, for example, that a capitalist labour market will efficiently place people of the relevant ability in the functionally appropriate occupations. And that this will be reflected in a reward structure which gives the highest rewards and status to those in the functionally most central positions. Criticism of this assumption is clearly brought out in Parkin's (1978) discussion of the functionalist explanation of private property. On the assumption that we are moving from an ascribed to an achieved society by technological imperative, the inheritance of private property can only be viewed by functionalists as an anomaly - a hangover from a former era which will eventually wither away. However, private property has proved remarkably resilient to the meritocratic strategies of taxing inherited wealth. This is because as Parkin points out:

"Private property and market forces require one another ... Any serious dismemberment of private rights of appropriation would throw a market system of reward into jeopardy; property is not some optional extra for the system, but its very raison d'être."

The market system is after all predicated on the accumulation of wealth and private investment from that wealth, and market forces determine the distribution of rewards quite independent of functional importance. There is nothing immutable about the relationship between the technical division of labour and the division of rewards; the same technical division of labour in other societies will not produce the same disparities of wealth that we find in Capitalist countries.
Distributive mechanisms are, then, important for determining key aspects of society and they will not conform to the demands of the technological imperative. Ultimately, however, these mechanisms will be determined by the social relations of production. Under capitalism the existence of private property and a market economy is guaranteed by a production relation whereby one group (capitalists) extract profit from another group (workers). It is the ability to extract profit from another's labours which is at the basis of what Parkin calls private rights of appropriation.

I conjecture that failure on the part of Technological-Liberals to see the lack of correspondence between their theory and capitalism was the result of the consensus they observed in industrial relations during the fifties and early sixties: a consensus which is written into the heart of their theory, and which brings me to the second anomaly.

2. The Theoretical Assumption of Consensus. This assumption is derived from a substantive theoretical presupposition and endorsed by the functionalist mode of explanation.

The meritocracy to which Technological-Liberals aspire assumes that social mobility determined by intelligence and motivation alone is possible or nearly possible. This in turn presupposes a society in which there is consensus, where groups do not struggle to impose mobility blocks for their own advantage. The question now arises as to how classes or groups could have the power to determine educational outcomes in their
own interest.

If we look at the conditions typically regarded by Liberals as necessary for perfect social mobility as they relate to education, we find there are three which need to be fulfilled:

(a) People have equal opportunity to enter the educational competition. Equality of opportunity here is interpreted to mean they have equality of access to, and equal treatment within, education.

(b) They have perfect knowledge of the rewards and benefits education offers. Or in the case of young children their parents have the knowledge.

(c) It is a competition without handicaps. Everyone comes equally prepared; i.e. there are no ascribed advantages. Hence, only talent and motivation are significant in determining educational outcomes.

Were these conditions to be met, perfect social mobility with respect to education would be possible. Where, however, they are not met Technological-Liberals would once more explain this and other failures in terms of the residual categories of a by-gone era, where the favours of ascription determined educational outcomes because the upper classes had the power to manipulate the above conditions. But according to this
theory, as technology takes a firm grip on society, conflict would diminish and so would the power to transfer privilege through education.

In fact, the evidence suggests the opposite. The relative chances of different classes to achieve educational and subsequent occupational success has not changed throughout this century (Halsey 1980). In other words there is a systematic bias operating in favour of the middle and upper classes. One plausible explanation for this is that they still have the power to manipulate educational outcomes to their own advantage. This would entail their control and distribution of what counts as knowledge and the access people have to it through education.

However, Technological-Liberalism cannot admit the notions of power and conflict presupposed by this type of explanation. For according to its tenets, it is technology which shapes the nature of society, not conflict between classes. Within the functional mode of explanation society is seen to adapt to the functional needs of technology. One such need is that of consensus. Since this kind of explanation begins with the assumption of equilibrium, which in this case means consensus, notions of conflict and power which are dysfunctional can only be parasitic upon the assumed equilibrium condition. For example, alienation may lead to conflict but as we have seen this concept is interpreted within the theory as a by-product of the internal evolution of the system.
The theory, then, does not have the resources to explain the persistent educational advantage of the middle and upper classes in terms of power and conflict. And yet, in the light of the evidence, there is a good *prima facie* case for believing the best explanation for the evidence would make use of these notions: a case I shall later seek to make good.

3. The Explanations Precluded by Technological-Liberalism. The third problem concerns what Technological-Liberalism prohibits by way of explanation for the persistent inequality of opportunity. There are two sets of explanations it precludes: those which make reference to (a) the official content of the curriculum and (b) the capitalist economy.

   The official content of the curriculum cannot be considered as a vehicle for the promotion of inequality precisely because it is considered the curriculum necessary for the training required for the technological society.

   Furthermore, insofar as the curriculum embodies knowledge, as construed by Logical Positivism, it is considered above social influence, since it is established on certain epistemic foundations. In addition, the form of rationality in which students are initiated is also above question because, as I pointed out in Chapter 1, it was derivative of the foundationalist view of knowledge enshrined in Logical Positivism. Consequently, this epistemology precludes an explanation of the curriculum as having a built-in social bias favouring one class over another. As such it underwrites the
view of the curriculum as given.

A further feature of the social world taken as given is the capitalist economy. Again a substantive theoretical commitment is underwritten by an epistemological doctrine, this time that of the epistemic privilege of observation. Together substantive theoretical commitment and epistemic doctrine conspire to exclude capitalist economic relations as a candidate explanation for inequality.

In my first 'conceptual' criticism I noted that economic arrangements are not considered significant in explaining the social world, rather it is technology which is the primary explanatory principle. Technological-Liberals acknowledge that inequality of educational opportunity is class based (Blau and Duncan, 1967) but class for them is interpreted as a function of the technical imperatives of production, and not the social relations of production. According to this theory occupational hierarchy is the best single index of social class position (Hopper 1971b) where occupation denotes the technical expertise and skills people bring to production. In contrast the social relations of production refer to the power of decision-making ability within production. Analytically these two concepts are distinct for the people with the most technical expertise do not necessarily have the power to make major decisions. But in the view of class, occupational position also determine the power relationships which obtain. 'Class' thereby reflects the meritocratic belief that the most able, in the functionally most central positions, are also the power holders.
Meritocracy is indeed a society led by experts. The upshot is that this theory is blind to the possible determinate influence which the social relations of capitalist production may have on the class structure and consequently on inequality.

The Technological-Liberal view of class is underwritten by the Logical Positivist doctrine of the epistemic privilege of observation. Positivist researchers note that occupational hierarchies can be observed, engineers earn more than mechanics and are held in higher esteem; and a numerical value can be assigned to each level in the hierarchy according to criteria such as occupational prestige, income and occupational qualification. These researchers also point out that occupation is a useful measure for calculating the inequality of educational opportunity for people from different class backgrounds.

In contrast social relations have a similar status to that of meanings within a Positivist guided science, since there is no possibility of direct experiential access to them. As such they are disqualified from having any explanatory significance within the theory.

For these reasons then, two possible candidates for explaining inequality of opportunity are precluded. And it is noteworthy that in seeking to explain the perpetuation of inequality Liberals made reference to neither concept. The instruments of selection (IQ tests), and schools' procedures for selection, were suggested as possible explanations (Floud and Halsey 1961), but not the official content of the
curriculum. Similarly when Coleman (1966) suggested that the locus of inequality was working class and racial minority families, their relationship to the social relations of capitalist production was not considered. Rather it was hypothesised that they were trapped by a cycle of deprivation (Rutter and Madge 1976), in which they transmitted norms and values which were antithetical to cognitive achievement in school. Consequently, it was suggested, working class kids should be removed from this cycle at an early age and placed in stimulating pre-schools, thereby giving them a chance to catch up with their middle class counterparts.

As we now know, the compensatory education projects predicated on these explanations failed. One inference which can be drawn from this is that the explanations on which these attempts at educational reform were built were inadequate. In the words of Halsey:

"In summary it may be said that Liberal policies failed basically on an inadequate theory of learning. They failed to notice that the major determinants of educational attainment were not schoolmasters but social situations, not curriculum but motivation, not formal access to school but support in the family and the community."\(^{12}\)

In short the apparent deprivation among working class families was matched by the theoretical deprivation of Technological-Liberalism; it could not plausibly explain the persistence of inequality. For this reason some educationists took up radical theories which could consider both the 'official' curriculum and capitalist social relations of production as candidate explanations for inequality. It is these to which I turn in the next chapter.
Summary

When measured against the criteria stated at the end of Chapter 1, Technological-Liberalism does not adequately explain educational outcomes relative to its account of the school-society relationship. Its strength lies in its ability to account for the organisation and structure of the school system vis-a-vis its view of society. The three key aspects of schools it identifies, hierarchy, bureaucracy and competition are all regarded as promotive of meritocracy. In this sense the school is seen as dovetailing into the functional needs of society. However while Technological-Liberalism can provide a plausible account of school organisation in relationship to its view of society, it cannot satisfactorily explain why school outcomes should be so contrary to a form of school organisation geared toward meritocratic selection. Furthermore the presence of a wide-ranging Liberal curriculum is also contradictory to that expected in schools preparing kids for a technologically based meritocracy. For it would be expected that in a smoothly functioning school-system the curriculum would be tuned to the relevant training for work. Moreover, it cannot account for certificate inflation. It predicts that an increase in the upgrading of job skills would be complemented by an increase in competence as measured by credentials. However, there has been a relatively small increase in the upgrading of job skills and a much larger increase in competency as measured by credentials. There is, therefore a serious mismatch between what is predicted and what has occurred. This points to a further anomaly concerning the anticipated relationship between technology, work and
education, for while there has been rapid technological advancement there has been educational retrenchment.

The net result is this theory cannot plausibly explain the school-society relationship. Moreover it places teachers in a compromised position. Ostensibly, the theory provides very clear directives to teachers providing them with a central role in society as selectors of talent, transmitters of cognitive skills and inculcators of values which find their justification in the notion of meritocracy. What teachers in fact find is that they merely abet the transmission of privilege.
Notes and References for Chapter Two


8. This point is discussed with respect to the work of Parsons in Keat and Urry (1975).


12. A. Halsey, Educational Priority, HMSO, London, 1972, p8. At this time, as can be inferred from the quote Halsey was still something of a Liberal, though conceding the failure of the educational reforms. He has subsequently become a self described radical.
CHAPTER THREE

THE RADICAL TURN IN EDUCATIONAL THEORY:

THE WORK OF YOUNG, FREIRE, AND BOWLES AND GINTIS

The perceived failure of both Liberal theory and practice led many educators to a Radical analysis which could explain why education had been unable to contribute to the development of a more just society. The move to a Radical position was prompted by the nature of Liberal failures - the fact that education seemed unable to exercise any influence on educational outcomes independent of student's class background was seen as indicative of its impotence to engineer a more just society. The inference drawn by Radicals was that class conflict exercised a decisive influence on education and for some the source of this conflict lay in the capitalist mode of production. It was argued that because capitalism created class conflict a more just society could not be erected on its foundations. In particular, under these conditions, education could not provide fair treatment for all students: nor could it produce critical self-reflective people since it merely reproduced the ideology of the dominant classes. The task which fell to the Radicals was to explain the precise effects of class conflict on education; and to suggest a means by which an alternative egalitarian socialist pedagogy could contribute to the transition to a more just socialist society.

In this chapter I examine three theories which have all made seminal contributions to Radical theory. The work
of Michael Young is significant because he argues the official curriculum is an instrument of domination, in doing so he takes a first step toward a theory of ideology relevant to education. Freire provides an important start to a theory of Socialist pedagogy applicable under conditions of class conflict, while Bowles and Gintis contribute a very clear account of the relationship of school to capitalist social relations.

However, despite the importance of these theories, I shall argue that none of them are able to explain successfully the relationship of education to the underlying structures of capitalism which have produced class society and class conflict. The consequence is that they cannot provide an adequate theory to guide practice. I begin by examining the work of Michael Young.

Michael Young and the 'New' Sociologists of Education

The major statement of the position advanced by the 'New' sociologists is to be found in their collection of articles Knowledge and Control (1971) edited by Michael Young. The arguments in this book made a considerable impact because of their radical nature: not only in the political sense but also because they broke with certain cherished views in sociology and philosophy at the time. Though these arguments provoked considerable criticism, often justified, their work nevertheless represents an important development in the understanding of the school-society relationship.
The Social Context

The research of this group was developed at a time when it was becoming increasingly apparent that the period of post-war consensus was over. Student unrest and the resumption of industrial conflict marked a new era in the West. Student leaders demanded greater democracy and equality as a reaction to the increasingly hierarchical and bureaucratic nature of industrial society. These demands were taken up by many educators and can be seen as a significant impulse in the work of Young and his followers.

In the following I shall discuss Young's work as representative of this group and in particular the period between 1971 and 1976, since it was during this time that he developed the ideas most relevant to this thesis concerning the social bias of the curriculum.

The Interpretive Structure

Young and his followers reacted against a series of assumptions made by Technological-Liberals. The focus for this was the 'official' curriculum, which had been taken as 'given' by the latter group. Young argued that the curriculum was a social construction of the dominant groups in society. By imposing it they established a particular view of the social world which legitimated their position. Moreover, through the hierarchical and abstract nature of the knowledge taught they ensured the educational success of their offspring and the failure of working class kids for whom this kind of knowledge made no sense, because he suggested, it was unrelated
to their everyday understanding of the world.

In developing this idea Young contrasts the 'curriculum as fact' with what he calls the 'curriculum as practice'. The former posits a Realist theory of knowledge which is characterised by a realm of truth independent of human beings. This, he says, produces reification of the curriculum because it leads to a view of knowledge as a 'thing' external to human beings. This has implications for the way the curriculum is regarded in school:

"This conception of 'curriculum as fact', with its underlying theory of knowledge as external to the knower, both teacher and student, embodied in syllabuses and textbooks, is widely held and has profound implications for our conceptions of teaching and learning. To say 'I teach history or physics' implies a body of knowledge to be transferred from the teacher who has it to the pupil who has not." \(^1\)

One consequence of this, according to Young, is that pupil failure can only be explained either in terms of bad teaching or in terms of the social or psychological characteristics of pupils. The curriculum itself cannot be part of an explanation for failure.

But this form of curriculum also has consequences for teacher-student relationships, for it is hierarchically stratified and emphasises abstract 'theoretical knowledge'. Young suggests it places teaches in a correspondingly hierarchical position over their pupils; for the latter must learn and be examined in these 'higher' levels of knowledge by the teachers who are its purveyors.

According to how well students do, they are selected and labelled:
"If knowledge is highly stratified, there will be a clear distinction between what is taken to count as knowledge, and what is not, on the basis of which processes of selection and exclusion for curricula will take place. It would follow that this type of curricula organization presupposes and serves to legitimate a rigid hierarchy between teacher and taught, for if not, some access to control by the pupils would be implied, and thus the process of exclusion and selection would become open for modification and change."

The 'curriculum as fact' operates as a screening device but since it is predicated on a reified view of knowledge there is no epistemic justification for selecting some as more successful than others. Rather, this curriculum merely serves to legitimate the success of those in whose interests it is perpetuated.

One consequence Young draws from this, inferred by the last sentence quoted above, is that the rejection of stratified knowledge in favour of some alternative non stratified account would open the way for democratic participation by students. For according to him it is the 'curriculum as fact' which gives teachers their authoritarian status over students. The alternative he advances is the 'curriculum as practice'.

The 'curriculum as practice' starts with the "intentions and actions of men". Knowledge in this view is the product of the collaborative work of teachers and pupils in their attempts to understand and transform their environment. In this sense he wants to tie knowledge to everyday practices and to 'common sense'. One cause of the failure created by the 'curriculum as fact' is the discontinuity between the kind
of everyday knowledge kids bring to school and the abstract, seemingly irrelevant knowledge they learn there. When they reject this abstract knowledge because of its discontinuity with what is of practical relevance to them, they are, he says, labelled less able or non-academic.

So the 'curriculum as practice' is one which has more or less immediate practical relevance to students. Young does not develop the idea further but he gives examples of what he has in mind. One example is of a girl who, (for a 'Nuffield Science' A-level project), chose to investigate certain problems with streamlining a boat. In doing so she learnt a lot about viscosity. In the context of her project, he remarks, viscosity was not an external piece of knowledge which was imposed but became an element in her learning to understand and transform the environment.

In itself, I do not think this is a particularly good example to show how this 'curriculum as practice' is differently structured to that of the 'curriculum as fact'. The concept of viscosity is relatively abstract, understanding it has no immediate relevance to the everyday world and the way she learnt about it would be as much a cause of satisfaction for a 'curriculum as fact' teacher as anyone else. It does, however, serve to emphasise the point that the way she perceived what she learnt made it very much part of her life. And it is a point which Young usefully emphasises because the majority of kids are alienated from what they are told to learn at school.
Underpinning the 'curriculum as practice' is a view of human beings as active negotiators and interpreters of reality. In seeing people as active in making and transforming their world Young was challenging the received view in sociology which, based on a Logical Positivist epistemology and a functionalist mode of explanation, viewed people as passive.

The intellectual antecedents of his alternative view of human nature came from phenomenologists and ethnomethodologists in the United States and in particular from the work of Alfred Schutz. It is through the latter's work, in particular, that Young draws the connection between people as creators and negotiators of meaning and a view of knowledge as socially produced. This is brought out in his discussion of Schutz when he says:

"Schutz treats the institutional definition or typifications (whether of education or families or politics) as the intersubjective reality which men have constructed to give meaning to their world; therefore though they are a part of the accepted world of everyday life for teachers, mothers and politicians, they can become the objects of sociological enquiry. In other words, if 'knowledge' or 'what is taken for 'knowledge'' is ideal - typical in construction, Schutz is pointing to a study of the construction of subjects, disciplines and syllabi as sets or provinces of meaning which form the basis of intersubjective understandings of educators."\(^4\)

From the recognition that knowledge is produced through the negotiation and development of intersubjective meanings, Young make two inferences. Firstly, for him it is individuals who produce and negotiate meanings, it is they who create a particular view of social reality, as such explanations of the social world can only make reference to individuals. Secondly,
knowledge is seen as culturally arbitrary: what is true of
the world is simply a function of the way people choose to
understand it. Young then has a relativist view of knowledge
in two senses. Firstly he argues knowledge is socially produc-
ed, that it does not have a priori foundations in certainty.
This can be called foundational relativism. Secondly, he
also wants to claim that what is legitimated as knowledge is
exclusively the result of a power struggle in which one group
imposes its view of the world on another. He is also then a
judgemental relativist in that he believes there are no good
epistemic grounds for choosing one view of the world over another.

The combination of a voluntarist view of human beings
as creators and transformers of their social world and a
relativist view of knowledge led Young to reject the scientific
method associated with Logical Positivism. In its place he
advocated what he took to be an anti-naturalist form of enquiry,
ethnography. This form of qualitative research enabled him and
his followers to study what they considered central to the
transmission of inequality in education: the negotiation and
imposition of meanings. (For a discussion of this kind of
study in education see Chapter 8.)

With his emphasis on ethnographic study, Young added
a much needed dimension to educational research, since the
study of the context in which meanings are generated and
negotiated is clearly important for an understanding of educa-
tional processes. But Young tended to exaggerate the
importance of the 'curriculum as fact' as the mechanism for
the perpetuation of inequality.

One implication Young drew, which illustrates his view that the 'curriculum as fact' is the primary mechanism in producing inequality is that if this curriculum was changed so would the inequality which it perpetuated:

"One might speculate that it is not that particular skills and competencies are associated with highly-valued occupations because some occupations 'need' recruits with knowledge defined and assessed in this way. Rather it is suggested that any very different cultural choices, or the granting of equal status to sets of cultural choices that reflect variations in terms of the suggested characteristics, would involve a massive redistribution of the labels 'educational' 'success' and 'failure', and thus also a parallel redistribution of rewards in wealth, prestige and power."\(^5\) (my emphasis)

The conclusion to be drawn from this is that education is the primary causal determinant of stratification. But this raises the issue of how the 'curriculum as fact' came to be imposed in school and what forces serve to maintain it. Clearly the answers to these questions demand some account of the wider society and the nature and role of the power holders within it. Young suggests "those in power will attempt to define what is to be taken as knowledge" but he gives no account of who these people are or why they are the power holders. All he offers is a Weberian taxonomy of the "various economic, political, bureaucratic, cultural and educational interest groups" which comprise the dominant order.

Young (1971) cites Williams' Marxist analysis of the relationship between the dominant classes and educational policy as "most promising" but does not pursue the leads
Williams offers.

There are, I think, two reasons for this. Firstly the Marxian notion of economic structures determining educational content is antithetical to his voluntarism. This is clearly brought out in his article 'Taking Sides Against the Probable'⁶. Here he argues that a Marxist theory is "not enough", that what is required is personal and moral commitment. This is because the social sciences preclude the possibilities for action. They "do little more than confirm ... believed necessities" about the social world, when what is required is a view of the social world in which everything is open to change. In such a world, he claims, the only certainty comes from the knowledge that our understanding of the world is partial. Once this is appreciated "the crutches of bourgeois or Marxist scientism" can be rejected and we are confronted by the fact that the only grounds we have for action are those of personal commitment.

While not wishing to deny the necessity for commitment, this voluntarism has the consequence of explaining the failure to achieve the liberation he seeks in terms of a failure of personal will rather than in specific material and ideological constraints. As it is, his Relativism ensures we can have no knowledge of the 'real' mechanisms of domination, which brings me to the second reason for his failure to theorise the dominant order. A Marxian account of the structures which determine the constraints and possibilities of people's lives presupposes a Realist epistemology. But Young denies the validity of
Realism because it falls into the class of objectivist epistemologies he rejects:

"it is my contention that the problems of validity of truth criteria or relativism in sociology of knowledge are still evaded rather than confronted, whether one turns to a variety of objectivist views of knowledge, to Dewey's 'rational man' ...... or to Marx's proletariat."

The upshot is that he gives no account of the relationship of the school curriculum to the wider society, and if he had it would be vitiated by his relativism since there would be no good grounds for choosing his view of the social world over any other. Instead, Young offers a life of commitment but the difficulty with this is that it is not clear what we should be committed to. Moreover, in rejecting any analysis of the mechanisms of domination in favour of a life of commitment, it appears as though the only explanation for oppression is that people do not have the commitment to liberate themselves, which must surely be considered unsatisfactory - more a consequence of his voluntarism than a reflection of reality!

Young's error, as I see it, concerns his Relativism. It is his denial of the possibility of knowledge of the objective structures which govern behaviour which impels him toward the notion of 'pure' commitment, and the attendant rejection of social theory. However, accepting the premiss of foundational relativism (knowledge is socially produced) does not entail judgemental relativism (there is no good reason for choosing one account of the world over another). It is possible to argue that knowledge is socially produced and that there are underlying social structures of which we can have knowledge (Harris 1979). Furthermore it is possible to choose between
theories according to rational criteria. This is a point I shall develop in subsequent chapters.

Summary

It will be apparent that I have not dealt with Young's substantive theory of education for the good reason that it is too fragmentary. He seeks to explain the nature of school organisation, the curriculum and educational outcomes by reference to the 'curriculum as fact', which he argues has been imposed in order to perpetuate the dominance of particular groups or classes. However, since he cannot offer a plausible account of the relationship of the curriculum to society, his theory fails according to the criteria articulated at the end of Chapter 1. There I suggested that an adequate theory would be able to relate school organisation, the hidden and the official curriculum, to the wider society and to educational outcomes. Nevertheless, in challenging received assumptions, particularly in suggesting the curriculum is a vehicle for the perpetuation of dominance relations, his work has been seminal in opening this area of education for critical consideration.

His fundamental problems concern the inability to develop a theory in which people who actively create and transform their world could also be regarded as constrained by certain objective structures of which we can have knowledge.

One who combines a Realist epistemology with a view of people as agents is Paulo Freire and it is to his work I
now turn.

**Paulo Freire and the Pedagogy of the Oppressed**

Paul Freire is one of the most interesting radical humanist writers on education. His practical experience as an educator is South America, where he worked as Secretary of Education and director of an adult education programme in Brazil until the coup in 1964, and subsequently in Bolivia and Chile, provided him with important insights into the phenomenology of oppression from the point of view of both exploiters and exploited. From this understanding he developed the basis for a genuinely radical pedagogy.

**The Social Context**

Freire's *Pedagogy of the Oppressed* (1972b), was published two years after Illich's *Deschooling Society*: it was a period when the issues of democracy and equality in education were much in the air. In part this accounts for his immediate popularity amongst educators in the West. In addition, the major focus for his theory of pedagogy was in the context of teaching literacy to peasants and I think it is a fair surmise that educators saw relevance in his techniques to literacy programmes amongst working class and racial minorities in the West.

**The Interpretive Structure**

Freire is an eclectic thinker, incorporating aspects of Christianity, revolutionary socialism, psychoanalytic theory and existentialism. It will come as no surprise therefore,
that given his practical pedagogical concerns, his theory is in places both incoherent and incomplete. Its basis is a Realist epistemology and an essentialist view of human beings as active agents. For Freire there are objective structures within the social world of which we can have knowledge. These structures determine the lives of individuals and it is only through praxis that individuals can free themselves of their determinate influence. Praxis here is interpreted both as theoretical reflection upon objective structures and the testing of that reflection through practice. In this way the social world is explored and transformed. Freire's discussion of this epistemological position is brief and much of it has to be inferred from his theory of pedagogy. Despite this it represents a most fruitful line of thought and one I shall subsequently explore.

What impels human beings to the form of praxis just mentioned is his essentialist view of human nature. He tells us:

"Within history, in concrete, objective contexts, both humanisation and dehumanisation are possibilities for man ...... only the first is man's vocation."  

Because it is man's "ontological and historical vocation" to be more fully human, "sooner or later being less human leads the oppressed to struggle against those who have made them so."

*The Substantive Theory*

Oppression takes the form of economic and cultural imperialism practiced by a metropolitan society on a dependent society. This has a number of consequences for the colonial
society. In particular it alienates it because:

"If we consider society as a being, it is obvious that only a society which is a "being for itself" can develop. Societies which are dual, "reflex", invaded, and dependent on the metropolitan society cannot develop because they are alienated; their political, economic and cultural decision-making power is located outside themselves in the invader society."10

A similar duality pervades oppressed individuals:

"The oppressed suffer from the duality which has established itself in their innermost being. They discover that without freedom they cannot exist authentically. Yet, although they desire authentic existence, they fear it. They are at one and the same time themselves and the oppressor whose consciousness they have internalized. The conflict lies in the choice between being wholly themselves or being divided; between ejecting the oppressor within or not rejecting him; between human solidarity or alienation; between following prescriptions or having choices; between being spectators or actors; between acting or having the illusion of acting through the action of the oppressors; between speaking out or being silent, castrated in their power to create and re-create, in their power to transform the world. This is the tragic dilemma of the oppressed which their education must take into account."11

I have quoted at length to give something of the power of Freire's insights into the conditions of the exploited.

One major product of colonialism is that "oppressive reality absorbs those within it and thereby acts to submerge men's consciousness". The particular form this takes is that of 'fatalism'. The oppressed see their condition as natural and inevitable:

"It almost always is related to the power of destiny or fate or fortune - inevitable forces - or to a distorted view of God. Under the sway of magic and myth, the oppressed (especially the peasants, who are almost submerged in nature) see their suffering, the fruit of exploitation, as the will of God - as if God were the creator of this "organized disorder"."12

The task then is to unveil these myths through praxis. The
critical difficulty is getting the oppressed "as divided, unauthentic beings (to) participate in developing the pedagogy of their liberation".

The participation of the oppressed masses in liberation through pedagogy is necessary precisely because what is distinctive of human beings is their ability to act upon critical reflection. For revolutionary leaders to impose a view on the masses by propaganda is merely to keep them in their state of inauthenticity, for their actions are then not their own but others. Liberation, Freire says, cannot be achieved by semi-humans nor can it be bestowed as a gift on the masses by revolutionary leaders. The correct method for liberation lies in dialogue which then results in the conscientisation of the masses. For:

"to substitute monologue, slogans, and communiques for dialogue is to attempt to liberate the oppressed with the instruments of domestication. Attempting to liberate the oppressed without their reflective participation in the act of liberation is to treat them as objects which must be saved from a burning building; it is to lead them into the populist pitfall and transform them into masses which can be manipulated."13

It is clear, then, that pedagogy as dialogue is central to the revolutionary transformation of society. It is the only possible way crippled human beings can come to believe in themselves and trust in their ability to understand the world; both necessary conditions for a socialist society of fully participating autonomous people.

Central to the idea of a revolutionary pedagogy is the
view of human beings as essentially active knowing subjects. Freire presupposes that a dialogical pedagogy begins with the peasants' experiences and their ability to question those experiences. In essence, what the revolutionary educator does is to take the peasants' intuitions and experiences, strip them of the supernatural mythologies which imbue them and represent those experiences in a systematic form which explains their misery and deprivation in terms of a vocabulary of exploitation and oppression. But explanations are not enough, they must be tested against the objective reality of the world through action.

This view of revolutionary pedagogy and the ontology and epistemology which underpin it is in direct contrast with what Freire calls the 'banking concept' of education. Roughly speaking, this corresponds to a traditional view of education where the teacher has all the knowledge, the pupils none, and where the teacher's task is to 'deposit' knowledge, as if the minds of pupils were containers to be filled up. The banking concept then "mirror(s) oppressive society" by alienating students both from a one-sided knowledge which they can never make their own, because they cannot act upon it, and a teacher who sets him/herself up as a necessary opposite to those who are ignorant. Knowledge is then bestowed as a gift upon students who are regarded as adaptable, manageable "things" rather than people.

In contrast to the banking concept, the raison d'être of revolutionary pedagogy lies in its drive to reconcile teacher
and student. And here Freire's epistemology is essential to an understanding of this process for the key is the common action undertaken by teachers and taught in transforming society and the learning they engage in together through the process of transformation:

"Teachers and students (leadership and people), co-intent on reality, are both Subjects, not only in the task of unveiling that reality, and thereby coming to know it critically, but in the task of re-creating that knowledge. As they attain this knowledge of reality through common reflection and action, they discover themselves as its permanent re-creators." 14

It will be apparent that the revolutionary leaders who are also the teachers are central to the notion of change in Freire's scheme of things, and we should therefore enquire a little more closely into who these people are and how they are able to overcome the material and epistemological constraints of oppression to find themselves in a position of leadership.

For Freire, these leaders come from the dominant class but they are people who, in his words, are personally and ideologically "resurrected". Freire constantly emphasises that it is both the oppressed and the oppressors who are damaged by exploitative relations. It is necessary, therefore, for those from the ruling class to make themselves authentic beings, to fulfill their historical vocation. This requires, on their part, not only an appropriate theoretical view but also strong moral and political commitment. The kind of people Freire cites are Mao, Castro and Guevara, and it is not unfair to comment that the path to liberation is littered
with charismatic figures. Expressed in these terms, it becomes clear that Freire may himself be engaging in some mythologizing; there are problems with this view which bring out his Idealism.

Walker (1980), argues convincingly that we should not view the introduction of these Promethian figures as 'ad hoc' but rather as an integral part of Freire's theory, one derived from its Christian-Existentialist sources. But as such it presents the following difficulties:

"Even supposing that it is realistic to preach such a gospel, supposing that the 'sacrificial' class will respond, it is a further question whether the response will have the political effects expected of it, namely, that sui generis moral will can cancel out class conflict. There is no evidence that it ever has or ever could. Freire trades on hope rather than prediction, faith rather than expectation and love rather than political realism."\(^{15}\)

What this points to is a failure on Freire's part to adequately theorise the material and political constraints on people: underlying this is an inadequate theory of the relationship between the ideological, political and economic factors contributing to oppression. Freire's Idealist tendencies reveal themselves not only in discussing the revolutionary elite, but in the central part played by education in the revolutionary transformation of society independent of political and economic considerations. For Freire, the pedagogical is the political, and revolutionary leaders are identified as teachers; "leaders and people" are, in his theory, co-extensive with "teachers and students".

Now Freire does attempt to place the pedagogical within the broader social context, but the models of society he uses
are vague and may be contradictory. On the one hand he refers to society in Hegelian terms as a "being", the subject writ large, at other times he refers to Althusser's notion of a 'structured totality'. In these references he views the culture of oppression or "silence" as "overdetermining" the infrastructure in which it originates. 16 As with Althusser, he views the cultural or ideological as semi-autonomous from the infrastructure, for he is careful to reject mechanistic explanations. By this means he is able to explain why oppressive cultural myths remain after the infrastructure is transformed and why the educator's job is not done once the revolution has been won.

There are, however, two difficulties with Freire's espousal of Althusser. Firstly, rather than helping to situate the cultural, Althusser's theory serves to overemphasise its importance. This is because in Althusser's view, anything can overdetermine the infrastructure and, similarly, any essential contradiction can be displaced and emerge at any level within the structured totality. One consequence can be that the cultural can be regarded as the site for many of these overdeterminations, hence its importance can be exaggerated.

Much more difficult for Freire is that fact that his model of human nature is in outright contradiction to Althusser's. The latter views people as merely 'bearers' of relations; they are passive, whereas Freire sees people as essentially active. 17
Freire, then, has difficulties similar to Young in resolving the voluntarism-determinism issue, which stems from the premiss that people are determined but asserts they can be freed from the determinist grip. This is both true of his theory of revolutionary change and of his general theory of the relationship of the cultural to the totality of social relations.

Summary

It would be unfair to judge Freire's theory of pedagogy against the criteria suggested in Chapter 1, since it was developed in the South American context where there was no formal system of education for the people he was working with. Nevertheless the importance he attributes to education in the transition to socialism, if idealistic, is welcome. For the aim must surely be to bring about change democratically according to people's critical and reflective understanding rather than through the leadership of an elite. Similarly, his emphasis on a Realist epistemology in which theory and practice are related is significant. And while he only sketches what is involved in this it retains the potential to overcome the problems encountered by Young. In subsequent chapters I shall explore the possibilities Freire has opened up concerning the theory-practice relationship.

There are however two weaknesses I have identified which need remedying in order to develop a coherent pedagogy of revolutionary change. Firstly, his essentialist view that people inevitably seek liberation papers over the important
issue of just how a pedagogy of this kind is initiated - in other words what the social conditions are which make the oppressed begin to reflect upon their situation. Is it merely the force of the charismatic leader which provokes critical understanding or are there material conditions which play a part? This is related to the second weakness, which is, as I have already noted, that Freire has no adequate theory of the relationship of people to social structures. The result is that as with Young, we do not gain an adequate understanding of just what the objects of critical reflection are, nor how through practice they can be changed. What is needed is an account of social structure which can explain both why under certain conditions people's actions are determined by social structures and how through reflection they may be freed from their determinate influence.

In this respect Freire runs into the same kind of problems as Young and, as we shall see, Bowles and Gintis do not escape the problem either.

The Correspondence Theory of Bowles and Gintis

In 1976 Bowles and Gintis published 'Schooling in Capitalist America', the first sustained Marxist treatise on education. It comprised a systematic 'refutation' of the meritocratic view and demonstrated that it is the capitalist mode of production which determines the present nature and outcomes of schooling, rather than, as Liberals believe, the technology of a post-capitalist society. On the basis of this analysis Bowles and Gintis discuss a strategy
for change, which is, interestingly, predicated on a progressive theory of pedagogy.

The Social Context

It is clear from their discussion of the possibilities for change that Bowles and Gintis were strongly influenced by the student protests in America. These assumed additional significance because students were to the forefront in the anti-Vietnam movement as well as the unrest in 1968. However, by the time 'Schooling in Capitalist America' was published in 1976, the optimism for change they express, based on these events, seemed less well founded.

The Interpretive Structure

Bowles and Gintis use a functionalist mode of explanation to relate schools to capitalist society. As with Technological-Liberalism they have a determinist view of human beings and view the sub-structures of society as smoothly cohering to fulfill the system's needs, in their case those of capitalism. This determination is at odds with the voluntarist assumptions they make when they come to discuss the possibilities for change.

In addition, I shall argue that Bowles and Gintis use Positivist inspired methods of research which serve to reinforce the determinism of their functionalist explanations.

The Substantive Theory

The centre piece of the Bowles and Gintis argument is
the notion of correspondence between education and work under capitalism. What, in effect, they invoke is the mechanistic Marxist idea that the base determines the superstructure - in this case, education - such that the superstructure is congruent with and supportive of the needs of the base - the capitalist economy.

Despite these mechanistic overtones, their thesis is stated with some elegance:

"The educational system serves - through the correspondence of its social relations with those of economic life - to reproduce economic inequality and to distort personal development." 18

"The educational system helps integrate youth into the economic system, we believe, through a structural correspondence between it social relations and those of production. The structure of social relations in education not only inures the student to the discipline of the work place, but develops the types of personal demeanour, modes of self presentation, self image, and social class identifications which are the crucial ingredients of job adequacy." 19

Since the workplace is unequal and indeed, in their terms, 'totalitarian', it follows schools reproduce the inequality rooted in capitalist relations of production. As a result it is necessarily the case that capitalist societies cannot fulfill the Liberal promise of equality of opportunity.

To make their case Bowles and Gintis employ three kinds of explanation: an historical explanation to show how the congruence between education and work evolved, the presentation of research which shows how it is maintained, and a functional explanation which stands as a model of the school-society relationship, in this case that between education
as part of the superstructure and work which constitutes the economic base.

The Historical Argument

While I am not qualified to comment on the substance of their interpretation of American educational history, there is one noteworthy point, concerning their functionalist mode of explanation, that can be made. Bowles and Gintis very often reduce an explanation of events to the individual intentions of businessmen.20 It seems in consequence that what their explanation amounts to is a conspiracy theory - the correspondence between schools and work is the product of the will of capitalists.

The difficulty with functionalist explanations is that it is easy to slide between the needs of the system and personal needs, especially in a Marxian theory where the needs of the system are those which maintain the ruling class of capitalists. The consequence is that where their account should be concerned with tracing the unfolding structures which allow capitalists to impose their will and force others to cede to it, their explanations are frequently reduced to those about individuals.

The Explanation for the Maintenance of the Correspondence.

Two related explanations are used for the maintenance of this correspondence: a congruence of personality and social structure explanation and a legitimation explanation.

The first explanation claims that schools reproduce the
relevant consciousness and personality traits required by capitalist relations of production. These forms of consciousness and personality trait are fostered by a stratified education system which, in turn, corresponds to levels in the hierarchical division of labour:

"the lowest levels in the hierarchy of the enterprise emphasize rule-following, middle levels dependability, and the capacity to operate without direct and continuous supervision, while the higher levels stress the internalization of the norms of the enterprise. Similarly, in education, lower levels (junior and senior high school) tend to severely limit and channel the activities of students. Somewhat higher up the educational ladder, teacher and community colleges allow for more independent activity and less overall supervision. At the top, the elite four-year colleges emphasize social relationships confirmable with the higher levels in the production hierarchy."21

The authors spell out this idea by pointing to the fact that the education system is stratified on a number of dimensions all serving to emphasise these personality traits. On the first dimension, schools correspond to the areas they serve; in working class areas schools will be authoritarian because the kids are likely to be less compliant and more reluctant to learn. This is reinforced by inequality of educational provision, so that schools in wealthy areas are likely to get more facilities than their counterparts in the poorer areas. On the second, they point out that many schools are tracked or streamed, where the bottom track, the preserve of working class kids, emphasises conformity and rule following, while the high tracks permit more autonomous activity. On the third dimension, as pointed out in the preceding quote the tertiary system is also stratified into different types of colleges, each catering for students from particular social classes.
In order to establish that these divisions in the education system do produce different kinds of personality type, ones which correspond to the kinds of personality required at different levels of the work hierarchy, they refer to research by Binstock, Edwards, and Bowles, Gintis and Meyer.22

Binstock's research shows how tertiary colleges have adjusted to a market demand which reflects the different class consciousness and personality traits of school leavers. She concludes:

"the college industry remains a ranked hierarchy of goals and practices, responding to social class pressures, with graded access to the technical equipment, organisational skills, emotional perspectives and (class) work values needed for each stratified level of the industrial system."23

The work of Edwards is concerned with relating personality measures to performance in the workplace. He compared supervisors' rating of worker performance with a prepared set of sixteen personality measures. He found a cluster of three personality traits - rules orientation, dependability and internalisation of the norms of the firm strongly predicting supervisor ratings of workers. The point of using supervisor ratings was that since the supervisor's estimation of employees determines hirings, firings and promotions, they are the best measures of job adequacy. What he found from the supervisors' ratings was that rules orientation was important at the lowest levels of the work hierarchy, dependability at the middle levels and internalisation of norms at the highest
levels. Workers whose personality traits conformed to these at the relevant levels were then considered good workers.

In seeking support for the correspondence principle, Bowles, Gintis and Meyer took this work a step further by applying the same personality categories to high school students. They found that these personality measures were almost as good a predictor of grade point averages as scores from IQ and College entrance examinations. In other words those with a rules oriented personality (working class kids) received bad grade point averages whereas those who had internalised the norms of the school had good averages.

The essence of the research findings is that schools produce people tailor-made for subservience to hierarchical authority. In other words, schools certify particular personality traits for work. However, this process needs to be legitimated since in a meritocracy it is not personality but ability which is supposed to be the fundamental determinant of educational and occupational success.

In order to refute the claimed legitimacy of meritocratic selection Bowles and Gintis assault the doctrine of 'IQism", which asserts that educational and subsequent occupational achievement are a function of intelligence and motivation. As I pointed out in Chapter 2, Bowles and Gintis have found that for people with the same IQ score social class has a profound effect on educational and occupational success. Consequently they infer that what is in fact legitimated is
not ability but personality traits.\textsuperscript{24}

The final link in the causal chain then is to show that personality traits are class related and perpetuated. They do this by showing how these traits are related to different class characteristics of families, making reference to Kohn's acclaimed research (1969).\textsuperscript{25}

The hypothesis Kohn advances is that: "personality traits and values of individuals affect the economic positions they attain, and conversely, their job experiences strongly affect their personalities and values".\textsuperscript{26} What he has found is that individuals of higher economic status value internal motivation while people of lower economic status are more likely to value behaviour which conforms to external authority. The pay off to this research for Bowles and Gintis is that these attitudes are reproduced in the family. As Kohn says:

"Middle class parents are more likely to emphasise children's self-direction, and working class parents to emphasise their conformity to external authority."\textsuperscript{27}

The cycle of reproduction is closed: work creates certain personality traits and values, these are passed on in the home, schools foster and reinforce these traits by offering different kinds of organisation either internally through tracking or externally through a stratified tertiary sector which reflects the different characteristics and value orientations children have. They are then fed into the appropriate level within the work hierarchy only for the cycle to begin anew.

In sum, schools function to feed people smoothly into
the appropriate slot in the work hierarchy; like ginger-bread people they are stamped out in the family, baked in the schools and served up ready for work.

As a determinist statement of a correspondence between base and superstructure, however, it encounters a number of difficulties. Firstly, as a number of critics have remarked, it is hard to see how on this model education ever changes, or why it should, if it works so smoothly to the advantage of capitalism. Secondly, given a closed deterministic system such as this, it is impossible to envisage change to the kind of socialist society Bowles and Gintis desire. Thirdly, however, this account does not do justice to the resistance and political struggle which does occur in the educational arena. This struggle suggests that the educational system has the possibility for a greater autonomy than Bowles and Gintis are prepared to concede.

An example of such struggle would be the events of 1968 where perhaps the most lasting reforms were established in Italy where an open entry policy to university was implemented and workers gained the right to 150 hours paid study leave. For the most part, though, 1968 should be considered as an a-typical example of struggle. The more usual kind under capitalism is that initiated by the 'Great Debate' in England in 1976. In response to the crisis in capital accumulation the Labour Government of the time considered that by emphasising the humanistic aspects of the curriculum rather than the instrumental, schools were not preparing kids adequately for
work. Through this debate they attempted to get schools to conform to the demands of the workplace.

What this case points to is that schools can have some autonomy from the demands of work and it is through political and ideological struggle that the state attempts to bring education into line with the needs of capital accumulation.

Underlying Bowles and Gintis' failure to theorise this aspect of the school-society relationship is the absence of a theory of ideology. Ideological debate and struggle is centred in conflicting beliefs about the world but the correspondence theory has no theoretical space for a theory in which substantive beliefs can be seen as a basis for action. According to this theory consciousness is reduced to a set of personality traits.

A consequence of this is that Bowles and Gintis' explanations for the reproduction of the capitalist system are entirely in terms of the hidden curriculum which is hypothesised as reinforcing personality traits, rather than the official curriculum. In short they have no theory of ideology or ideological transmission whereby the reproduction of capitalism can be accounted for, in part, by an official curriculum which masks its real relations. In this context it is worth noting that their attack on 'IQism' amounts to an empirical 'refutation' alone. It is not embedded in a general theory of ideology and ideological transmission.
The upshot of this is that they cannot theorise ideological struggle about education nor the role of the official curriculum in the maintenance of capitalism. As I shall argue shortly this vitiates their theory of change to a democratic socialist society. One condition of such a society is that people can reflect upon their circumstances and act accordingly i.e. they are autonomous beings, but Bowles and Gintis cannot admit this possibility on the basis of their correspondence theory.

Their failure to refer to people's substantive beliefs as a cause of action reinforces their determinist model of the school-society relationship - a determinism emphasised by their Positivist research techniques, which give the impression that the world of the shop-floor is also characterised by passivity and compliance.

This is particularly apparent in Edward's research where he relies on supervisors' reports of workers' performance. What places it within Positivist methodology is that the supervisors' ratings of the people they regard highly are based on what they observe of their work. Moreover, the answers they give concerning the kinds of personalities desired for particular kinds of work would probably reflect the 'official line'. Within the context of Bowles and Gintis' discussion the impression this research gives is that new workers arrive from the school with a suitably compliant consciousness; they are fitted into the relevant slot in the work hierarchy where by doing what is required they are rewarded. But as we know
from the work of Burawoy (1978) and Willis (1977) what workers actually do behind the backs of supervisors is to be creative, aggressive and independent. The shop floor is not characterised by compliance but by resistance, subterfuge and games through which workers wrest some autonomy from the hierarchical conditions imposed upon them. By the same token Willis (see Chapter 8) emphasises working class resistance in schools which far from rule following is perversely creative in breaking rules.

In sum, the compliance demanded by capitalism has to be created and re-created. There is resistance at work and in education which has to be countered by political and ideological struggle. But the failure to incorporate these elements within their model leaves Bowles and Gintis unable to theorise any plausible strategy for change. This clearly emerges in their discussions of the possibility of a socialist revolution, where they assume a voluntarism which cannot be incorporated into their model.

For Bowles and Gintis the student radicalism of 1968 was the product of a fundamental contradiction between a Liberal ideology which required the continual expansion of educational opportunities and a contracting labour market for the well educated. As a result students became frustrated, their values changed and they became radicalised. The consequences for this 'contradiction' for Bowles and Gintis are far reaching:

"The weakening of the reproductive role of higher education represents an opportunity for radical change, not only on the campuses, where these contradictions are now most acutely felt, but also
in other sections of society where the crisis in higher education will help destroy (sic) the mythology of opportunity and progress and thus reveal the shortcomings of the social institutions which regulate our lives. "30

The idea that it is the educated middle class which will trigger a Socialist revolution is a curious one for Marxists to propound. The inspiration for this idea clearly comes from the alliance between students and workers in France in 1968 when together they overthrew De Gaulle only to find him replaced by his protégé, Pompidou. But I think this idealism is underwritten by a weak notion of contradiction which is superimposed upon their model. The point is that in their account the source of social change is a contradiction between an ideological and material condition of society, between the rhetoric of equality of opportunity and the contracting labour market. But this is a secondary contradiction and as we now know leaves the social world largely untouched. The dynamics of change emanate from the primary contradictions of capitalism and they are firmly embedded in the material relationship between capitalist and worker. If fundamental change comes, then according to Marxian theory it will begin from this contradiction.

The difficulties Bowles and Gintis encounter in theorising change are also manifest in their discussion of education for a socialist democracy. In their view schooling under capitalism is hierarchical and authoritarian because it corresponds to the demands of the hierarchical division of labour. This is in contrast, for example, to some Liberal theories
of education which see the authoritarian nature of education as a function of the development of rationality. Roughly speaking Bowles and Gintis have a simplistic 'correspondence' theory of social psychology which relates organisations to beliefs; given an appropriate form of organisation people's beliefs will correspond to it.

In contrast, under socialism they view the appropriate form of education to be along 'progressive' lines, where schools are characterised by choice and democratic decision making. The problem here is that it is difficult to see how the democratic model of schooling is consistent with a view of people who passively respond in the appropriate way to the organisation they find themselves in. It could be argued that Bowles and Gintis are quite consistent here, that by their 'correspondence' theory of social psychology people will respond democratically under a democratic form of school organisation. But the point is that under a socialist democracy people are meant to be autonomous agents who respond critically and rationally to their situation. What this presupposes is an altogether different view of human nature, one in which people can critically reflect on the world. But this in turn presupposes a theory of ideology and consciousness which takes into account the fact that people behave according to substantive beliefs they have about the world and not merely as a result of certain personality dispositions they might have: a view of human nature Bowles and Gintis cannot entertain within their theory.
As with their humanist radical counterparts Young and Freire, their discussion is vitiated by an inadequate theory of human nature which cannot explain how the transition to socialism is possible. What is required, once more, is an account of the relationship of individuals to social structure which can consistently accommodate the possibility of the transition to socialism. This requires a theory of social structure which allows the possibility that people may act upon a critical examination of their beliefs, which in turn entails the need for a theory of ideology.

Summary

The value of 'Schooling in Capitalist America' lies in its assault on prevalent Liberal beliefs about the nature of society; Bowles and Gintis' emphasis on capitalism as the source of inequality and the refutation of IQism has yet to find a plausible defence amongst Liberals. But the explanation of the school-society relation and its perpetuation that Bowles and Gintis give, is, I believe, misleading in certain crucial respects. The consequence is that they cannot adequately theorise the transition to socialism.

In terms of the criteria laid down in Chapter 1, Bowles and Gintis provide a good explanation for the structure and organisation of schools as corresponding to that of the capitalist workplace. They have a strong theory of the role of the hidden curriculum but no theory of ideology to account for the 'official' curriculum. The failure to attend to the role of substantive beliefs as a cause of action serves to
emphasise the smooth functioning of the school-economy relationship at the expense of any autonomy to the school system. As such they cannot theorise education as politically and ideologically contested. They also jeopardise the possibility of a coherent theory of the transition to socialism and the role of education in it.

Consequently I suggest we need a theory which, on the one hand, views people as capable of action on the basis of a critical examination of the theories they hold about the world. And on the other regards them as constrained by certain structures. These underlying structures produce both class society and an ideologically impregnated curriculum.

Such a theory would be Realist insofar as it would assert we can have knowledge of the structures which place constraints upon us. It would accept foundational relativism insofar as a theory of social production is needed to articulate an account of ideology. And it would reject judgemental relativism claiming that we can have knowledge of the social world by choosing the best theory by the relevant criteria.

It is to the epistemology of such a theory I turn to in the next chapter.
Notes and References on Chapter Three


3. Young suggests Freire shares this view of the curriculum but it should be emphasised that the latter does not share Young's Relativist epistemological position. See the section on Freire in this chapter.


17. For a statement on the Althusserian view of people as 'bearers' see the quotation from Kevin Harris in Chapter 6, p234.


20. See for example their comments on the aims of employers and the capitalist class in their (1976), p10 and p49.


22. This research is discussed in Bowles and Gintis (1976), pp131-141.


24. Bowles and Gintis do not explain how personality traits are related to educational success and failure per se but an explanation can be reconstructed. They point out that IQ scores are a good predictor of grade point average (p136). They also point out that for every IQ score people from the working class leave school earlier than their middle class counterparts. The inference is then that the personality traits of working class kids ensure they leave school earlier. One explanation for this would be that working class culture encourages them to leave earlier. See Chapter 8.


31. See for example the discussion in Chapter 8 on Liberal-Rationalism, the theory of the 'London School; of philosophers of education.
PART TWO
CHAPTER FOUR

TOWARD AN ALTERNATIVE REALIST ACCOUNT OF SCIENCE

The aim of this chapter is to elucidate a Realist account of natural science: one which can have qualified application in guiding the development of social theory. In subsequent chapters I shall show that a social theory with a Realist underpinning will provide a far richer and more plausible account of the school-society relationship than that offered by the competitor theories I discussed in previous chapters.

I shall begin this chapter by discussing some of the criticisms which have struck at those doctrines which may be considered to lie at the heart of Logical Positivism - the doctrines of the epistemic privilege of observation and the verification theory of meaning. A discussion of the more telling criticisms of these doctrines will enable me to introduce some issues concerning the nature of knowledge, and of theories, which a viable Realism will have to take into account. Moreover, by showing how these criticisms render Logical Positivism untenable the contrast between naturalistic and non-naturalistic modes of enquiry, drawn by Logical Positivism, collapses.

Criticisms of Logical Positivism

For purposes of exposition my criticisms of Logical Positivism will be divided into three sections. In the first
I shall examine the idea that observation is theory-impregnated. The doctrine of the epistemic privilege of observation assumes observations are, in principle, independent of theory. As such observations provide a secure basis for knowledge. If, however, it can be shown that observations are theory-dependent, the idea that observation provides a secure basis for knowledge will be undermined with the following consequences. Firstly, the Logical Positivist view that knowledge accumulates on the secure foundations provided by observation would be undercut. Secondly, if observations are not independent of theory the role played by observation in arbitrating between theories will be more complex and problematic than Logical Positivists have suggested. Thirdly, if observation cannot provide a foundation for knowledge then it is plausible to argue that knowledge is socially produced. The point is that the idea that observations are epistemically privileged enables Positivists to view knowledge as based on foundations independent of social processes. But if observation does not provide such an independent foundation we can view the production and justification for what counts as knowledge as a social process. Fourthly, the Positivist case for proscribing reference to unobservables (theoretical entities) would be severely damaged since for Positivists the grounds for precluding theoretical entities rests on the epistemological and ontological privilege assigned to observation statements.

In the second section I discuss the view that theories are undetermined by the evidence. Positivists consider that knowledge is secured through the Hypothetico-Deductive method. By this method Positivists claim an hypothesis can be verified
or falsified, in principle, according to whether an hypothesis' predicted consequence is observed. If, however, evidence cannot provide decisive or near decisive confirmation or disconfirmation for an hypothesis a number of consequences follow. Firstly, the Hypothetico-Deductive method, placed within the context of Positivist thought cannot provide an adequate account either, of scientific method or of the historical development of science. Secondly, the failure to provide an adequate descriptive account of scientific method tells against the plausibility of the normative account of science Positivists offer. Thirdly, because Positivists have not accepted the full implications of the underdetermination of theory by evidence thesis, they have assumed that empirical evidence alone is sufficient to judge the worth of a theory. Consequently, they have ignored the significant role played by conceptual criteria in theory choice. Finally, the underdetermination of theory by evidence thesis points to a qualified holistic view of knowledge, rather than the particularist view taken by Positivism, which suggests that specific hypotheses may be confirmed or disconfirmed in isolation from the background knowledge they presuppose.

In the third section I discuss Quine’s attack on the analytic/synthetic distinction. This distinction, as it has been interpreted by Positivists, may be regarded as the cornerstone of the verification theory of meaning. By his criticism Quine undermines the credibility of a theory of semantics which is consistent with and supportive of both the doctrines of the epistemic and ontic privilege of observation and the particularist view Positivists take of the relationship
between theory and observation. The consequence of Quine's criticisms is that the rejection of the analytic/synthetic distinction allows us to consider an alternative qualified holistic theory of meaning which is consistent with a qualified holistic view of knowledge.

The Attack on the Doctrine of the Epistemic Privilege of Observation

There are a number of points which taken together tell against the possibility of making a strong distinction between theory and observation.\(^1\) We can begin by noting that observations need to be expressed in a public language if they are to have any scientific value. Observations cannot just be private experiences but must be expressed in such a way that they are open to public evaluation. Consequently, if observations are to be admitted into scientific discourse they must be expressed in a public language as observation statements.

However, observations are mediated by the concepts which are embedded in language. When we observe X we do not apprehend it with an innocent eye, rather we view X under a particular description which is theoretically loaded. Hanson has used the analogy of a gestalt figure to bring out this point.\(^2\) He asks us to consider an ambiguous figure such as that of the duck-rabbit:
Hanson suggests there are two ways in which the process of seeing this figure can be understood. On the first account, which is consistent with the Logical Positivist view of observation, the seeing of X is only the having of a visual sense-datum of X. For sense-datum theorists there is always some basis for agreement in what we see; in the case of the duck-rabbit figure this will be a configuration of lines. These lines comprise the foundation upon which an interpretation of what they represent can be made. Seeing and cognition are two distinct processes and as Hanson points out:

"We may interpret differently what we see. We may bring all sorts of considerations from our individual past experiences, our training, etc, to bear on what we see. But this is just an intellectual excrescence upon the business of seeing. It is a kind of rational plaster stuck on the hard stones of visual sensation, it is not really relevant to an analysis of pure seeing and pure observation."

Hanson calls this the two-phase account of observation and against this he contrasts a Wittgenstein view which he favours. In this view observation and interpretation are not two distinct moments in the process of seeing. In viewing the duck-rabbit figure we do not see a configuration of lines and then interpret them as representing a duck or a rabbit. We just 'see' a duck or a rabbit. The inverted commas placed around 'see' serve to emphasise that in Hanson's terms we never see X; we always 'see X as', where to 'see as' denotes the particular description under which we see X. Two consequences follow: firstly, there is no agreed basis as to what is seen (two people looking at the duck-rabbit figure see quite different objects). Secondly, what we see is determined by theory. Therefore in viewing the world from different theoretical perspectives different objects are 'seen'. 
Theory enters the description under which we 'see' an object in at least two respects. Firstly, what we 'see' will be a function of our background knowledge. For example, 'seeing' the figure as either a duck or a rabbit presupposes a theory of representation, it also presupposes a theory concerning the classification of animals. Secondly, what we 'see' will be informed by context. If we see the figure in a frame hanging on a wall we may take it as a representation of a duck or a rabbit. If, however, we see it in a foreign city on what we take to be a street sign we may interpret it as a symbol conveying directional information.

If observations are theory impregnated it follows that our observation statements will also be theory impregnated. There are two points of importance arising out of this. Observation statements will always be made relative to a particular theory. If we make the claim that what we see is a duck it is because the theory by which we identify animals tells us that ducks can, in part, be identified by the fact that they have beaks. But it is also the case that the meaning of the observation statements will be derived from the theoretical context in which they are embedded. The reason why the notion of a duck or rabbit has meaning for us, whereas, for example, the notion of a duck-rabbit creature does not, is that our theory of evolution suggests it is implausible to believe the latter creature exists or could have existed. In other words, the concept of a duck-rabbit creature would only make sense within a theory which can plausibly explain how such a creature has evolved. In sum our observation statements are a function of the theories we hold. Hanson sums up the point
clearly when he says:

"We do not begin with a visual sensation and only then turn our theories and interpretations loose on it. In a most important way our theories and interpretations are in the seeing from the outset."

Observations are, then, theory impregnated. As such they cannot provide an independent foundation for the accumulation of knowledge. In addition, it is not possible to appeal to observations, in a direct sense, to arbitrate between competing theories for the entities theories make reference to will carry different descriptions. This makes it difficult, though I shall argue not impossible, to validly compare theories and the observational evidence which they marshall in their favour. However, it is also the case that within theories any set of observations predicted by a particular hypothesis cannot be considered decisive in either confirming or disconfirming the hypothesis. It is to this issue I now turn.

The Underdetermination of Theory by Evidence

Positivists embed the Hypothetico-Deductive method within a particularist view of theory. This view assumes that, in a relevant sense, an hypothesis or set of hypotheses can be tested independent of background knowledge. It is because Positivists have espoused a particularist view of theory that they also believe that theories can be decisively or near decisively verified or refuted. However, the particularist view of theory fails to adequately describe the complex relationship between an hypothesis which is being tested and the background knowledge and associated theories which it presupposes.
Once, however, the complex nature of the relationships between the hypothesis being tested and background assumptions is acknowledged the view that a theory can be decisively or near decisively verified or refuted is rendered untenable. This point can be shown as follows: If we want to establish the validity of a theory $T$, in conjunction with initial conditions $I$, then we must deduce an observational consequence $O$. When, however, we set up tests to identify $O$ we find the deduced observational consequence does not occur. Schematically this process can be depicted in the following way:

$$T.I \rightarrow O \quad (T \text{ together with } I \text{ will have observation consequence } O)$$

$$\sim O \quad (\text{the observation consequence does not occur})$$

$$\therefore \sim T \sim I \quad (\text{therefore either } T \text{ or } I \text{ does not obtain})$$

The problem here is that it is not clear which is at fault, the theory or the initial conditions. But in a real scientific test situation matters are even more complex because in addition to $T$ and $I$ the background theory presupposed needs to be included. Examples of the background theory needed in testing $T$ are those related to the instruments used in the test such as optical theory if microscopes are used, and statistical theory which is commonly used in the social sciences. If we take all the background theory as represented by 'B' then this yields the following schema:

$$T.I.B \rightarrow O \quad (T \text{ together with } I \text{ and } B \text{ will have the observation consequence } O)$$

$$\sim O \quad (\text{the observation consequence does not occur})$$

$$\sim T \sim I \sim B \quad (\text{therefore either } T \text{ or } I \text{ or } B \text{ does not obtain})$$
The upshot is that in testing $T$ against experience we do not confront experience with a single hypothesis or set of hypotheses but with a complex network of theoretical assumptions.

Given that this is the case we do not know where to distribute the praise or the blame. In the schema immediately above where the predicted observation consequence has not occurred, it is unclear whether the fault lies with $T$, $I$ or $B$. This being the case it is open to scientists to retain their belief in the truth of $T$ and to adjust $I$ or $B$. And in fact such an *ad hoc* strategy is not only open to scientists in principle but the history of science is replete with examples of this strategy and variations upon it. A further *ad hoc* strategy employed by scientists in the face of the failure of predicted observational consequences is to introduce new auxiliary hypothesis to explain the failure. Imre Lakatos gives an amusing example of this strategy:

"The story is about an imaginary case of planetary misbehaviour. A physicist of the pre-Einsteinian era takes Newton's mechanics and his law of gravitation, $(N)$, the accepted initial conditions, $I$, and calculates, with their help, the path of a newly discovered small planet, $p$. But the planet deviates from the calculated path. Does our Newtonian physicist consider that the deviation was forbidden by Newton's theory and therefore that, once established, it refutes the theory $N$? No. He suggests that there must be a hitherto unknown planet $p'$ which perturbs the path of $p$. He calculates the mass, orbit, etc., of his hypothetical planet and then asks an experimental astronomer to test his hypothesis. The planet $p'$ is so small that even the biggest available telescopes cannot possibly observe it: the experimental astronomer applies for a research grant to build yet a bigger one. In three years' time the new telescope is ready. Were the unknown planet $p'$ to be discovered, it would be hailed as a new victory of Newtonian science. But it is not. Does our scientist abandon Newton's theory and his idea of the perturbing planet? No."
What the above considerations point to is that the Positivists' particularist view of theory as an hypothesis or set of hypotheses which can be tested against experience in a piecemeal way is erroneous. Rather it is the theory understood as a complex network of interrelated hypotheses and assumptions which is tested, as a whole, against experience. It is precisely because theories are complex structures that they have the resources which enable them to survive refuting instances when they are tested against experience. However the fact that theories are complex structures with the resources to survive refuting instances makes them more difficult to appraise. One noteworthy account of how theories as complex structures can be appraised has been advanced by Lakatos and I discuss it in the following section.

It is plausible to suggest that it is the Positivists' concern to establish a foundational epistemology based on observation which encouraged them to develop a particularist account of theory. For if observation is to be foundational for knowledge then an account of theory is required for which observation would be decisive in determining the truth value of any specific theory. Moreover, the same motivation has led Positivists to exclude metaphysical statements from scientific theory because they considered such statements constituted one important class of statements which could not be directly tested against experience. Now, in certain significant respects Positivism's theory of semantics, the verification theory of meaning, is consistent with and supportive of the particularist view of theory. For example, it will be recalled from chapter 1, that according to the verification theory of
meaning, the meaning of a singular statement is established by its method of verification, where only that which, in principle, can be observed can be verified. The verification theory of meaning thereby rules out metaphysical statements as cognitively meaningless precisely because there is no method by which they can be decisively verified or falsified. Furthermore there is a sense in which the emphasis placed by the verification theory on the singular statement as the unit for which meanings are established mirrors the particularist view of theories. At the epistemic level I have drawn a contrast between theory construed as a complex holistic structure and theory understood in the particularist sense as an hypothesis or set of hypotheses. This distinction finds its parallel at the semantic level between an holistic account of meaning which views meanings as determined by their place within a conceptual network, and a particularist account, such as the verification theory, which views the singular statement as the unit for which meanings are established.

However, if the underdetermination of theory by evidence thesis vitiates the particularist view of theories and paves the way for a qualified holistic account of theory, the same service is performed at the semantic level by Quine's assault on the analytic/synthetic distinction, which distinction may considered the cornerstone of the verification theory of meaning. I shall therefore outline, briefly, Quine's widely accepted case, against the analytic/synthetic distinction.
Quine's Attack on the Analytic/Synthetic Distinction

In his celebrated paper 'Two Dogmas of Empiricism', Quine uses two arguments to undermine the analytic/synthetic distinction. The first argument is concerned to undermine the traditional notion of analyticity as a statement "which is true by virtue of meanings and independently of fact". His aim in this argument is to show that there is no clear way in which this notion of analyticity can be understood. Analytic statements fall into two classes; those which are logically true and which are typified by:

(1) No unmarried man is married.

where the statement remains true under any and all reinter- pretations of 'man' and 'married', just so long as the logical particles 'un', 'not', 'if', 'then', 'and' etc remain constant. The second class of analytic statement is typified by:

(2) No bachelor is married.

The characteristic of such statements, Quine suggests, is that they can be turned into a logical truth by putting synonyms for synonyms. Hence, (2) can be turned into (1) by putting 'unmarried man' for its synonym 'bachelor'. Now the suggestion Quine considers is that it is through the notion of synonymy that this concept of analyticity can be explicated - that the reason why we intuitively regard (2) as a paradigmatic analytic statement is that it is synonymous with (1). As such a statement is analytic if it can be obtained from a truth of logic by putting synonyms for synonyms. But, as Quine observes, the notion of synonymy is as vague as the notion of analyticity.
Therefore to explicate analyticity in terms of synonymy does not advance our understanding of the notion of analyticity.

Quine then considers the objection to his argument that the difficulty in distinguishing between analytic and synthetic statements is due to the vagueness of ordinary language. He considers a proposal by Carnap that in fact the notion of analyticity can be made clear within an artificial language where analyticity is defined according to a semantical rule. However, Quine has little trouble in showing that this strategy merely pushes the problem back one step since it is now the notion of a semantical rule which stands in need of explication.

By demonstrating that the concepts of 'synonymy' and 'semantical rule' are as vague as the concept of 'analyticity', Quine shows just how difficult it is to make sense of the notion of analyticity. However he does not argue that to explicate analyticity in terms of synonymy is impossible, merely that we do not currently have an adequate theory of synonymy. In this respect his argument is not particularly strong and it is his second argument against the notion of analyticity which many consider to be decisive.

Quine's second argument attacks the notion of analyticity from a different angle. Now he considers the idea that analytic statements are just those statements which are held true "come what may". Against this idea he argues for an holistic view of knowledge which "impinges on experience only along the edges". As such our theories are radically
underdetermined by the evidence so that there is considerable choice as to what statements we can re-evaluate in the light of experience. Indeed he suggests that any statements can be held true, come what may, if we make drastic enough adjustments elsewhere in the system. And among the changes we may be prepared to consider are changes to the laws of logic and changes in what we consider are analytic statements. In Quine's holistic view of knowledge no class of statements are immune from revision.\(^8\)

Quine's two pronged attack on the notion of analyticity clears the path for an holistic theory of meaning, one which is consistent with an holistic view of knowledge - a view endorsed by Quine in its most radical form.\(^9\)

*Towards An Alternative View of Theory and Knowledge, and Some Problems*

The view that observations are theory-impregnated coupled with the thesis that theories are underdetermined by evidence points to a different conception of theory and knowledge than that advanced by Logical Positivists. In this alternative view it is the theory which is the unit of appraisal not the singular statement because, as I pointed out above, it is the former, rather than the latter, which faces the tribunal of experience. Furthermore, the terms within a theory will derive their meaning from their place within the theory's conceptual network. To take an example closer to the concerns of this thesis: the concept of class has a different meaning in Technological-Liberal theory to its counterpart in Marxian theory. In Technological-Liberal theory the major variables
by which class is identified are occupation, income and education; moreover classes are ranked hierarchically on a continuum. This view of class contrasts with that of Marxian theory; here classes are defined in terms of their relationship to the means of production rather than by occupation. And instead of being viewed on a continuum they are regarded as discrete and antagonistic groupings.

At this point it is worth pausing to ask what it is about the different semantic networks distinctive of theories which generate unique sets of meanings. Why, in other words, is the Technological-Liberal notion of class different to that of the Marxian notion? Part of the answer to this is due to the fact that theories have different ontological commitments; they have unique world-views at their core. For example, Technological-Liberals presuppose a consensual society - one in which it is possible to view class on a continuum precisely because there are no conflicts or struggles between groups to inhibit social mobility. On the other hand, the Marxian view of capitalism is precisely of a society characterised by conflict between discrete classes. And it is noteworthy that the description of Western societies by the two theories is quite different: Technological-Liberals refer to industrial society, Marxists to capitalism.

It is because theories have unique ontologies that the idea that observations are theory-impregnated assumes importance. What a theory takes to be the objects of observation or its data will be determined by its ontological commitments. To take the example of class again: in the Technological-Liberal view
the characteristics of class which are operationalised and tested are those relating to occupation, whereas from the Marxist viewpoint, it is the social relations of production which are operationalised. Accordingly, the data collected in order to confirm or disconfirm claims about the nature of class will be different for the two theories. In this respect the fact that the two theories have different ontological commitments assumes significance at the lowest empirical level of data collection. However, while a theory determines what counts as an observation it does not determine what is observed. As we have seen the Technological-Liberal theory predicts high rates of social mobility according to the relevant definition of class but the predicted rates of mobility have not occurred. Consequently, though observations are theory impregnated they are nevertheless significant in our evaluation of theories. But, while the evidence a theory generates may count for or against the theory, it cannot be used, in any straightforward sense to settle the claims of conflicting theories. Since there is no neutral observation language no data can be used to arbitrate directly between theories.

One lesson drawn from this, which is typically associated with the views of Feyerabend (1978), is that theories are incommensurable, that there are no criteria either by which theories can be relevantly compared or critically assessed to judge whether one is superior to another. But because theories do not have referents in common (e.g., the Marxian notion of class does not refer to the same thing as its Liberal counterpart) and there is no netural observational
standard which can be appealed to, it does not follow that there is no basis for critical comparison.

There are two considerations which count against Feyerabend's radical conclusion. Firstly, Hooker (1973) has argued that such a radical conclusion would only be licensed if each time we changed from one theory to another the neural mechanisms by which we apprehend the world also changed. Since, however he suggests there is good reason to believe these have evolved uniformly among human beings then the interpretive structures which these mechanisms impose on our perception of the world are held in common. This, then, imposes certain common limits to what it is we see, so that even when the theories we hold interpret the world differently there is still some agreed object we can say the theories are about. He makes the point with reference to the sun:

"One can imagine that an Aristotelian watching the setting sun would perceptually adopt the earth as the fixed reference frame and have a perceptual experience of the sun sinking toward it, while a Newtonian, perhaps, may adopt the sun as the fixed reference point and have a perceptual experience of the horizon rising toward it, ...... But only under pathological circumstances of the deepest kind would we expect to be able to convince any *homo sapiens* that the sun was square ... or that the sun was green ... it is no accident that no theory has been put forward under which the sun is square or green ... it is downright impossible to believe that our theories could affect our perceptions of these aspects of the sunset situation whilst ever we remained sane."10

The same kind of point can be made with respect to social theory. For example Liberals and Marxists can both agree that working class kids typically 'fail' at school just so long as they accept the statistical theory by which this
is established and a common definition of what counts as 'failure'. Though of course the explanation for this and even whether kids should be doing the kinds of activities for which this definition of failure counts is another matter. This brings us to the second consideration.

Walker and Evers (1982) elaborate on some hints by Lakatos concerning the idea of 'touchstone' theory. By this they mean that there are certain theories that are, for the time being, commonly accepted and on the basis of which theories can agree as to certain minimal objects (e.g., the sun-object in the above example) which comprise the world. An example of touchstone theory which is commonly used in the social sciences is statistical theory. On this basis theories may be considered in competition where it is agreed they are seeking to explain and describe the 'same' phenomena. But as the authors caution, "Touchstone is not made up of epistemically favoured statements. It is merely the (shifting) amount of theory that is shared by rival theories and/or theorists."

These considerations, then, provide the basis on which theories may be judged in competition. More formally, the above authors' account of when theories are in competition can be adopted:

"Educational theory $T_1$ is in competition with $T_2$ when one or more of the claim(s) of $T_1$ is contrary to the claim(2) of $T_2$. For this situation to obtain, $T_1$ and $T_2$ must be addressed to the solution of at least one common problem."
If these criteria establish the basis on which theories can be judged as competing, the next concern is to lay down criteria by which one theory can be judged, in the relevant respects, as superior to another. Before doing so it is worthwhile pausing to establish the point we have arrived at.

The arguments I have cited tell strongly against the foundationalist doctrines on which Logical Positivism is built. But these arguments also point to an alternative conception of the development of knowledge, where the basic unit of knowledge and appraisal is the theory. Consequently, rather than seeing knowledge as accumulating on certain foundations, the growth of knowledge must be accounted for in terms of the displacement of weaker theories by more powerful ones.

This critique of Logical Positivism has had the effect of radically altering our conception of knowledge and how it develops. An important issue now, is to see whether it is possible to articulate criteria by which we can choose between competing theories, and for this I turn to a discussion of Lakatos' 'Methodology of Scientific Research Programmes'. (Hereinafter abbreviated to MSRP).

**Lakatos' Criteria for Theory Choice**

Lakatos' meta-theory of the criteria for choosing between theories or what he calls research programmes poses certain problems of interpretation. This is because Lakatos himself equivocates as to the status of these criteria and their relevance to practicing scientists. I propose therefore
to partition his theory into three distinct but related parts. By doing so Lakatos' intentions can be more clearly evaluated and those aspects where the theory is weakest can be rejected and what is considered worthwhile or useful retained.

MSRP has three component and related parts: (1) a theory of the structure and relative autonomy of research programmes; (2) a theory of the development of research programmes, in which the relationship between a research programme and its constituent theories is articulated; (3) a theory of the progress and rationality of science based on (1) and (2).

(1) A theory of the structure of research programmes, (RPs)

For Lakatos, RPs are individuated by a set of 'hard core' propositions, which represent the distinctive world-view of the RP. These propositions are taken to be irrefutable. The 'hard core' is therefore supplemented by a 'negative heuristic' which has two aspects, it is an injunction forbidding any attack on the 'hard core', and a series of methodological rules which indicate the avenues of research which are not open for investigation. By the same token a 'positive heuristic' provides methodological rules and hints as to the direction in which the research is to be pursued.

The direct objective of this research is to provide a 'protective belt' of auxiliary hypotheses against which attacks upon the 'hard core' are directed. The 'protective belt' consists of a series of theories which attempt to accommodate the anomalies thrown up in testing the theory.
The point being that no theory is decisively refuted by one falsified hypothesis since a counter-theory can always be advanced to account for the falsified instance as Lakatos shows with the example I quoted previously. This brings us to Lakatos' theory of progress.

(2) The theory of the development of research programmes

Clearly, if a refuting instance can be accommodated by a further theory (auxiliary hypothesis) criteria are required by which we can judge whether the auxiliary theory accounting for the anomaly represents 'progress' for the theory. The point is that any 'ad hoc' hypothesis may be dreamed up to account for the anomaly but unless it conforms to certain procedural rules it becomes merely an illicit defence more concerned to save the 'hard core' than to adequately account for the anomaly. To this end Lakatos proposes the following celebrated criteria of theory choice.

A theory $T$ is falsified iff another theory $T_1$ has been proposed with the following characteristics: (i) $T_1$ has excess empirical content over $T$, that is, it predicts novel facts, improbable in the light of, or forbidden by $T$; (ii) $T_1$ explains the previous success of $T$, that is, all the refuted content of $T$ is included in the content of $T_1$; (iii) some of the excess content of $T_1$ is corroborated.\[^{12}\]

We should note that Lakatos distinguishes between a theoretical and empirical problemshift. The former occurs when a new theory has been proposed, the latter when some
of its 'excess content' has been corroborated. Where both these criteria are satisfied we can talk of a progressive problemshift.

Now despite the distinction between the theoretical and progressive problemshift it is important to appreciate the weight Lakatos places upon the ability of a theory to predict novel facts. For in his view the prediction of novel facts becomes not only the prime distinguishing feature of 'progress' but of science. In MSRP he says for example:

"A given fact is explained scientifically, only if a new fact is also explained with it." (my emphasis)

"The idea of growth and the concept of empirical character are soldered into one."

"empiricalness (or scientific character) and theoretical progress are inseparably connected."¹³

For Lakatos, then, science and progress are inseparable from empirical confirmation and specifically novel prediction. A theoretical problemshift counts for nothing unless it can be empirically corroborated.

(3) The theory of progress and rationality in science

Empirical progress as represented by novel predictions is the cornerstone of Lakatos' theory of scientific rationality. According to Lakatos, if the history of science is to be characterised by progress then the choices scientists have made between RPs will be on the basis of his criteria of theory choice, where the ability to predict novel facts is regarded as central.
It follows for Lakatos that RPs which do not conform to his account of science are both unscientific and irrational. Since he believes the social sciences do not conform to his criteria of progress he is quick to condemn them, particularly Marxian and Freudian theory. What Lakatos is seeking to do is to provide demarcation criteria between science and non-science, the rational from the irrational, while conceding that the foundationalist cause is lost. In other words, he believes it possible to establish clear criteria for what is rational without the authority of knowledge which has been derived from certain foundations.

Unfortunately the precise nature of these demarcation criteria were never made clear by Lakatos and they were a source of considerable ambiguity in his own pronouncements concerning the practical advice for scientists he considered they licensed. I shall return to this point shortly in discussing the strengths and weaknesses of Lakatos' proposal, since it has considerable bearing on whether the criteria for theory choice he articulates can in fact guide scientists.

An Assessment of Lakatos' Project

The Strengths. Lakatos is regarded by many as having provided the most sophisticated account of scientific development yet. Of particular note is his emphasis on the phasic development of theories in which the unit of appraisal is not a singular statement or an isolated theory but a series of theories. However he does not push the issue of phasic appraisal far enough, for the concept of phasic appraisal suggests that
different criteria should be used at different times in a theory's history to evaluate it. So, for example, with fledgling theories he counsels we should treat them leniently but he gives no account of what this might involve. This issue is one related to the question of how the 'hard core' emerges and I shall discuss it further in the next section.

While, Lakatos does not deal with the emergence of the 'hard core', the notion is nevertheless valuable because it reserves a place for dogma or tenacity in the scientific enterprise, which as Kuhn and Popper have both pointed out are important features of scientific practice. Relatedly, the fact that scientists, on this account, can rationally provide auxiliary hypotheses in order to save their theories provides a welcome liberalisation and is faithful to good scientific practice.

As a counterpoint to the dogma he rightly regards as important, Lakatos counsels a proliferation of theories so that the widest possible choice is available. In doing so he accords some place to imagination and ingenuity while emphasising that only the fittest (the most progressive) will survive the Darwinian competition between theories.

The consequence of these 'strengths' is that Lakatos is able to provide a normative account of scientific rationality predicated on a fairly accurate description of scientific practice. There are however problems with the descriptive and normative aspects of his theory.
The Weaknesses. There are three problems raised by MSRP I want to deal with. Firstly, Lakatos places too much emphasis on novel predictions as the prime criterion of scientific progress. Secondly, he is not sufficiently thorough in developing the idea of phasic appraisal. Thirdly, he is ambiguous as to whether it is legitimate to offer advice, that is whether MSRP can be used to guide the practice of scientists. I deal with these in turn.

For Lakatos there are two criteria which distinguish the scientific from the non or pseudo-scientific, the first concerns a RP's ability to anticipate and solve anomalies. What this amounts to is the demand that a theory takes the form of a RP: that it has a 'hard core' and positive and negative heuristics by which the hard core can be defended. This ability to defend the 'hard core' against successive anomalies (what Lakatos called 'heuristic power') generates the autonomy of theoretical science. By this he means a RP not only deliniates a world view but also produces anomalies with respect to it. It operates as a more or less closed system.

The second criterion which distinguishes science is the demand for novel predictions; for Lakatos the idea of progress in science is necessarily connected with the ability of a research programme to generate novel predictions. But there are good reasons for believing that he underestimates the role of theoretical adequacy in scientific progress and places too much store on the empirical adequacy of novel predictions as a criterion of theory choice.
Concerning the role of theoretical considerations,

Laudan has pointed out that:

"the work of several historians in the last twenty years has provided overwhelming evidence that the methodological beliefs of scientists often do profoundly effect their research and their appraisals of the merits of scientific theories".14

Laudan also documents the influence of epistemology and metaphysics on scientists' choice of theories. As an example of the role of epistemological beliefs in theory choice he cites the debate in the 1720's between members of the Newtonian school as to whether scientific theories should admit unobservable entities or whether they should proceed simply from observations to inductively inferred generalisations. As an example of the influence of metaphysics he points to the debate in quantum mechanics over the nature of causality, change, substance and 'reality'.

The reason why these debates have been central to theory choice and thereby scientific development is that the metaphysics and epistemology espoused determines the nature of possible explanations. If a view of what constitutes legitimate scientific theorising prohibits unobserved theoretical entities then clearly they cannot figure in any putative explanation. The debate between the Newtonians occurred precisely because Newtonian theories of electricity, chemistry and physiology among others were positing the existence of imperceptible particles. By the same token questions of metaphysics have loomed large in Quantum theory, where Einstein's celebrated quip that God does not play dice with the universe, signalled his rejection of the statistical causality
presupposed by explanations within this theory.

The same point can be made by reference to the theories discussed in the previous two chapters. For example, I objected to Bowles and Gintis' explanation of the school-society relationship on metaphysical grounds - it was too deterministic, on empirical grounds - it produced significant anomalies, and on heuristic grounds. In the latter case I questioned the Correspondence theory's heuristic worth because I considered the passive view of human nature it presupposed made the realisation of a socialist democracy, in which everyone participated, implausible. Scientific development is much more than simply choosing the most progressive theory according to the criterion of novel predictions - which brings me to the second problem, Lakatos' inadequate account of phasic theory appraisal.

For Lakatos, theory appraisal can only begin once the 'hard core' has been established, since his criteria for theory choice only apply to defences of the hard core. He does suggest theory appraisal can enter at the earliest stages of development, for example as I noted earlier he counsels that fledgling theories should be treated leniently but gives no indication of the criteria by which young theories should be judged. The reason for this is that he gives no more than a cryptic footnote as to how the 'hard core' emerges. But a rational reconstruction of how it develops would pave the way for the articulation of criteria of appraisal for this phase in a theory's life history. The way this is possible will be
discussed in the next section on Realism.

The final problem I want to raise in connection with MSRP is related to the question of the basis on which the criteria for theory choice can be used to guide the practical decision making of scientists. To see what the problem involves something more needs to be said about Lakatos' account of rationality.

Lakatos argues that MSRP shows all theories of instant rationality to have failed. This is because, "rationality works much slower than most people tend to think, and, even, then, fallibly". In fact it is only with hindsight we can establish the rational pattern of science. An important reason for this is:

"One may rationally stick to a degenerating programme until it is overtaken by a rival and even after .... It is perfectly rational to play a risky game." (author's emphasis)

On this basis Lakatos makes a distinction between appraisal and advice, where the former is concerned with providing normative criteria of scientific rationality in retrospect and the latter with providing procedures for good scientific practice, what in any given practical situation it is best or rational for a scientist to do. On the basis of this distinction Lakatos claims that he is not concerned with advice but only with appraisal. I think there are three reasons which can be identified as to why he believes advice cannot be proffered.
Firstly, advice cannot be given precisely because a degenerating programme may be turned, triumphantly, into a progressive programme. As such it is not possible to give the directive 'always follow the most progressive programme' because yesterday's loser may be today's winner.

As I see it, the error Lakatos makes is in believing advice must be tied to a notion of rationality which has a 'success' criterion built into it. This is because for him the notion of rationality is tied to that of progressiveness and one can never be certain at any particular time which theory will emerge as the most progressive. But I see no objection in giving conditional advice by pointing out what the risks are in working with a degenerating programme.

In fact Lakatos is not averse to giving advice which is primarily aimed at the social sciences. There is the suggestion is his writing that his 'hands-off' policy regarding advice only refers to the natural sciences where he says it is "hubris" to give advice to the developed sciences like physics. But I find the idea that it is odd to give advice to the advanced sciences difficult to understand. Especially since he wants to claim that MSRP is the most progressive of competing methodologies. If this methodology, as a matter of 'fact', has characterised good science in the past then why should scientists not be urged to seriously consider its norms for current practice?

There are two sets of related grounds why advice, even
to the most 'developed' sciences, should be considered appropriate. Firstly, as Laudan has observed, scientists do consider and are influenced by questions of methodology; this then provides *prima facie* grounds for thinking that giving good advice is appropriate.

Secondly, Laudan's point concerning the significance of scientists' methodological beliefs for theory choice serves to underwrite the particular view of scientific development which I believe to be most defensible, for in my view the issue of method and its tacit or explicit role in guiding scientists is central. In this view, science has developed because scientists have learnt by monitoring and appraising their methods. In short, we learn to learn as we learn. If this is the case then questions of method assume critical importance because it is by following the best methods available that good practice is perpetuated and improved. One aim therefore for philosophy of science is to improve scientific practice by offering a descriptive-normative analysis of past and current science.

However, on this view the development of science cannot be divorced from the cultural context in which it is embodied. Methodological advice will be influenced by the aims or purposes science is conceived to have (Maxwell 1980), by the current state of scientific technology (Stockman 1978) and so on. In sum, science is a 'bootstrap' operation and is guided by no more than the practical rationality and wisdom available at any given moment of history.
This is not the place to enter into a defence of such a view but its initial plausibility comes from the observation that contrary to Logical Positivism, there are no methods by which certain knowledge can be obtained. Nor are there supra-historical criteria of rationality by which its 'progress' is guided. It is precisely on this latter point that I diverge from Lakatos. For he does want to claim there are supra-historical criteria of rationality by which science has progressed. This constitutes the third reason why he does not think advice appropriate, and I believe it underlies the two previous considerations.

Following Popper, Lakatos identifies three worlds, the first being the physical world, the second that of beliefs and the third of ideas. Of these he says:

"The three worlds interact, but each has considerable autonomy. The products of knowledge: propositions, theories, systems of theories ..... live and grow in the third world. The producers of knowledge live in the first and second worlds."\(^{16}\)

Now Lakatos' central concern is to give a history of the third world which is uninhabited by humans:

"Belief, commitment, understanding are states of the human mind. They are inhabitants of the 'second world'. But the objective scientific value of a theory is a 'third world' matter. It is independent of the human mind which creates it or understands it."\(^{17}\)

This third world marks out the domain of the rational and he believes its development can be accounted for by MSRP. This furnishes him with the distinction between internal and external history. For him, "the rational aspect of scientific growth is fully accounted for by one's logic of scientific
discovery". Since MSRP constitutes this logic, everything it
can account for comprises the domain of internal rational
history. Everything which it cannot account for is to be
explained by external history, which is couched in the causal
explanations of sociology and psychology. The latter will
be the preserve of the second world of beliefs.

By divorcing the rational development of science from
beliefs Lakatos precludes the possibility of giving advice
since the rationality he identifies is unrelated to any
specific decisions scientists might make, and in fact he writes
his internal history without regard to what specific scientists
have thought or done. 18 In sum, the focus of his research is
concerned with this third world and the appraisal of its
rationality and, since he believes it autonomous from beliefs,
the question of advice does not arise.

In contrast to the view of scientific development I
have sketched, Lakatos believes in some supra-historical notion
of the rationality of scientific development, which is indepen-
dent of beliefs; as a consequence, giving advice to scientists is
simply not pertinent. The difference between these two pers-
pectives is clearly expressed by Amsterdamski when he says:

"Thus we have two versions of science: the first aims
at constructing normative, supra-historical criteria
of rationality and ex definitione excludes from the sphere
of science any and all statements which do not satisfy
these criteria; and the second single out science as a
particular fragment of human culture, which performs
the function of unifying the changing universe of
human experience with no less fluctuating ideas con-
cerning the cosmological order and human cognitive
capabilities, and treats the changing methodological
rules as means for accomplishing this function. These
two different visions of science must lead to different programs of philosophical reflection on science and on its evolution.\textsuperscript{19}

A judgement as to which one of these perspectives is superior would require a detailed comparative appraisal - Amsterdamski has gone some way in doing this, providing in the process a good defence of the kind of view I favour. In addition, Lakatos' attempt to write the history of science according to the criteria laid down by MSRP has drawn strong criticism from Kuhn (1970b), McMullin (1974), and Koertge (1976).

There are a number of conclusions to be drawn from this discussion. Firstly, I have identified three reasons why Lakatos is 'officially' reluctant to give advice. Underlying these is a particular view of the rational development of science. It is not, however, a view which we need to subscribe to. On the alternative view I have sketched it is possible to divorce MSRP from the idea of a supra-historical criterion of the rationality of scientific development. As such, MSRP is used to provide norms for practical judgements of critical preference between theories. The rationale for using these norms is that they have been developed out of an analysis of the best scientific practice of the past two hundred years (Hacking 1979). This, I have suggested, provides the basis for a justification for giving advice.

There is, however, a qualification which needs to be entered at this point. It has been noted that Lakatos' is an objectivist account of scientific practice. As such the account he has given of scientific development over the past two hundred
years is independent of the intentions and actions of individual scientists. This being the case, an objection which could be raised against my argument is that it is not clear how a Lakatosian account of good scientific practice can be translated into a set of norms for practicing scientists. The point I am trying to make, however, is that MSRP provides scientists with an understanding of the nature of their enterprise. As such, it offers a framework within which they can think critically about their practice. More specifically it provides a set of rules of thumb of the kind, "reconstruct the hard core of your research programme", "deflect attacks upon the hard core in a non ad hoc manner" and so on. In other words MSRP provides a heuristic for self-reflexive critical thought about scientific practice for scientists.

Secondly, I have observed that Lakatos' emphasis on the importance of novel predictions as the criterion of scientific progress is exaggerated; 20 theoretical beliefs are also significant in judgements of critical preference.

Thirdly, it was also suggested that the view of scientific method articulated in MSRP is deficient in its understanding of the 'hard core' and how it develops. This points to a further general criticism that can be made, which is that Lakatos is not sufficiently Realist in his view of scientific theorising. While he provides norms for critical appraisal he does not provide a sufficient guide for scientific practice Realistically construed. In particular he fails to discuss in any detail the particular view of models taken by Realists, how they are to be developed and how models of
underlying structures are related to appearances. By the same token he fails to discuss the modes of reasoning involved in linking appearances to underlying structures. It is these aspects of Realism and Realist method which will be elaborated in the next section.

The issue to which I now turn briefly is whether a suitably modified MSRP can be applied to judgements of critical preference in the social sciences.

The Criteria for Theory Choice in the Social Sciences

Lakatos argues that there are two criteria by which a theory can be judged scientific; it must have heuristic power and it must predict novel facts. There is little doubt that some social science theories have heuristic power. Lakatos himself regards Marxian and Freudian RPs as conforming to this criterion and in subsequent chapters I shall support his judgement concerning the former. (See the discussions in chapters 7 and 8.)

Social science theories can have distinctive world-views, they can generate anomalies and they can resolve them more or less adequately by bringing empirical and conceptual evidence to bear on them. They can also make predictions with varying degrees of accuracy some of which may conform to Lakatos' criteria for a novel prediction. But I think these cases, if they occur, are the exception rather than the rule. Moreover unlike the natural sciences the social sciences cannot typically make point predictions.
Does this weakness in predictive ability disenfranchise social science theories from the domains of science and rationality? The answer, I think, depends upon one's view of the relationship of science to history and society. If the concern is to discover a mode of rationality which is produced by people but which is above history, then demarcation criteria such as Lakatos wants to draw become central to the enterprise and predictive power as one of these assumes prominence. If, however, like Amsterdamski we believe it is rational to attempt to make sense of one's world of which the social is a significant aspect, and scientific methodology can help to do that, then we will not be unduly concerned about demarcation criteria nor the power to make novel predictions. We shall simply do what I believe scientists have always done - used the best methods available to get a grip on the world.

What is necessary is a defence of naturalist enquiry as helpful in understanding the social world, and I shall provide grounds for believing it is in subsequent chapters. However, one reason for thinking scientific methods are useful in the social sciences is that they can yield particularly powerful modes of explanation. And if our concern is to understand the world rather than make predictions about it, then explanation assumes significance. I therefore turn to a discussion of Realist methodology where explanation is accorded a central position.
A Realist Method of Science: Retroductive-Hypothetico-Inferentialism (RHI)

The RHI account of method has been developed by Haig (1980, 1982). Its significance lies in the fact that though it is a method developed from the natural sciences, Haig has shown that it has application to the social sciences and in particular to ethnographic studies.

As an account of science RHI stresses the generational and developmental nature of theories and the necessity for appraisal in all their phases. In both of these respects it goes beyond Lakatos' account of theory appraisal. Furthermore it provides a far more detailed account of scientific method than does Lakatos', thereby providing scientists with a better practical guide.

RHI identifies three phases in a theory's life history: (1) theory generation, (2) theory development and (3) theory appraisal. The first two are temporal phases the latter is non-temporal precisely because theory appraisal takes place throughout a theory's life. I shall deal with these phases in turn.

(1) **Theory Generation**

For RHI, scientific enquiry begins with problems which are considered intrinsic to the method. The view taken of problems is that of a 'Constraint Inclusion' account. A problem is initially ill structured and the description under which it is seen will typically comprise no more than a set of regulative principles and some background knowledge. These
constitute the constraints under which the problem is viewed and what is to be included under the description of the problem. The regulative principles influential in problem identification are metaphysical and methodological. To see how these determine a problem's initial conceptualisation an example will be helpful.

To illustrate the Constraint Inclusion model we need look no further than to the problem of inequality in education. Initially the selection of a problem will be determined by the background theory and context. What may be a problem in one context may not be in another. For example, for Technological-Liberals persistant inequality in education constitutes both an anomaly for the theory and presents a practical problem since inequality of opportunity represents a potential wastage of talent. For Radicals the focus on the problem is somewhat different; in theoretical terms educational inequality is to be expected in capitalist society, however, the mechanisms which produce the inequality need to be satisfactorily explained. In practical terms inequality represents one aspect of oppression and is therefore undesirable. But in the Platonic state educational inequality between, say, citizens and slaves would not be considered a problem at all. This is because slaves are not regarded as persons and do not therefore have the rights accorded persons, including those of citizens.

Now in all three cases the metaphysical view of the nature of social being assumes importance for the view taken on educational inequality. In each case the metaphysics (and value presuppositions) will determine who is eligible for
education and the length and type of education they receive. For Technological-Liberals the most able are also to be the most favoured by educational resources. This is because they view all societies as necessarily inegalitarian (as a function of universal social behaviour) but regard meritocracy as the most rational of inegalitarian societies. Radicals, on the other hand, deny the claimed universal necessity for inequality and consider the majority of human beings as capable of benefiting from education. They therefore insist that all should have equal access to educational resources. In the Platonic state, however, only citizens are considered worthy of education so all non-citizens are ruled out (e.g., slaves). But within the citizenry different kinds of people will be subjected to different types of education according to their 'talents' and 'aptitudes'.

While metaphysical principles play a large part in determining the scope, nature and significance of a problem, methodological principles determine how the structure of the problem is perceived. For example, with respect to educational inequality of opportunity, Technological-Liberals are methodological individualists; they take individuals as the exclusive objects of social explanations. They therefore seek to explain educational inequality in terms of individuals' cognitive ability and the factors which may develop or retard it. In addition, Liberals are empiricists; they will formulate explanations in terms of individuals' observable behaviour. By contrast, Radicals are methodological holists; they seek to explain problems such as that of educational inequality in terms of underlying social structures which cannot be reduced to
explanations about individual actions. Radicals are also Realists; their explanations for educational inequality will be formulated in terms of unobservable structures. In connection with the search for explanations, it should be noted that the cognitive aim of a method of inquiry constitutes a further methodological regulative principle. In the case of RHI the cognitive aim is explanatory truth and it is to the fulfilment of this aim that research into a problem will be directed. Such research will also be guided by heuristic regulative principles. These direct us to give preference to explanatory hypotheses which display virtues such as those of simplicity and coherence.

In these respects regulative principles constitute constraints on the scope of the problem domain. They also structure the problem by determining how it is to be understood and investigated. There are two points about this account which need to be stressed. Firstly, the Constraint Inclusion model brings out the importance of conceptual criteria in determining how a problem is viewed. And, as we shall see, the important role reserved for conceptual criteria within RHI is continued in the phases of theory development and appraisal. Secondly, however, at this stage of the inquiry the problem will not be clearly defined. Its contours will emerge more clearly as the investigation proceeds. An initial move in making the problem sharper is through the collection and analysis of data.

The importance attributed to the collection and analysis of data by RHI contrasts with that of the Hypothetico-Deductive method of Logical Positivists. According to RHI
the direction of the research effort is from the exploration
of data considered puzzling or problematic within which
provocative data patterns can be identified to an explanation
of the data patterns in terms of an underlying cause. In the
case of the Hypothetico-Deductive method, inquiry begins when
a hypothesis is advanced for testing. The difficulty with
this account, however, is that it cannot explain in methodo-
logical terms from where the hypothesis has been derived. In
doing so it neglects exploratory data analysis as a significant
aspect of method, viewing data only as a means of confirming
a hypothesis. Moreover, according to RHI there is an
important sense in which confirmatory data analysis is used
within the context of theory generation. Once a provocative
data pattern has been thrown up it is important to confirm
the pattern is not accidental. For example, if a study shows
a pattern which relates educational inequality to the working
class this study would need to be repeated with different
samples to establish that the relationship was neither acci-
dental nor peculiar to the locality from which the sample was
drawn.

The method by which the move from exploratory and
confirmatory data analysis, and the richly described datum
statement it produces, to explanation is achieved is by
retroductive inference, which may be characterised as follows:

"Some observations are encountered which are
surprising because they do not follow from any
accepted hypothesis; we come to notice that those
observations would follow as a matter of course
from the truth of a new hypothesis in conjunction
with accepted auxiliary claims; we therefore
conclude that the new hypothesis is plausible and
thus deserves to be seriously entertained and further
investigated."21
Typically, on a Realist account this reasoning process enables us to move from a set of observations to an explanation of them in terms of an underlying cause which is different in kind to the observed phenomena. For example, Marx explains certain beliefs as a function of a particular mode of production and Freud explains pathological behaviour in terms of the unconscious.

Now if problems are the motors of method they are also, on the Constraint Inclusion model, guides to the explanations that may be entertained; for the regulative principles which determine how a problem is apprehended also place limits on what will count as a possible explanation. The aim is to narrow down an infinite possible set of explanations to a set of the best possible (most plausible) explanations. Regulative principles enable us to do this by setting constraints on what is considered plausible and acceptable in terms of the scientific goals assumed, where the constraints will be precisely the ones imposed in the initial formulation of the problem. It is in this respect that problems are an integral part of the method.

Once a plausible explanation has been inferred the next move is to develop a series of increasingly adequate models of the causal mechanisms which have been posited as explaining the observed phenomena.

(2) Theory Development

Central to the Realist attempt to explicate underlying causal mechanisms is the development of a model(s) which explains the relationship between a putative causal mechanism
and the observed phenomena it generates. Typically, the process of modelling begins by proposing an analogue to the posited mechanism which is familiar to us. This frequently takes the form of a metaphor. For example, one which has recently been used in Marxian theory is the 'house' metaphor for society. The foundations and pillars (the economic) are said to causally maintain the roof (the political and ideological) but in addition the latter is said to provide stability for the foundations and pillars. In this way a complex set of causal processes can be represented in a simple and clearly understandable way. In more technical terms this kind of model is called a paramorph. A paramorph is a model in which an underlying generative mechanism which is unknown or unfamiliar is made familiar through the use of an analogy with some well known process or thing. This kind of model is distinctive of the Realist method precisely because it enables us to get a purchase on underlying causal mechanisms.

Paramorphs can be contrasted to homeomorphs; in the latter case what the model depicts is the same as the source from which it is derived. A plastic model of the heart or a Keynesian model of the economy are models of the heart and the economy respectively, and modelled on them. In Harré's words homeomorphs do not have a creative role, they are not used to explicate something which is essentially unknown. A paramorph can be represented by the following diagram:

<table>
<thead>
<tr>
<th>problem domain</th>
<th>observed patterns</th>
<th>causal mechanism</th>
<th>analogue</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
To clarify the diagram I shall use the example of the house as an analogue to the relationship between economic, political and ideological levels. Box 1, refers to the problem domain, for example, the initial impetus for modelling the relationship between economy and society may be that, like Bowles and Gintis, we want to explain working class failure at school. Box 2, then, represents the underlying patterns of the data collected on working class failure. Box 3, the generative causal mechanism, which is in our example the capitalist economy which produces a particular set of outcomes in school. Box 4, represents the 'house' analogue by which the unfamiliar relationship between economy and education is made familiar. And Box 5 represents the original familiar source from which the analogue is taken.

The complex role the analogue has to fulfil in a para-morph is represented by the broken horizontal lines. The line between 4 and 5 indicates that an analogue must be like its source in order to fulfil its function of making the unfamiliar familiar; in our example the idea of a house satisfies this demand. Next, the line between 2 and 4 points to the relationship between analogue and observed patterns; the political and ideological levels of society must be seen as a product of and supportive of the mode of production, in much the same way as the roof of a house is supported by the foundations and pillars and in turn stabilises them. Initial observations that the legal system is supportive of private property, that the education system does not produce critical self-reflective people, etc, would confirm the *prima facie* plausibility of the analogue. Finally, the analogue must be like the generative mechanism
in relevant respects; this is indicated by the line between 3 and 4. In this case the principle notion captured by the house is one of causality, that the economic primarily determines the political and ideological. In this case we can say the behaviour of the analogue is similar to that of the generative mechanism in its relationship to the social world.

One important further function of the analogue is that it both constrains and enables the search for the generative mechanism. For in the example of the house, there are limits beyond which this metaphor no longer has application. If we believed that the economic, political and ideological had equal causal weight the analogue of the house would no longer do as representing the causal processes of capitalist society.

The constraints imposed by the analogue should be seen as a further step in the process of narrowing down the search for the most probable hypothesis from among a potential infinity of possible hypotheses, where the initial process of selecting the plausible from the possible is achieved by retroductive reasoning. Should the analogue prove fruitful the hypothesis entertained may be considered probable. In turn, how the analogue is interpreted within the context of the problem domain will be determined by the regulative principles which have informed each step of the search for a probable hypothesis. The search for a probable explanatory hypothesis progresses with the development of more refined models. These will provide more accurate descriptions of the putative causal mechanisms and hypotheses as to where they can be located and how they can be investigated. In the example I have used the initial
analogue of the house is relatively crude. In the following chapter I provide a more complex model of the relationship between economy and education which is then elaborated in the succeeding chapters in conformity with the process just described.

This completes the phase of theory development and I now turn to theory appraisal.

(3) Theory Appraisal

According to RHI, appraisal is a continual activity throughout the theory's life history. This allows us to rationally appraise all phases of a theory's career and it serves to compensate, as, I suggested before, for the lack of any possibility of decisive empirical tests. Central to the concept of continual appraisal is the notion of retroductive reasoning since it is by such means that we can get a rational grip on theory generation. The notion of retroductive inference has both descriptive and normative import. Descriptively it constitutes a rational reconstruction of scientific practice concerning theory generation. Normatively, it can be used to appraise the plausibility of an explanatory hypothesis. Appraisal is carried out according to the criteria established by the regulative principles for what counts as a satisfactory kind of explanation. What these principles do is to winnow out the bizarre and the improbable, leaving a sub-set of plausible explanations.

What retroduction cannot do is guarantee the truth of a hypothesis. As a normative guide to scientists, retroduction
is best considered as a systematic way of thinking about the plausibility of explanatory hypotheses. It does not constitute a sure-fire way of deriving explanatory truths from a particular set of observations. One necessary condition for that to be possible would be that the regulative principles were themselves grounded in some *a priori* foundation which established their veracity. But a number of regulative principles are guided by a theory's metaphysical and methodological commitments and these are always contestable. It is precisely for this reason that when scientific theories run into trouble these higher level commitments come up for critical scrutiny.\(^{23}\)

Retroduction does not claim to do what every other method has failed to do, produce knowledge claims which can be established as true or not with certainty but it does claim to be able to provide a rational account of theory generation. A retroductive inference by which a data pattern is explained in terms of some underlying cause is facilitated by the exploratory analysis of data. As Haig views it:

"exploratory data analysis gives us a better chance of throwing up provocative data patterns which will hopefully trigger an insistent demand for explanation via retroduction".\(^{24}\)

For example, the pattern of educational failure is so systematically biased against the working class that our search for an explanation is directed towards class based mechanisms as the determinants of working class failure. But the patterns thrown up by exploratory data analysis also provide us with the opportunity to make a judgement about the quality of the inference from data to explanation by asking the question, is the explanation likely given the observed data pattern?\(^{25}\)
The process of appraisal is continual throughout the phase of theory development. In this phase models are developed and refined by the use of inductive and retroductive forms of reasoning. The former is used to gain confirmation for the model while the latter is used in those cases where the evidence forces changes in the model. The following provides an example of a case where the search for confirmatory evidence forces an adjustment. Suppose that we are looking for an explanation of working class failure in terms of a correspondence model of the relationship of education to the capitalist economy, such as that of Bowles and Gintis, but that we find in one set of schools that working class kids do just as well as their middle class counterparts. In this case, it may be on further analysis that our correspondence model would have to be adjusted by the retrodution of an auxiliary hypothesis to give some autonomy to schools to effect educational outcomes.

In sum, appraisal features in the entire history of a theory from its inception, through its development to its demise.

In the following chapters I shall show how this Realist account is applicable to the social sciences. As a preliminary I want to point out one fundamental difference between the view of explanation and prediction on the Covering Law model as espoused by Logical Positivists and on the view taken by RHI. I then want to make some general comments about the superior potential of RHI over its competitors for understanding social processes and in particular the school society relationship.
Explanation and Prediction on the RHI Account

In chapter 1, I pointed out two ways in which, for Logical Positivists, predictions are intimately related to the possibility of explanation. Firstly, explanations are derived from universal or statistical laws which have been established through the verification of their predicted consequences. Secondly, there is a logical symmetry between explanation and prediction. For the Realist, however, explanations are of a different order; they are concerned with relating phenomenal forms to generative mechanisms. On the Covering Law Model, as interpreted by Logical Positivists, no reference is made to generative mechanisms; laws are simply causal regularities from which explanations may be deduced. But since no reference is made to generative mechanisms in the premisses for the explanation, the explanation from a Realist perspective is inadequate.

Realists posit an ontological domain comprising generative mechanisms and the causal sequences they produce, which together are explanatory for a particular set of phenomena. These causal sequences are termed tendencies because it is a contingent matter as to whether a generative mechanism triggers a tendency or not. For example, an acorn may grow into an oak or it may be nipped in the bud by a frost. Since this is the case there can be no question of a logical connection between a predicted causal sequence and the explanation of it. The nature of a causal mechanism can be explained in the absence of any specific causal sequence it might normally trigger. However, while there is no logical connection between explanation and prediction in the Realist view, predictions are nevertheless
desirable where possible, because they provide one form of confirmatory evidence for the postulated nature of an underlying causal mechanism. I shall return to these issues as they apply to social theory in the next chapter.

The Prospects of RHI as a Superior Guide to Social Theory

In contrast to Logical Positivism, Realism acknowledges there are no epistemically privileged observations.\textsuperscript{26} Even in the natural world all objects are interpreted by a theoretical network of meanings. But Realism also allows that meanings can be the object of theoretical understanding since it admits an ontological domain of objects which are not immediately accessible to experience.\textsuperscript{27} In addition, because Realist explanations are primarily concerned with the relationship between causal mechanism and phenomenal form, they can take into account the context-bound nature of meanings. Realist explanations do not need to be derived from universal laws which preclude explanations appropriate to specific contexts.

Ontologically, Realism enables us to see how the actions and meanings generated by actors are constrained and facilitated by underlying structures (see chapter 6). It is therefore superior to an anti-naturalist position such as that of Michael Young's in its potential explanatory power. Young shares with Logical Positivists a 'flat' ontology. For him, candidate explanations of the social world can only refer to meanings and the immediate context in which they are negotiated; he cannot conceive the possibility of a social ontology where underlying structures determine the meaning context.
Methodologically, Realism can incorporate both qualitative and quantitative research methods. Haig (1980) establishes the possibility of a methodological unity in social theory by showing how the qualitative methodology advocated by Glaser and Strauss (1967) conforms to the phases and reasoning patterns of RHI. As such the understanding of the actions, meanings and symbols of the micro-social episodes captured by ethnography can be integrated into the possibilities Realism offers for an understanding of the macro-social world. Realism enables us to understand the macro-social world because it can grasp the underlying structures, which, I suggest in the following two chapters, are salient properties of societies.

Furthermore this Realist view of science allows us to appreciate the significance of interpretive structures in theory development; it creates the 'space' for a theory of ideology, which gives Realism genuine critical potential and finally it provides an account of what it is to reflect critically. In short it enables us to pay off the promissory notes which have accrued so far in the discussion. I shall discuss them in turn.

The notion of regulative principle makes precise the role of interpretive structures both in theory development and appraisal. It shows the significance of these structures at every phase of a theory's history in setting constraints on both problems and explanations. Moreover with the aid of retroductive reasoning it provides an account of how the 'hard core' of a research programme develops. In this respect
RHI is superior to MSRP.

Realism can admit a theory of ideology because it acknowledges that theories are socially produced. Once it is appreciated that observations are not epistemically privileged, that there is no foundation in certainly for the theories we hold, then it follows that science is not above the contingencies of the social world; rather theory creation and appraisal are aspects of social practice. As such, scientific theories are open to the possibility that the ideas they incorporate are subject to the influence of social bias and interest; they are candidates for ideological contamination. (See chapter 6 for a discussion of ideology.)

Finally, the Realist view of science I have sketched provides us with an account of what it is to think critically, in short, the ability to appraise theories by the relevant criteria. And if we are concerned with theories which are to guide practice then we should act accordingly to the most favourably appraised theory. For this will be the one which gives us our best understanding of the world.

In the next chapter I show how Realism can have application to the social world by looking at an account of Method derived from Marx which will enable us to get a better purchase on the school-society relationship.

Summary

In this chapter I argued that the Logical Positivist view of science is untenable. I then examined an alternative
account of science developed by Lakatos, in which the basic epistemic unit for appraisal is not a singular statement, as it is for Logical Positivism but a series of theories. In this view the key epistemic issue regarding appraisal concerns the criteria by which we can make judgements of critical preference between theories. Here I argued that Lakatos places too much emphasis on the criterion of novel prediction; criteria concerning theoretical adequacy should also be considered. I then went on to develop a Realist account of natural science according to the tenets of RHI. Finally I examined the prospects of RHI as a guide to social theory.
Notes and References to Chapter Four

1. I would argue, however, that it is possible to make a relative distinction between observation and theory within particular theoretical contexts. To anticipate the following discussion, the basis for this view derives from the point that while theories determine what objects we may see they do not determine that we will see the designated objects. It still requires observation to see whether a theory's putative objects 'exist'.


3. Sense-datum theorists not only argue that there is some basis for agreement in what we see but that the means by which sense-datum is 'translated' into material objects provides us with near certain knowledge of those objects. This theory was the source of considerable debate within the Positivist camp. For a discussion and elaboration of the sense-datum theory see Ayer (1969).


8. It will be apparent that in the second argument Quine is concerned to criticise the notion of analyticity at an epistemological level. For an interesting discussion of the rationale behind Quine's move from the semantical to the epistemological level see, H. Putman, 'Two Dogmas Revisited', in G. Ryle (ed.), *Contemporary Aspects of Philosophy*, Oriel Press, London, 1976, pp203-213.

9. Quine's epistemological holism is, I think, too radical. For an account of a qualified holism which is more defensible see C. Hooker, 'On Global Theories', *Philosophy of Science*, 42, 1975, pp152-179.


13. These quotes are to be found respectively in Lakatos (1970), pp119, 119, 112.


18. See for example his discussion of Prout and Bohr in Lakatos (1970), pp138-154. He acknowledges on p140, note 4, that the historian may regard his rational reconstruction as a "caricature" in which some statements are to be taken with "tons of salt".


23. Kuhn points out that scientists ascend to a critical discussion of higher level commitments at times of crisis. See Kuhn (1970a). Unlike Kuhn, however, RHI suggests a more continuous and significant role for these commitments in theory development and appraisal. With respect to the latter it is important to emphasise that precisely because theories are underdetermined by the evidence regulative principles play a significant role in theory appraisal. As such, questions concerning the adequacy of a theory's metaphysics, the range and nature of its explanations, its coherence, etc., all assume significance for theory appraisal. However, as Kuhn suggests, it may only be at times of crisis that regulative principles come up for critical examination themselves.

24. This quote is taken from a private communication with Brian Haig.

25. Given the strong relationship between working class and racial minorities and educational failure there is a strong presumption that explanation for educational failure will make reference to pupils working class and racial minority backgrounds. In this sense we can ask whether the explanation is likely given the data patterns. An explanation which did not make reference to these two groups would be considered unlikely. In this respect we can appraise the plausibility of a putative explanation in the light of the data patterns produced by exploratory analysis.

26. However, see the discussion in the first section of chapter 4 on the relative importance of the theory/observation distinction.

27. See, however, the discussion by Giddens of the problem of the 'double hermeneutic' in his (1976a).
CHAPTER FIVE

AN APPLICATION OF THE REALIST METHOD TO SOCIAL THEORY

This chapter is devoted to the elaboration of a method for understanding the social world which is consistent with the epistemological position I have just developed.

Realism is typically regarded as a descriptive-normative theory for the natural sciences; I extend it to social theory through a Realist reconstruction of Marx's method. Of particular relevance is the process by which Marx reasons from a phenomenal form to an underlying mechanism which can be apprehended through the development of models.

Having drawn out the salient features of the method I then provide a sketch of how it can be applied to an understanding of the school-society relationship, an understanding which will be developed in later chapters. Finally, I turn to the issue of how theories which have been guided by this method can be appraised.

A Realist Reconstruction of Marx's Method

Marx's method is one by which theoretical concepts can be developed to grasp the underlying reality of social appearances. The means by which this is achieved is through the concept of abstraction.

Marx saw the process of abstraction in the social sciences as the analogue, in one sense, to the experimental techniques used for isolating and observing the underlying mechanisms of nature:
"In the analysis of economic forms, moreover, neither microscopes nor chemical reagents are of use. The force of abstraction must replace both." 3

While abstraction may serve as an alternative to the experimental conditions which can be created in a laboratory, there is a further sense in which abstraction is used in the natural sciences. This is through the use of models; these represent underlying mechanisms which are identified through experimental conditions. The question arises of how, for Marx, the two senses of abstraction are related, since normally we are not able to produce the experimental conditions necessary for the identification and testing of causal mechanisms in the social world. It is the merit of his method that he can combine a Realist model of the social world with the means for isolating and grasping the underlying processes the model identifies through the relevant theory.

There are three stages to his method: (1) A distinction is made between trans-historical and historical categories, the former refers to that which is common to all social life, while the latter refers to that which is particular to specific societies. (2) Necessary internal relations are established. These are the underlying structures which determine the phenomenal form society takes. As such, internal relations may be considered as the analogue to generative mechanisms in nature. (3) Middle range theories are developed to identify the tendencies generated by the internal relations. These tendencies relate the underlying structures to a society's particular phenomenal form.

(1) Historical and Trans-Historical Categories

Any adequate science of society must be able to explain change in and between societies and to identify those causal
processes which make societies similar and different in relevant respects. What is required, in the first instance are criteria by which different kinds of society are distinguished. On the basis of these criteria causal mechanisms can be identified which explain the characteristics unique to specific kinds of society.

Marx differentiates between kinds of society (or social formation) by making a distinction between historical and trans-historical categories and concepts through which societies are to be understood. To illustrate the nature of this distinction and the purpose it serves I shall use the concept of 'labour' as an example.

Labour is a consequence of people's need to produce as a condition of their existence; it is to be found in every society. But we also know it takes on quite different forms in different societies. The difficulty is to find some general concept, 'labour', by which we can validly compare and explain the similarities and differences between its various forms in different historical contexts.

To provide such a general concept Marx develops the trans-historical category of general or universal labour. This is an a posteriori category, and it has, as Marx says, to be "sifted out by comparison"; different societies through history must be examined in order to abstract the general properties of the concept.

For Marx, the two most significant trans-historical properties of labour are that it enters into two sets of relationships, one with nature (the forces of production) whereby techniques are used to extract what is needed; and the other with people (social relations of production) because people always produce through a certain form of social organisation.
So, for example, Feudalism was primarily land-based employing relatively primitive agricultural techniques and organised hierarchically under the control of a Feudal lord. Under capitalism, however, labour is primarily industrially based and is again hierarchically organised, but this time under the control of capitalists.

It is a fundamental tenet of Marxist thought that societies are distinguished according to their mode of production, and in this the ability to identify historically specific forms of labour is crucial. But while trans-historical criteria can be used as the basis for identification and comparison of categories, the specific historical form they take cannot be deduced from them a priori. It is always a question of inspection as to what historical form a category will take. Failure to observe the distinction between these concepts leads to a logical error. As Sayer puts it:

"We cannot hope to deduce or otherwise derive historical from trans-historical categories simpliciter either, for an attempt to do so would involve us in the manifest absurdity of trying to infer what differentiates individual members of a class from the concept of what precisely they have in common."\(^5\)

The first and highest form of abstraction is the trans-historical. It is important to emphasise that the method by which this abstraction takes place is Realist. The abstract concept is not an ideal type or a fiction but is generated by empirical inspection and analysis.\(^6\) The precise means by which Marx moves from the phenomenal form of a particular trans-historical category to its essential nature is by retroductive reasoning. The question is posed: what must obtain for all the manifestations of a particular category to be possible? And,
as was noted, in the case of labour Marx inferred that what is essential to the category is that people enter into the relationship with each other and with the technology used for production.

(2) The Establishment of Necessary Internal Relations

The next step is the development of a model of the necessary internal relations of an historically situated society. Marx distinguishes societies according to their mode of production. He then hypothesises that it is the internal relations, constitutive of specific types of modes of production, which generate a particular kind of social formation. There are four noteworthy aspects to the development of the model of internal relations:

A. The role of regulative principles, particularly in distinguishing good from bad abstractions.

B. The roles of epistemic realism and retroductive reasoning in grasping the underlying structures of society.

C. The nature and derivation of underlying theoretical entities (structures), the explananda of Marxian theory. Marx's analysis of the commodity form.

D. The means by which the model of internal relations is developed.

I shall deal with these in turn.
A. The Role of Regulative Principles

As with the first stage of the method, the model of internal relations is generated by the process of retroduction where the categories it employs presuppose the essential nature of the trans-historical categories. The latter act as one form of constraint upon the historically specific categories and relations which are retroduced. Other constraints are those of the regulative principles discussed in the previous chapter; for example the Realist epistemology directs us to explain phenomenal forms in terms of underlying categories, and Marx's metaphysics of the social world directs us to look for categories which are historically specific.

The significance of these regulative principles cannot be stressed enough because they determine good from bad abstractions. The latter are categories which are not historically specific. For example, classical Liberal theory asserts, through the concept of the 'possessive individual', that people naturally act out of self-interest. This view is central to the classical Liberal explanation for, and justification of, capitalism. It is a view which is clearly expressed in Bentham's writing and is satirised by Marx in his discussion of the buying and selling of labour-power. Marx says that for Bentham the sphere in which:

"the sale and purchase of labour-power goes on, is in fact a very Eden of the innate rights of man. There alone rule Freedom, Equality, Property and Bentham. Freedom, because both buyer and seller of a commodity, say labour-power, are constrained only by their own free will. They contract as free agents, and the agreement they come to, is but the form in which they give legal expression to their common will. Equality, because each enters into relation with
the other, as with the simple owner of commodities, and they exchange equivalent for equivalent. Property, because each disposes only of what is his own. And Bentham, because each looks to himself. The only force which brings them together and puts them in relation with each other, is the selfishness, the gain and the private interests of each."

Marx, as we shall see, argues that there is neither freedom nor equality in the sale and purchase of labour-power. For the moment, though, the important point to note is that it is the postulate of the 'possessive individual' which underwrites Bentham's "Eden". For Marx, this postulate is unscientific because it fails to distinguish human nature in general from human nature as it is modified in each historical epoch. More specifically it fails to take into account how the structures generated by specific modes of production determine human behaviour. Whether people are psychologically disposed to act out of self-interest is irrelevant to an explanation of their social behaviour. Marx's point is that given the relations between buyer and seller of labour-power are characterised by compulsion and inequality, and given the relative poverty and immiseration of the sellers of labour-power (the working class), the latter could not possibly be acting out of self-interest. Rather the actions of the working class need to be explained in terms of the objective mechanisms of compulsion and ideology by which it is coerced and deceived into selling its labour-power.

B. Epistemic Realism, Retroductive Reasoning and Underlying Social Structures

In the context of the development of the model of internal relations epistemic Realism is indispensable to
Marxian method. Internal relations \textit{qua} theoretical entities constitute the \textit{explanans} of Marxian theory. In particular, historically situated internal relations (underlying social structures) serve to explain why certain types of society take on a particular phenomenal form. In addition they serve as part of the explanation for the beliefs people hold about the social world. (See the following chapter on ideology.)

In conjunction with epistemic realism retroductive reasoning is also essential to Marxian method as the means by which explanations, in terms of internal relations, are generated. The reason for this is that explanations based on the Covering Law model with its use of universal or statistical laws are prohibited because use of such explanations would commit the error of attempting to deduce an historical category from a trans-historical category. Similarly, it is not possible to infer general laws from observed regularities alone by the process of induction, since that does not allow us to explain the regularities in terms of underlying entities. Precisely because neither deductive nor inductive modes of reasoning can be used to grasp these underlying entities, it is by retroductive reasoning that they are appropriated.

C. The Nature and Derivation of the \textit{Explanans}

of Marxian Theory

There are two different but related senses in which the \textit{explananda} of Marxian theory refer to underlying entities or internal social relations. In the first sense, the general concept of social relations denotes an entity which is not directly observable. What we see are individuals behaving
according to certain patterns which may be indicative of particular social relations; we do not, however, see the social relations which govern behaviour. In the second sense, Marxian theory posits a specific set of social relations, those concerned with production. And it is hypothesised that these exercise a significant influence in determining the nature of society as a whole. But people do not perceive the influence of the relations of production in any clear way. Much of their daily life comprises sets of apparently unrelated practices: what goes on in the home does not seem directly related to what goes on at work, or indeed, at school. In addition, I shall suggest in the following chapter that the determinate influence of the relations of production are obscured by ideology.

How does Marx reason from the phenomenal forms of capitalist society to the underlying relations which obtain between capital and wage-labour? In 'Marginal Notes on Adolf Wagner' Marx writes:

"In the first place I do not start from 'concepts' and hence do not start from the 'concept' of value ....What I start from is the simplest social form in which the labour product is represented in contemporary society, and this is the 'commodity'. I analyse this, and indeed, first in the form in which it appears. Here I find that on the one hand it is in its natural form a thing of use, alias a use-value, on the other hand a bearer of exchange-value, and in this respect itself 'exchange-value'. Further analysis of the latter shows me that exchange value is only 'a phenomenal form', an independent mode of representation of the value contained in the commodity, and then I proceed to analyse the latter."

In this passage Marx emphasises the point that he does not begin his investigations with a theory he has developed a priori (he does not start from 'concepts') but with the form
of things as they appear in society. His particular focus is on the commodity since with respect to both labour and its product, it is the commodity which presents itself as the central feature of capitalist production. As Marx observes in the opening passage of *Capital*:

"The wealth of those societies in which the capitalist mode of production prevails, presents itself as an immense accumulation of commodities, its unit being a single commodity. Our investigation must therefore begin with the analysis of a commodity." 9

Let us see how Marx begins with the commodity form, and reasons to the underlying, exploitative relationship between capital and wage-labour, 10 a relationship which he argues is central to the generation of capitalist society.

Marx begins with a trans-historical analysis of the commodity form by making a distinction between use-values and exchange-values. The former refer to the capacity of an object to satisfy human wants. Objects which only have a use-value are not commodities; they cannot be exchanged and as such cannot be quantified. Use-value objects are either used for personal consumption or they are so freely available (i.e. water or air) that they are not worth exchanging. The latter refer to those objects which are exchanged and which consequently can be quantified, in the sense that they have a numerical value assigned to them. For Marx commodities retain both a use-value and an exchange-value: to become a commodity he says a product must be transferred, by means of an exchange, to another for whom it will serve as a use-value. Marx regards exchange-value as having a numerical equivalence relationship between objects. This is expressed in *Capital* by the following
formula:

\[ X \text{ commodity } a = Y \text{ commodity } b \]

where 'X' and 'Y' denote the quantity of the commodity and 'a' and 'b' the commodity type. The question Marx now asks is why equality occurs in the exchange relationship. To use his own example, why is it that 20 yards of linen may be regarded as an equitable exchange for one coat? Clearly the exchange relationship has nothing to do with physical properties such as volume or weight since there is no way in which volume or weight can be relevantly compared in the exchange of cloth for coats. The answer, Marx argues, is that the exchange relationship is determined be people's labour: it is labour which is the source of a commodity's value. However, the nature of labour and the distribution of its produce are historically determined. For example, under Feudalism labour was tied to the Feudal estate and produce was distributed by direct appropriation and apportionment by the Feudal lord. Under capitalism, labour is 'free' to sell itself where it can and produce is distributed through free exchange in the market. On the basis of this insight, Marx analyses the historically specific nature of labour and exchange as it occurs under capitalism.

Marx identifies two distinguishing characteristics of capitalism. Firstly, the primary purpose of production is for exchange and secondly, labourers themselves become a commodity whose capacity to work (labour-power) is purchased and sold. There is however a paradox regarding capitalist production and exchange. Commodities appear to be exchanged as equivalents
and this applies as much to labour as to any other commodity (a fair day's wage for a fair day's work). But if this is so, it is hard to see how the capitalist generates profit. Consider the following diagram:

```
11
/
/
M ---- C ---- M'
/
/
Same things

Different value
```

In this diagram the employer begins with money M. With this he purchases various commodities C, including labour with which he can manufacture some further commodity to be exchanged for money M' where the final M' is numerically greater in value than the amount he initially started with. He can then use M' to start the round again in order to obtain an even greater magnitude of M. In other words he produces in order to obtain the same thing M and his purpose in doing so is to get more of it. The difficulty is to see where his increased M' comes from if the exchange at each moment in the round is equal. Marx's answer is that it is derived from the peculiar characteristic of labour-power *qua* commodity. Labour-power as a commodity has both a use-value and an exchange-value. The peculiarity of labour's use-value lies in the fact that it creates additional specific use-values in commodity form. It is the labourer who transforms raw materials into specific-use values which are then sold, at a higher price than the original raw materials. Labour therefore generates more value for the owner than he pays for the original inputs including that of the labourer. The labourer, in creating value over and above
that assigned to the original inputs generates the surplus which produces $M'$. But this surplus accrues to the capitalist as profit, rather than to the labourer and in this respect the latter is exploited. This leads Marx to conclude that the distinctive production relation under capitalism is that of:

$$(1) \quad C \leftrightarrow L$$

which may be defined as a production relation in which capital $C$ exploits wage-labour $L$ by appropriating the surplus product for private accumulation.\(^{12}\) This relationships, Marx suggests, is a necessary relationship:

"Capital presupposes wage-labour, and wage-labour presupposes capital. One is a necessary condition to the existence of the other; they mutually call each other into existence. Does an operative in a cotton-factory produce nothing but cotton goods? No, he produces capital. He produces values that give fresh command over his labour, and that, by means of such command, creates fresh values.\(^{13}\)

This necessary relationship is reflected in the internal relationship between capital and wage-labour. An internal relationship may be defined as internal, if and only if "A would not be what it essentially is unless B is related to it in the way that it is" (Bhaskar 1979).\(^{14}\) In terms of the relationship of capital to wage-labour $C$ stands to $L$ as $A$ stands to $B$. In terms of Marx's derivation of the capital/wage-labour relation from the analysis of the commodity form, $C$ and $L$ are clearly conceptually related. But the conceptual relationship is premissed upon a causal relationship: the social analogue to that of natural necessity. We can bring out the connection between the conceptual and the causal relationship by considering the more familiar example of a mother and father. Conceptually a mother presupposes the notions of biological father and a child. Similarly, a father presupposes the notions of mother
and child. In the case of any particular child these conceptual relationships are predicated upon biological relationships of natural necessity, in which the generative mechanism of sexual intercourse between mother and father has triggered the tendency to produce a child. In this case the conceptual relationship reflects that of natural necessity. We can view the causal relationship of natural necessity as follows: where a generative mechanism has the tendency to trigger a particular causal sequence, it will necessarily do so, all other things being equal. For example, sexual intercourse does not always lead to conception, but if it does, it is a natural necessity that a human foetus will form and not that of some other species - the imagination of horror comic writers notwithstanding. It is, however, a contingent matter whether the generative mechanism will trigger the causal sequence on any particular occasion. The application of this notion of natural necessity to the social world will be discussed in the following sections. For the moment it is important to note that the connection between a conceptual necessity and a natural necessity is not in any sense a priori. Rather the conceptual relationship is taken up into the language on the basis of an understanding of the natural necessity. That sexual intercourse leads to conception is not intuitively obvious and indeed there are some aboriginal people who, purportedly, do not understand that sexual intercourse can lead to conception. Consequently, claims concerning natural necessities, or their social analogues, always require empirical inspection in the first instance.
D. The Development of the Model of Internal Relations

I shall begin by showing how the model of necessary relations can be built up between the C ↔ L relationship and other elements within the social formation. For Marx C ↔ L generated a social class relationship between those who appropriate surplus value and those who have their surplus value appropriated. The former he termed the bourgeoisie and the latter the proletariat. We can represent this relationship as follows:

(2) \[ B \leftrightarrow P \]

The C ↔ L relationship generates this social class relationship because capital and wage-labour are divided at the point of production by an antagonistic relationship which reflects their conflicting interests. It is always in the interest of capital to generate as much surplus value as possible. This can be done in two ways, either by paying a low wage or by increasing wage-labour's working hours. By the same token, it is always in the interest of wage-labour to extract the highest wage possible and to lower the hours worked. Moreover, this fundamental antagonism is exacerbated by the difference in wealth between capital and wage-labour. As a consequence of these differences the C ↔ L relationship harbours the tendency to generate distinct social classes which have different life-styles, forms of consciousness and material conditions. However, the way and degree to which these classes develop distinct cultural patterns depends upon particular historical circumstances. For example, while there are very clear differences between classes in Britain, with respect to life-style and class awareness, the differences are
not so marked in New Zealand. The differences in these two cases can only be explained by looking at the historical development of capitalism in the two societies.

The B ← P relationship has a twofold significance. Firstly, it generates the potential for an extension of the struggle at the point of production to the society as a whole. Secondly, the crystallisation of two classes based on differences in wealth and cultural outlook, when coupled with their potential for conflict, will have a determinate influence on the nature of civil society and the state.\textsuperscript{15}

If it is now asked what further relationship must obtain in order for the C ← L relationship to be sustained then we can look to the clear example of the state's role. It is enough for our purposes to note that the state could not be a capitalist state without maintaining the rights of private property, and by supporting the capital/wage-labour relationship through forms of economic intervention which sustain the drive to capital accumulation.

In these respects there is a necessary relationship between C ← L and the state which we can denote:

\[
\begin{align*}
S & \quad \uparrow \\
(C \leftrightarrow L) & \quad (3)
\end{align*}
\]

where S stands for the state. It should be noted that while the model of internal relations establishes the presence of a set of causal connections between, for example, the capital/wage labour relation and the state, the direction of causation is
at this stage undisclosed because the precise nature of the
causal processes involved require further theorisation and
investigation. There is a presumption deriving from the
Materialist position that the primary causal thrust is from
C \rightarrow L to S, but it requires an historical analysis to show how
the relationship between the state and mode of production
evolved and a sociological analysis to reveal how the relation-
ship is sustained.

The same point applies to all relations established
within the model. They require what I shall call 'middle range
theories' of an historical and sociological nature to show how
the relationships within the model have evolved and the causal
mechanisms by which they are maintained. An important differ-
ence between the model of internal relations and the middle
range theories which flesh it out is that the former is a
static model in the sense that it does not show how the relation-
ships have evolved or how they are developing. What the third
phase of middle range theorising introduces is a dynamic element,
both through the analysis of history and through the identifi-
cation of tendencies derived from the model of internal relations.
For example, since the time of Marx capitalism has evolved into
its present form, corporate capitalism. If, therefore, we are
concerned with the relationship between corporate capitalism
and education we need to explain the tendencies harboured within
C \rightarrow L which have triggered the structures of corporate
capitalism. In turn this requires an examination of the
epistemic and ontic assumptions on which the ascription of a
tendency is based. In particular I shall be concerned to show
how the concepts of generative mechanism and tendency used in societal
theory share a formal similarity with their counterparts in the natural sciences.

(3) Middle Range Theories

Middle range theories are so called because they relate the abstract level of internal relations to the concrete level. They are theories about the nature of the tendencies generated by particular internal relations.

The connection between a tendency and an internal relation may be expressed as follows:

\[
\frac{C \leftrightarrow L}{t_1} \quad \frac{Cx \leftrightarrow Lx}{t_2}
\]

Here the relation \(C \leftrightarrow L\) at time \(t_1\) has changed to \(Cx \leftrightarrow Lx\) at time \(t_2\) where \(x\) stands for the relevant sense in which the relationship has changed. The form of this change requires some explanation.

The nature of the necessary relationship \(C \leftrightarrow L\) is such that it has the potential to produce the tendency by which \(C \leftrightarrow L\) is transformed to \(Cx \leftrightarrow Lx\) ceteris paribus (CP). This tendency is interpreted in the same sense as it is understood for the natural sciences. The tendency can be cast into a counterfactual of the kind:

'If \(C \leftrightarrow L\) has the potential to change, then it will change to \(Cx \leftrightarrow Lx\), CP'.

The ascription of a tendency is at a level of abstraction above the concrete. It amounts to the claim that so long as no other factors intervene the described change will occur,
hence the significance of the CP clauses. The concrete may be defined as the totality of causal relations obtaining between one variable and others.

If we take the example of the natural necessity which obtained between acorn and oak we can say there is a tendency for the acorn to grow into an oak. The relationship is one of natural necessity because the acorn has the potential or power to grow into an oak and no other kind of tree. At the concrete level, however, it is always a contingent matter whether if a particular acorn grows into an oak because there may be other tendencies which prevent the acorn's growth. A frost may occur at the precise moment the acorn buds to kill it.

Consequently, it is not possible to predict on the basis of one tendency what will occur at the concrete level. Within any particular historical context it is always a contingent matter what the outcomes will be. As such they cannot be predicted by a deduction from a specific tendency. How tendencies conspire to produce a particular outcome is always a matter of empirical investigation.

A further difficulty with analyses of the concrete is that interactions of quite different kinds of tendency may produce a particular outcome. The budding oak may be killed by unnatural causes, insecticide for example. In this case the tendencies of the natural world have to be set alongside those explaining human behaviour in order to account for the oak's demise. Where tendencies of different kinds produce an effect it is called a conjuncture. These are particularly common in the study of concrete phenomena such as education where biological, psychological and sociological tendencies typically combine to effect an outcome.
While tendencies introduce a dynamic element into the relational model, it is hypothesised that the primary generative mechanism which produces change within capitalism, and between it and post-capitalist society, is the contradiction, and I now turn to its elucidation.

Contradiction

This is a sub-class of internal relation identified by the particular form it takes. The significance within Marxist theory is that it represents the key mechanism through which change occurs.

The notion of contradiction has recently been given a good airing and attempts made to tighten it up are welcome, since it has often been used in the literature to refer to any anomaly, accident or paradox. In addition, the term is often used in a heuristic sense as a means for detecting inconsistencies either in thought or reality. I seek here to restrict the notion to a particular kind of internal relation which exists and which is Realistically construed.

There are at least two good reasons for imposing constraints on the concept. Firstly, if we are concerned with distinguishing necessary from contingent relations, where the former denote the limits to the possibilities for change within any society, and it is with them we are concerned, then clearly, if the term 'contradiction' represents the key mechanisms through which change occurs, it must refer to a necessary relation.
Secondly, if we are concerned with a theory which informs practice then it is important the theory indicate the critical areas where change is possible and it is precisely the restricted notion of a contradiction which can do that.

There are three conditions to which the notion 'contradiction' should conform:

1. The articulation of a formula for the application of 'contradiction' consistently throughout the theory. This precludes just any anomaly counting as a contradiction, since whatever is described as a contradiction must conform to the defined formula.

2. The notion should denote (a) a sub-class of internal relation, (b) a causal process, and (c), (a) and (b) should together generate an opposite, where this is understood as an unintended consequence of a particular practice or complex of practices which prevents the point or purpose of the practice being achieved.

3. The notion of contradiction should be shown to be specific to a particular social formation. This may be called the criterion of immanence; for one way of making it context specific is to define it as containing the potential for a specific kind of change, such that, were the potential fulfilled, the contradiction would be transcended. This change would constitute a transformation of existing social structures.

Schematically: (5) \[
\frac{C \leftarrow \rightarrow L}{t_1} - \frac{S(\_\_\_\_\_\_\_\_\_\_\_\_)}{t_2}
\]
Here I follow Giddens' (1979) suggestion that the distinctive contradiction of capitalism (C1) is contained within the internal relation C to L where it is the aspects of private appropriation and socialised production respectively which generate the contradiction. 17

It should be noted that schema (5) is different from (4) in that here a transformation of social structures has occurred rather than a change within a social structure. The point about this tendency is that it registers the potential for both change within a social structure and between social structures. For example, the contradiction between private appropriation and socialised production engenders class struggle which can, and indeed has, modified the nature of capitalism. And it also suggests the possibility that through class struggle capitalism can be abolished and the transformation to another kind of society effected. But the tendency merely indicates the possibility of either change or transformation. The move in this case is signalled by the transition to socialism S, where the empty bracket indicates that we cannot make a priori claims about the distinctive nature of the internal relations of socialist society; because we cannot use a retroductive inference to explain something which does not exist. We can only make an informed guess as to what the distinctive relations of a socialist society might be.

If this particular contradiction is to be designated the primary contradiction because it harbours the possibility of the transition to socialism, then further contradictions
we identify must be designated secondary and their significance must be assessed in the light of the impact they have on changing or transforming extant social structures.

The necessary concepts and their connections have now been furnished and I shall provide a summary of the stages of Marx's method by means of a diagram. I shall then provide an extended example to show how the levels of abstraction are related.

Diagram for summarising the three stages of Marx's method:

**STAGE 1**
Critique of what is necessary for $\phi$ in general

**STAGE 2**
Critique of $\phi$ in specific historical contexts

**STAGE 3**
Investigation of causal mechanisms which produce and sustain relations depicted at Stage 2

Trans-historical categories identified *a posteriori*

**Universal process of historical comparison**

- Phenomenal forms

**Concrete**

- Phenomenal forms within a specific historical context
  - Concrete

**Model of internal social relations**

- Abstract

**Theories of the middle range which relate internal relations to the concrete**

- Social relations
  - Causal mechanisms which generate and sustain tendencies

Note: __________ continuous line = retroductive inference

---------- broken line = inference of presupposition

Critique is used here, not in the sense of criticism but rather to refer to an investigation of the limits and possibilities of the essential categories and relations which comprise
capitalism. Sayer points out that for Marx the model of internal relations:

"establishes the extent and limits within which the categories through which these forms are ordinarily grasped can be validly applied and therewith determination of the boundaries within which theories which assume the validity of these categories can legitimately purport to hold." 19

Essential to an understanding of how the critique is mounted, I have argued, is the notion of retroductive reasoning whereby we can infer the presence of certain categories and mechanisms from observed phenomena.

The diagram represents the various stages of Marx's method and I shall now show the levels of abstraction within the theory it generates are related. I begin by summarising the hierarchy of abstractions and a description of the nature of theory at each level of abstraction.

HIERARCHY OF ABSTRACTIONS

1. Interpretive Structures
   (e.g. epistemology, social ontology)

2. Trans-historical Categories
   (e.g. nature of labour etc)

3. Historical Categories of necessary relations (e.g. C→L)

4. Tendencies generated by necessary relations

5. Concrete Level (nexus of tendencies)

6. Conjunctures
   (understood by a range of theories including non-Marxist)

| Analysis of change in internal relations through middle range theories connecting internal relations to tendencies |
| Analysis of the connection between various tendencies and concrete phenomena and the events they create |

We can see from this diagram the thrust of the theorising is
from the abstract to the concrete. By this means we descend from the categories generated by retroductive reasoning to an explanation of concrete phenomena. I now turn to a sketch which will show how the concepts of Marx's method can be used to guide explanations of the relationship between CMP and education.

**Abstraction, Middle Range Theories and the Concrete:**

**an example**

This example is concerned with showing how middle range theories can be used to explain the nature of education as the product of the causal tendencies of the capitalist mode of production (CMP).

The internal relation variables I will be concerned with are: (1) C $\rightarrow$ L; (2) B $\rightarrow$ P; (3) C $\rightarrow$ S.

The first set of middle range theories are concerned with those tendencies arising out of internal relations which explain the development of the structures of advanced capitalism. Each theory will explain how the internal relations listed have changed.

(1) $C \rightarrow L$

**Theory 1:** The production relation $C \rightarrow L$ has expanded to include a middle range of managers and technicians. This tendency has developed through (a) the pressure of economies of scale and (b) the development of the joint stock company; (a) arises because, in general, the unit cost per product falls as the production run increases; (b) occurs because the move to joint stock companies facilitates larger production units since
it allows public investment in companies. These 'economic' causes for the expansion of C → L are underpinned by (c) the development of the relevant technology for mass production. The tendencies of (a) and (b) combined with (c) generate the corporation which is the typical productive unit under late capitalism.

(2) B → P

The relationship C → L generates a particular social class structure founded upon relationships to the means of production. In Marxian terms the bourgeoisie (B) refers to that group which appropriate surplus value and the proletariat (P), that group which has its surplus value appropriated.

Theory 2: Due to the different material circumstances B and P find themselves in, there is a tendency to develop class cultures with different lifestyles, norms, attitudes and goals.

Theory 3: The expansion of the relations of production has produced a middle strata between B and P, the new middle class (NMC) which also has a distinctive culture.

S

(3) C → L

Theory 4: With respect to education there are at least four necessary relations between capital and the state which obtain under corporate capitalism. (a) With the expansion of production relations and the consequent increase in the size of firms a group of managers and administrators with the relevant skills are required; (b) scientists and technicians are also required
to maintain and develop mass production technology. (c) Mass production requires a high degree of numeracy and literacy among the workforce. (d) Procedures are required to standardise levels of attainment and to issue certificates which indicate the level achieved. This is because employers must know the level of competence of individuals to slot them into jobs commensurate with their skills and abilities. Only the state can fulfil (a) - (d) since only it can afford the investment. An all private system of education would not be possible because the majority could not afford to send their children to schools concerned with profit making. Moreover, some central directive body is required to maintain 'standards' and supervise certification. The state is well placed for this role. The state therefore expanded its role to include the provision of education.

The state fulfils its role with respect to education according to a particular organisational structure which corresponds to the mental/manual division of labour within capitalist work relations. One feature of the relationship between capital and wage-labour is that capital monopolises mental skills and their exercise within the capitalist enterprise. This is so with respect to both technical knowledge of the forces of production and in terms of policy making. Similarly, schools are primarily geared to select those who will perform mental labour and those who will perform manual labour. (For further discussion on this point see chapter 7.) The incorporation of the mental/manual division is clearly necessary in order to produce the types of labour power (work skills and consciousness) required under corporate capitalism.
Given theories concerning these tendencies we may now represent internal relations (1) – (3) as follows:

\[ \text{Sx} \]

(1) Cx $\leftrightarrow$ Lx; (2) Bx $\leftrightarrow$ Px; (3) Cx $\leftrightarrow$ Lx

Where x stands for the relevant tendencies.

With each of the above theories historical evidence would be required to show that the internal relations have developed in the way the theories suggest and sociological evidence that the indicated relationships exist. Furthermore, these theories about tendencies would seek to explain the mechanisms by which these relationships are maintained. The maintenance of these tendencies will be in part due to mediating variables of which education may be one. The following diagram expresses the relationship between the tendencies discussed and education.

In this diagram the continuous lines represent the internal relations or underlying structures which must exist if the Cx $\leftrightarrow$ Lx relationship is to be maintained and reproduced. These lines represent, therefore, abstract relations. In the above diagram relationships (1), (2) and (3), have already been
explained. (4) expresses the necessary relations which obtain between Cx ←→ Lx and the state, of which those pertaining to (7) are specifically related to education. While education is part of the state I have distinguished it from the state for two purposes, firstly in order to emphasise the specific necessary relations which obtain between education and Cx ←→ Lx, secondly, to bring out the point that at the level of the concrete the particular form education takes will be determined by class pressure and struggle both at the level of state policy making and within the schools. Necessary relations denote the constraints and possibilities for action. In the diagram the designation E(m/m) refers to one abstract property of capitalist education systems, namely the mental/manual distinction which is integral to them. So long as there is a capitalist mode of production we would expect the mental/manual division to be present in the organisation of schools. However, there is considerable room for manoeuvre as to the particular organisational form the mental/manual division takes. In part at least, the form it takes will be a function of class struggle. But the nature of the class struggle and its influence on education will be contingent upon various historical factors, such as, class awareness, organisation and values with respect to education. The broken lines of (5) and (6) represent contingent relations which at the level of the concrete will have some influence on the particular form E(m/m) takes. In particular, (5) indicates this contingent process with respect to the struggle to influence the state's policy on education, while (6) indicates the struggle at the level of the school. This struggle may take the form of parental pressure on school policy or it can take the form of the influence of particular class cultures
on educational outcomes. (For further discussion on this point see chapter 8.)

We can see how class struggle can alter the form of schooling while the internal relations (social structures) necessary to capital remain by considering the struggle in the United Kingdom to change the tripartite system of education to a comprehensive system of schooling. For, while the form of schooling changed the educational structures necessary to capitalist social relations remained (Baron et al. 1981). In particular, comprehensive schooling is still characterised by selection procedures which determine those pupils who will subsequently do mental work from those who will do manual work. In addition, there is no good reason for believing the chances of educational success for working class pupils have improved as a result of the move to comprehensive schooling (Ford 1969).

I now turn to a discussion of how theories developed according to this method can be appraised.

Theory Appraisal

An advantage of the model of internal relations is that it indicates the relative strengths of a theory's commitments. In Lakatosian terms those relationships, which through our theories we designate as necessary, form the hard core of the research programme.

This hard core is protected by theories which seek to explain the changes in the form these relationships take. They are the middle range theories of tendencies and it is
the validity of these that is the point at issue between Neo-Marxists and their critics.

This touches on an important difference between the natural and the social sciences and an example is apposite to clarify this difference. I suggested previously that the \( C \leftrightarrow L \) relationship had changed from the simple model of capitalist boss and worker to that of corporate capitalism. This has led to changes in the form of ownership and control and to the introduction of a middle strata of managers and technicians. Now both these changes have been taken as anomalies which tell fatally against the Marxist research programme, firstly because it is claimed ownership and control are of a substantially different nature to the \( C \leftrightarrow L \) relationship and secondly because the notion of a middle strata cannot be admitted into the framework of Marxist theory.

What these claims amount to are disputes about the validity of the extension of Marxist categories and hence the boundary conditions under which the theory is applicable, where the dispute has been prompted by changes in the social world. In contrast to the social world the natural world appears more stable and the high level abstractions by which it is grasped accordingly less tenuous. Indeed, if Kuhn (1970a) is correct, conceptual revisions at this level occur only at times of crisis but the constant change in the social world always casts doubt on the validity of the categories by which we grasp it; we have always to look over our shoulders.
The defence of these categories depends upon our producing more progressive theories. For example, in the past decade there have been a series of theories which have sought to explicate the nature and location of the middle strata in a way consistent with Marxist assumptions. These theories do not resolve the problem entirely; but that would be expecting too much - for as Lakatos notes each theory not only resolves some problems but generates further anomalies. All we can ask and all that is required for a research programme to be epistemically respectable is that it produces confirmed theories more progressive than their predecessors. Progress is construed according to the modifications in the Lakatosian sense of progress which I suggested were necessary in the last chapter.

Analyses of the concrete presuppose middle range theories. These analyses are likely to be complex precisely because they are concerned to evaluate the relative strengths of various causal tendencies in producing a particular outcome. For example, suppose we are concerned to explain working class educational failure. There are a number of tendencies which could contribute to this outcome; we may consider it is a product of unequal distribution of educational resources between working class and middle class schools, or the product of class cultures, or both. The problem, then, is to find some way of evaluating the causal strengths of these tendencies in interaction.

In this respect a welcome sophistication in Marxist studies of education has come with Willis' Learning to Labour
(1977), because he not only discusses the effect of working class culture on working class kids but the consequences of working class culture meeting the middle class culture of schools. Insofar as he tries to study and assess the interaction effects between the two cultures his is an exemplary study of the concrete. (See chapter 8 for further critical discussion of Willis' research.)

Theory appraisal, at the level of the concrete is accordingly more complex than at the abstract levels. At the concrete level our concern is with a set of mutually consistent theories which best identifies the relevant causal processes and their respective strengths as a basis for the explanation of the outcome of their interaction.

Concrete analyses of this kind are no different to those in the natural sciences. Suppose we wanted to explain why temperatures around the world were 5°C warmer that the average. We may have to refer to the particular movement of the sun relative to other planets, the eruption of a volcano, a particular configuration of cloud formations at the time the volcano erupted and so on. In this case to explain the increases in temperature we have to identify all the relevant causal mechanisms, their relevant strengths and their consequent effects in interaction with one another.

The use of the example of weather in this instance brings out some of the similarities and differences between the natural and social sciences, especially with respect to the question
of prediction and its significance as a test of theory. The natural sciences enjoy the advantage of being able to test particular hypotheses about the relationship between structures and the events they trigger under closed experimental conditions. Here scientists can abstract a set of variables from the open system of the natural world and assess the causal impact of one variable on another. Under these conditions predictions can be made as to the effect of one variable on another. Now the understanding derived from experiment on the structures and events produced forms the basis of an understanding of the flux of the open systems of the natural world. Here the laws of physics and chemistry can be used as the basis of explanations in geography and meteorology. Similarly, and somewhat closer to the social sciences, the laws of physics, chemistry and biology can be used as the basis of medical science. In what may be called concrete sciences such as geography, meteorology and medicine, predictions are typically replaced by prognoses because judgements have to be made about what is likely to happen within a particular concrete situation. But these prognoses are derived from the predictions of the natural sciences and are consequently more firmly based.

The social sciences are, of course, ones which also take explanations of the concrete as their object. But unlike geography or medicine they do not have the kind of backing provided by the natural sciences, precisely because experimental conditions are impossible. However, it was Marx's innovation to introduce the notion of abstraction into the social sciences as an analogue to the closed conditions of the natural
sciences. The abstractions of internal relations and the
tendencies they generate stand in proxy for the identification
of similar relations in the natural sciences under experimental
conditions. But, of course, tendencies identified by Marx
are conditional in a way that they are not when observed under
experimental conditions and accordingly we have to amend our
original definition of the notion of tendency to the following:

'If the internal relation \( R \) exists, then it has
the potential to change to \( R_x \).'

There is then a double conditional in social theory
where there is only one in the natural sciences for there is
no experimental means by which the internal relation or the
tendency it generates can be established. This does not mean
prognoses are impossible in the social sciences, just that
they are likely to be more provisional. In the absence of
experimental conditions we have to make do with tracing ten-
dencies through their effects in the concrete and making
prognoses on that basis.

The application of prognoses are to practices which
comprise the concrete, for it is upon practices that the ten-
dencies our theory identifies set constraints and possibilities.

Practices like observations are theory laden. Any
practice or set of practices can be interpreted and explained
by a potentially infinite number of theories. As I have shown,
what goes on in schools has been open to a series of different
interpretations. It is now possible to understand Freire's
point that it is through practice we test theory. For example, a consideration of the attempts to transcend the necessary requirements of education for CMP and their subsequent fate (I have in mind cases like those of Risinghill and William Tyndale) are testimony to the limits outside which practices are repressed by capitalist society. This, then, constitutes evidence of the presence of the necessary relations hypothesised by the model I sketched. But as Freire also points out it is through practices which undermine and transcend these constraints that we can transform social reality.

This points up a crucial difference between the notion of tendencies in the natural and social sciences, and a common weakness. Insofar as we can have knowledge of tendencies in the social world there is the possibility of changing them; they are mutable in a way that natural necessities are not. It is precisely because we can have reflexive knowledge of what we do that we can change the relationships we enter, clearly not a possibility for the necessary relations of the natural world which are space-time invariant.

Despite these differences, the logical form of the generative mechanism and the tendency it produces in the natural and the social sciences is the same, with the caveat I have entered with respect to the double conditional in the social sciences. But this in turn gives rise to a problem which afflicts both natural and social sciences - the problem of the underdetermination of theory by evidence. What this means in terms of social theory is that the test of social practice
is relatively weak, a potentially infinite number of theories can explain the limits and possibilities of practice in different ways. And unless we are spontaneists who believe we can grasp reality intuitively then it is a problem we must live with. 21

Summary

In this chapter I have shown how Realist concepts can have application to the social world, but I have also pointed out that there are certain differences between the application of Realism to an understanding of the natural world and the social world. In particular the application of the Realist method is qualified by the fact that the experimental conditions of the natural sciences cannot be reproduced in social theory. However, I have argued that the Marxian notion of abstraction provides an appropriate alternative which allows us to apply the Realist method to an understanding of the social world. In Chapters 6 and 7 I shall point out the advantages of this method, in particular over the functionalist method used by some Marxists. In the next chapter I turn to a discussion of a metaphysics which locates the individual as an agent constrained by the necessary internal relations which the Realist method enables us to identify.
Notes and References to Chapter Five

1. I have been helped in the development of this account of Marx's method by D. Sayer, Marx's Method, Harvester Press, Brighton, 1979, and A. Sayer, 'Abstraction: A Realist Interpretation' in Radical Philosophy, 28, 1981, pp6-15.

2. The underlying entities Marx is concerned with are not immediately accessible to experience - epistemologically they enjoy a status similar to those of 'meanings'. They may also be obscured for ideological reasons. See the discussion in chapter 6.


4. For a discussion of how modes of production can be individuated see J. Banaji, 'Modes of Production in a Materialist Conception of History', Capital and Class, I, 1977, pp1-44.


6. This first stage may be considered the social theoretic counterpart to a Realist taxonomic strategy in natural science. The distinction between trans-historical and historical categories is analagous, for example, to a distinction between the species fish and a particular kind of fish, say a lampray. The questions asked in the latter case are then, "what is common to all fish?" and "what is distinctive about the sub-group of fish termed lamprays?". In a Realist view the identification of the sub-group 'lamprays' will presuppose a generative mechanism(s) which has the tendency to produce those attributes according to which lamprays have been identified. Lamprays will be individuated by means of the generative mechanism(s) in conjunction with the observed attributes it produces. Similarly Marx individuates particular societies according to their mode of production and the societal characteristics they generate. The analysis of particular modes of production constitutes the second stage in Marx's method. The example of the lampray is taken from R. Harré. For further discussion of the points concerning identification and individuation see his, The Principles of Scientific Thinking, MacMillan, London, 1970, chapter 8.


"This method of approach is not devoid of premises. It starts out from the real premises and does not abandon them for a moment. Its premises are men, not in any fantastic isolation or abstract definition, but in their acutal empirical process of development under definite conditions."


10. In the following I shall not present Marx's derivation of the capital/wage-labour relationships from the commodity form in detail. I shall present the general form of his argument and his conclusions. Marx's derivation is both complex and controversial and it should be stressed that it is presented here as an example. For clear presentations of Marx's 'Labour Theory of Value' see B. Fine, Marx's Capital, MacMillan, London, 1975, and D. Sayer (1979).

11. This diagram is taken from B. Fine (1975).

12. As pointed out previously production relations involve not only relations of social organisation between people but also between people and technology. It is the two sets of relationship which, within the context of this discussion, comprise the capitalist mode of production. However, for purposes of simplicity I shall only discuss the social relation between capital and wage-labour and will assume the 'capitalist mode of production' is synonymous with it. There is controversy as to whether the social or technical relations of production are causally prior. For a discussion of this see, A. Levine and E.O. Wright, 'Rationality and Class Struggle', New Left Review, 123, 1980, pp47-68. They argue, convincingly in my opinion, that the social relations of production are causally prior, i.e., they determine the nature and organisation of the technical relations of production.


14. For a discussion of the other possible types of relations which can obtain in society see Bhaskar (1979), p54.


17. The relationship C ↔ L is contradictory because to maximise profits capitalists have had to break up family and community based production in favour of the factory as the locus and unit of production. This has enabled workers to co-operate, and thereby resist the drive to profit maximisation through low wages and long hours, by unionisation. But the organisation of workers also suggests the possibility of otherthrowing the capitalist mode of production in favour of one controlled by workers. The capitalists' drive to maximise profits has generated an opposing force which retards its realisation in the short term and threatens its existence in the long term.

For an elaboration of this particular contradiction and its central place in Marxist theory see A. Giddens, (1979), chapter 4.

18. The inference of presupposition in the model of internal relations is analogical. A traditional analogy used by Marxists is that of base and superstructure; a more recent example is that of the 'house' referred to in the last chapter. Both try to capture the relationship between the mode of production and other parts of society, where the mode of production is taken to be causally primary. The model of internal relations is more sophisticated than either of these because it can specify the nature and status of the relationships which obtain between mode of production and other parts of society.


21. It should be stressed, however, that on the RHI view there are other dimensions to theory appraisal in addition to empirical or 'practical' testing, as I noted in the previous chapter. Appraisal is a continual process.
CHAPTER SIX

METAPHYSICS, SOCIAL STRUCTURE, KNOWLEDGE AND IDEOLOGY

In this chapter a metaphysics is elaborated from the idea that social life is structured by internal relations of which people can have knowledge. The form this knowledge takes is best captured by a suitably qualified Realist theory of science; but since there are many theories of society at any given time a distinction has to be made between those which are ideological and those which are scientific. The point is that ideas are intimately tied to social structures, and under conditions of class division and social conflict some theories will be rationalisations for the oppression these structures harbour.

I begin by developing a Realist concept of social structure. This is followed by a discussion of the relationship of knowledge and ideology to that concept. Finally I compare the position articulated here with that of a recent discussion of these concepts in the context of education by Kevin Harris (1979). This will serve to illuminate the general issues involved with respect to knowledge and ideology and prepare the way for the development of a substantive theory of the school-society relationship in which these concepts will prominently feature.

Metaphysical statements are not open to direct testing (Watkins 1958) and this makes critical assessment of them
difficult but not impossible. The basic requirement for a metaphysic is that it has heuristic fertility. In the case of social theory this means it must provide the basis for rich and extensive explanations of human behaviour. On this score I would argue that a metaphysic which has the flexibility to view people either as determined or as free agents under specifiable conditions is superior to the kind of metaphysics we encountered in Part One of the thesis, which assigned people to the mutually exclusive categories of determinism or voluntarism.

Following on from this there are three general features of the social world which any metaphysics must be able to accommodate. Firstly the fact of intentionality; people do things because they have motives, intentions and purposes. Any metaphysics which cannot accommodate this central feature will provide an impoverished account of social life. Secondly, people have the ability to engage in a particular kind of intentional activity - one predicated on their ability to monitor their own actions and to monitor their monitoring. It is precisely this feature of human nature which I suggested, in Chapter 4, could plausibly explain scientific development. Thirdly, people's actions are repetitive and predictable to a certain extent. It is these aspects of their behaviour which account for stability in the social world. By the same token there are aspects of social life which are less stable. Any adequate metaphysics must be able to take into account, both the possibilities of stability and change in the social world. A determinist metaphysic such as that presupposed
by Logical Positivism overemphasizes the stability and regularity of the social world, while the voluntarism of someone like Michael Young underestimates the stability of the social order.

Ultimately a metaphysics will be judged by the fruit it bears, but that does not mean we have to wait before we can make a rational assessment. The criteria I have picked out, are arguably, general features of social life. Insofar as they are relatively uncontroversial their satisfaction would be necessary for any metaphysics. The one I now elucidate can, I believe, satisfy these criteria. I begin with an account of social structure.¹

The Relationship of Individuals to Social Structure

Internal relations constitutive of social structures are embedded in practices which may be defined as a set of relations which govern an ensemble of actions undertaken for particular purposes. In engaging in an action one also enters a particular set of social relationships. For example, the newly trained school teacher finds that in order to teach he/she also enters a specific set of relationships with other teachers and with the kids. These relationships are the vectors of power determining each individual's decision-making ability, duties and responsibilities. The social relations the new teacher enters pre-date him/her and there is usually no choice as to the kind of social relations entered into. Schools in Western societies are hierarchical and authoritarian and the majority of teachers, if they want to teach must conform to the social relations determined by these authoritarian structures.
This applies to most forms of employment, particularly within the economic sector, where in order to earn a living most people must submit to the authoritarian relationships of the capitalist workplace.

Practices, then, comprise an ensemble of actions carried out for a particular purpose(s) which occur within a determinate set of social relations which pre-date the individual. In entering a particular practice the individual becomes both a bearer of social relations and an agent insofar as he/she also carries out a particular set of actions. Insofar as social relations remain unchanged the bearer may be said to reproduce them.

There are two further aspects of structures which enable us to consider them independent of persons. Firstly, structures can be abstracted and examined without making reference to people; the sketch of the relationship of education to the capitalist mode of production in the previous chapter is an example. Secondly, events may also be predicated of structures independent of reference to persons. For example, in the model sketched in the previous chapter, it was suggested that a requirement of the education system under capitalism was that it set public standards by which people's competencies could be judged. In this case the structures of the education system produce a particular set of events - examinations. To take a further example, within capitalist social relations capitalist and worker are always in potential conflict due to their different interests. The capitalist always seeks to maximise profits
by minimising wages and the worker seeks to bid up his/her wages to the highest possible level. A product of this relationship is the familiar event of the strike, for when the bargaining breaks down one option open to workers is to strike. The antagonistic relationship between capitalist and worker produces, we can say, the tendency to strike. Of course this does not explain why specific strikes occur - that would require an analysis at the concrete level but, it does explain the conditions which make strikes possible.

Typically people enter a particular set of relations unwittingly and without cognisance of the unintended consequences of their doing so. People do not get married to reproduce the nuclear family nor do they work to reproduce the capitalist economy (Bhaskar 1979). Rather they typically get married for love, money or adventure and they work for money.

But the social relations which are unintentionally reproduced in turn impose constraints and enable possibilities. For example, workers are constrained by the authoritarian relations of the capitalist workplace but they have some room for manoeuvre through collective action. Similarly the married couple who reproduce the nuclear family are constrained by the absence of their parents in helping in the childrearing process since nuclear families comprise two generations. But this in turn gives the family greater potential for geographic mobility.

The question now arises as to how it is that the
subjective perceptions of people to whom the unintended consequences of their actions are opaque nevertheless serve to reproduce a more or less stable set of social relations or structures. Why is it that when people marry for love they also enter into the social relations of the nuclear family and not some other set of familial arrangements?

An important part of the answer lies in the mediating role of culture and ideology. For example, in the case of the newly married couple one reason why they embrace the splendid isolation of suburban living is that the ideology of love equates romance and contentment with this kind of living. The hypothesis I want to argue, then, is that objective structures generate norms and values which inform the very personal aims and goals which in turn serve to reproduce objective structures. To this end I shall now provide a formal account of the relationship of culture to objective structures and subjective perceptions, and in Chapter 8 I shall critically discuss Willis' theory of how culture mediates to reproduce working class educational failure.

Social Structures and the Mediating Role of Culture

A broad distinction can be made between culture construed as a 'way of life' and as 'products'. The former refers to the way people practically go about achieving their ends. The goals people have and the way they pursue them are informed by the meanings, norms and values constitutive of their culture. But culture construed as a way of life also produces artefacts distinctive of it - music, literature and art. In the following
I shall be concerned with culture understood as a way of life rather than with the artefacts a culture produces.

There are four levels of culture construed as way of life we can identify, and which are necessary conditions for the possibility of cultural activity. These are (1) practical consciousness, (2) intersubjective meanings, (3) common meanings and (4) cultural processes.

(1) Practical Consciousness

This refers to the attitudes, beliefs, values and dispositions of the individual. Gramsci (1971) makes a useful distinction in this context by talking about 'common sense' and 'good sense'. The former accords with our definition of practical consciousness but Gramsci emphasises how incoherent and fragmentary are the beliefs we hold. Many of the assumptions on which we act are unexamined. Nevertheless, we have enough practical understanding to negotiate the world. 'Good sense' refers to the skillful deployment of beliefs, conventions and norms in social interaction.

Gramsci's distinction is important for the theoretical perspective I am developing because it permits the idea that people creatively engage in the making of their everyday world while being unaware of the assumptions on which they act and the unintended consequences of their action. I shall provide the epistemological and social support for this view under the discussion of 'social processes'.
(2) *Intersubjective Meanings*\(^3\)

These refer to meanings and norms constitutive of and implicit in practices. If we talk about the meaning of a particular practice we are using the term three dimensionally:

(i) The meaning is for a subject, (individual or group).

(ii) We can analytically distinguish between a piece of behaviour and its meaning. A single behaviour may have different meanings, raising the hand at a Nazi rally denotes a form of salutation, while the same behaviour in the classroom is a means of getting attention. Meanings, in other words are context specific, or in the language I have been using specific to particular practices. This brings us to the third dimension. (iii) The particular significance attached to a meaning accrues only in virtue of the meaning's relationship to the meaning of other things and to the underlying relationship between practices to which meanings are tied. Meanings cannot exist in isolation. There are two aspects to this. Meanings presuppose rules by which we can identify a behavioural sequence as an action under the relevant description, where the action denotes an aspect of a particular practice; but meanings are also set up within a field of contrast; we can only make sense of one action if we know how it is different from another.

Meanings also presuppose a set of norms and assumptions concerning human nature-in-society. For example, the practice of negotiation is only possible if we make assumptions about the norms of good faith, rationality and the conditions of freedom under which a genuine agreement may be struck. The fact that norms and values of this kind are presupposed by
the meaning and practice of negotiation points to the third level of culture.

(3) Common Values and Goals

These refer to the values which are communally sustained. The kinds of values presupposed by negotiation are one example, but further assumptions are made in this case as to the value and efficacy of negotiation as a means to desired goals. But while in any society there must be shared values, it does not follow that every member espouses the same values. In Liberal thought the major shared value is an agreement to allow people to hold different values, within limits. Moreover in a class-divided society the meanings and values attributed to social phenomena by different classes may have a cohesive effect. The different meanings and values invested in the notion of work by the middle and working class in late capitalist society illustrates this point. The middle class views work in terms of the rewards it brings over and above the financial; the social importance of the job, intrinsic interest, a career, security of tenure, and status are all part of their valuation of work; work implies doing something worthwhile, of 'getting somewhere'. While for the working class male whose work is typically manual, meaningless and transitory, a set of meanings and values are attached to work in terms of the dignity it confers and the sense of manhood it sustains (Willis 1977). Arguably, the positive light in which manual labour is regarded by the working class and their rejection of mental labour as 'soft' contributes to their acceptance and preparedness for manual work.
While in this particular instance the differences in the valuation of work may be functional for social order there will clearly be some values which are contested; such values are a site of cultural struggle and this will be particularly so in class divided societies where there are clear conflicts of interest. A significant contribution to the understanding of culture as being a site of struggle has been made by Bourdieu who argues that meanings and values and the media by which they are advanced are intimately related to the struggle for power in class societies. For him cultural struggle is termed symbolic struggle:

"Different classes and class fractions are engaged in a specifically symbolic struggle to impose the definition of the social world most in conformity with their interests. The field of ideological positions reproduces in transfigured form the field of social positions. They may carry on this struggle either directly in the symbolic conflicts of everyday life or indirectly through the struggle waged by the specialists in symbolic production (full time producers), in which the object at stake is the monopoly of legitimate symbolic violence - that is to say, the power to impose (and even indeed to inculcate) instruments of knowledge and expression of social reality (taxonomies), which are arbitrary (but unrecognized as such). The field of symbolic production is a microcosm of the struggle between the classes. It is by serving their own interests in the struggle internal to the field of production (and to this extent alone) that these producers serve the interests of groups external to their field of production."  

One of the major sites of struggle for Bourdieu is in education, and in Chapter 8 I shall discuss some aspects of that struggle and their consequences.

(4) Cultural Processes

Practical consciousness, intersubjective meanings and
common values are embedded in cultural processes which are the subject of history. If our concern is with class society under capitalism then we can suggest practical consciousness, meanings and values are the product of struggle and material necessity. These processes through which culture is reproduced and transformed are largely unintended and unconscious; they are the silent premisses from which meanings and values are generated. They are reproduced through the practical consciousness of everyday activity but they are typically understood only in fragmentary fashion.

The Feminist movement has clearly demonstrated the opaque nature of cultural processes by showing how the meanings and values embodied in language which inform practical consciousness are the product of patriarchal dominance (Lakoff 1975, Spender 1980).

But Feminists have also shown how fragmentary and contradictory has been men's practical consciousness with respect to women. There is no clearer example than the double-think by which men view women as both mother and whore (McRobbie 1978).

Epistemic support for the idea that practical consciousness is fragmentary and, on occasion, distortive dervies from the point that our common sense concepts are not exhaustive of reality (Bhaskar 1979). Just as theory is underdetermined by observation so our understanding of social reality is underdetermined by the concepts of common sense; such concepts can always be reinterpreted by systematic theory. It is an advantage
of social theory in general and theories of patriarchy in particular that contradictory attitudes such as those held by men regarding women can be explained in a way which makes the contradiction intelligible.

It follows from this point that we can use our theories to place practical consciousness within the context of cultural processes. Such theories would be Realist since they would be concerned with explaining the beliefs and attitudes of individuals in terms of their culture informed meanings and the underlying structures which have historically generated the particular form the culture has taken.

The mode of empirical research used by this kind of theory will be ethnographic. Positivist sociology made extensive use of questionnaires but this merely tapped practical consciousness divorced from the meanings and values in which it was embedded (Taylor 1971). Ethnography goes beyond this by trying to relate practical consciousness to the meaning relations of a particular context.

**Cultural Constraints and Socialisation**

In transmitting these kinds of values a culture both constrains and enables. It does the former by imposing limits on the cultural horizons of individuals. If, for example, manual work takes on a particular meaning and value in working class culture, then all other things being equal, the children of that culture will be taught to give it the same significance and value. In doing this the culture precludes other
possibilities such as an equally positive assessment of mental work. If manual work enhances a sense of masculine worth because it is physical then the same kind of value cannot be attributed to mental work, and consequently mental work is devalued.

Of course a single example such as this may help to get the general point across, but it conveys nothing of the power of culture to shape the individual's understanding and ambitions. In Chapter 8 I shall attempt to provide further insights into this process.

But if a culture constrains it also enables. In passing on a set of meanings and values a culture imbues its members with a set of attitudes; an orientation toward life which enables it to be negotiated. In this respect Bourdieu's notion of habitus is useful; he defines it as: "A system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a matrix of perceptions, appreciations and actions". As such it is a source of the individual's creative interaction with his/her social environment, "defining for a determinate agent the .... strategy that is adapted to his particular chances of profit, given his specific competence and authority".  

It is, then, through this set of cultural or transposable dispositions that the connection between objective social structure and subjective perceptions can be made. Cultural dispositions provide an orientation to the world which limits people's expectations and perceived interests to the material environment
in which they find themselves. These dispositions are not
the only mechanism by which objective structures are trans-
formed into a subjective understanding of the world but they
are significant. In looking at the connections between class,
culture and education I shall fill out the relationship between
the objective and subjective. For our immediate purposes it
is important simply to note that some transformational mechan-
ism is required, such as that of cultural dispositions, if
we are to give an account of the relationship between beliefs
and the material circumstances in which they are grounded.

A further significant point arising out of this view
of culture as an important mediating link is that it gives
rein to the view that people are not merely bearers or 'cultural
dopes' but active makers of culture, while it also acknowledges
that the form culture takes will be constrained by social
structures.

The relationship between social structures, culture
and practical consciousness can be summarised in the following
diagram:
Socialisation and Reproduction/Transformation of Social Relations as Mediated by Intersubjective Meanings and Common Meanings and Values.

In the diagram the vertical line (1) depicts the process of socialisation while vertical line (2) shows the process by which practices and relations are transformed. The horizontal and angled lines represent the reciprocal relationships between intersubjective meanings and common values on the one hand and practical consciousness and practices on the other. It is important to note that the practices people engage in are themselves invested with meanings and significance. The positioning of intersubjective meanings on the left hand side and common values on the right is a matter of diagramatic convenience: the horizontal line indicates that both are involved in the processes of socialisation and cultural reproduction/ transformation.

The space set aside on the right for the reinterpretation of these cultural processes by theory is essential to my argument. For it is through theory that we can self-reflexively and critically understand the relationship between social structure, culture and practical consciousness. Indeed since
practical consciousness is often fragmentary and contradictory, it is only through theory that it can be interpreted in a way which provides a coherent picture of the social world and our place in it.

The question that now arises is what the precise relationship is between 'men's conceptions of themselves' as portrayed by social theory and social structure.

Knowledge and Social Structures

In this section I shall advance six theses concerning the relationship between knowledge and social structure that are predicated on the discussion of the past two chapters. They will form the basis for the subsequent discussion of ideology and the distinction I shall draw between ideology and science. These theses are:

(1) knowledge of society and social processes is primarily knowledge of social structures

If societies comprise generative structures which impose constraints while allowing certain possibilities (in the way I have described), it follows that an understanding of society entails an understanding of social structures. In this view knowledge about society is irreducibly social knowledge. It is not gained through an understanding of the psychology of individuals nor of their physiology. While subjective perceptions are necessary as part of the explanation of how societies reproduce themselves they are not sufficient. For explanations of people's subjective view of the world must
always be related to their objective position within the social structure.

Insofar as these structures underlie the surface phenomena of society they will only be accessible to our understanding through a Realist construal of social theory.

(2) particular social structures exist for limited periods, as does knowledge of them

If social structures are the fundamental entities to which explanations in the social world refer, then major changes in social life will be explained in terms of the displacement of one set of social structures by another. It follows that knowledge of a specific set of social structures will only be valid so long as these structures exist. Major changes in social structure necessitate changes in the theoretical categories by which these structures are to be grasped. Major or revolutionary changes in the social world prompt parallel changes in beliefs about the social world.

In this view there is an important sense in which revolutions in social theory are a necessary product of the objects of their study. We should therefore examine more closely the claim that changes in social structure trigger changes in the comprehension of them.

(3) knowledge of social structures is impossible in advance of their occurrence

Because generative mechanisms and tendencies are
constitutive of and unique to, specific social structures it follows that we cannot establish general laws about the nature of social structures from the study of particular cases. Future social structures will have an unique set of generative mechanisms and associated tendencies about which we can make prognoses by studying current and past societies but about which we can make no predictions. Moreover, as I have noted, predictions can only be made with confidence under closed experimental conditions. In the open systems of the social world we can only make informed prognoses based on an estimate of the contingent outcomes of the effects of tendencies in concrete circumstances: since predictions of a lawful kind cannot be made across social structures nor indeed about changes within them. Consequently the continuity of social theories must be broken in this respect: new social structures must give rise to new theoretical categories if they are to be comprehended. Knowledge of the social world is necessarily bound to specific social structures. As Marx puts it:

"even the most abstract categories, despite their validity precisely because of their abstractness - for all epochs, are nevertheless, in the specific character of their abstraction, themselves likewise a product of historic relations, and possess their full validity only for and within these relations". 8 (my emphasis)

In Lakatosian terms the categories which must change are those which comprise the substantive hard core of the research programme. An example from the previous chapter would be those internal (necessary) relations which are central to capitalism. However, while hitherto, I have emphasised the necessity for change in substantive theoretical categories in order that
they can capture the changing reality of social structure, continuity is maintained through the traditions from which a theory's interpretive structure is drawn.

(4) intellectual traditions are continuous across structures

The interpretive structures which guide theory development are derived from intellectual traditions whose validity is not directly dependent upon social structures or changes in them. Those who theorise about their circumstances do so at this level by engaging with particular intellectual traditions. Through critical analysis and synthesis of the latter they are able to generate interpretive structures which can better guide their substantive theories. In the case of Marx it was through a confrontation with Hegelian philosophy and the Anglo-French Utilitarianism of the Classical Political Economists that his interpretive structure was developed (Therborn 1980).

But these traditions are related to social processes, albeit more tenuously. The form a particular tradition will take at any given time will be a function of particular historical conditions. Stockman (1978), for example provides an interesting attempt to relate the interpretive frameworks of Positivism and Realism to scientific practice in the context of the development of science and technology under Capitalism.

(5) theories about social structures are not 'ad hoc' responses to specific social problems or crises

Theories about social structures are not responses to every minor crisis or problem confronting society. They are
not to be construed as policy 'band aids' — instruments for patching things up. Rather they retain their purpose and find application by virtue of their explanatory power. Such theories are concerned with relatively enduring structures and their effects, consequently the problems they can explain and the solutions they suggest will depend upon the possibility of making structural changes. This in turn implies that solutions will be found in terms of prolonged treatment or radical surgery, since a change in structure implies a change in deep seated social arrangements.

If theories of social structures are conceived in Lakatosian terms they will retain their autonomy from the caprices of political demands for quick solutions in virtue of their substantive hard core propositions and positive and negative heuristics. By the same token they will seek to explain minor crises and problems in terms of underlying structures, where their ability to do so constitutes a test of the theory. Theories about structures should be stable and relatively enduring, surviving as long as the structures they explain. They are not the products of fashion nor are they merely 'ad hoc' responses to particular crises.

(6) theories about social structures are not serendipitous

Theories about social structures are not the product of an untrammelled imagination; they are made possible by the formation of the individuated social structures they are about. This much seems obvious. The problem arises, however, that social structures provide the context for the production of
many theories. Moreover where these structures generate exploitation and oppression we would expect some to rationalise and obscure these undesirable features. Under such circumstances it is important to distinguish theories which are ideological from those which in a relevant sense correspond to the real internal relations of the social structure. What is required is an explanation of how ideologies are generated and the criteria for their identification.

Social Structures and Ideology

Ideologies occur when they take as their premisses features of the world of appearances rather than underlying structures. In observing the world we do not see sets of internal relations, rather we see individuals in apparently unrelated activities, which have specific descriptions and carry unique sets of powers, rights and obligations. The activities undertaken by a father are quite different from those of a judge, teacher or carpenter. Similarly the institutions of society have quite different organisations and activities - what goes on in a law court seems totally unrelated to what goes on in a classroom - and this reinforces the perception that in our daily lives we are engaged in an ensemble of discrete practices and experiences.

Ideologies, then, are grounded in perceptions of everyday life and this condition of 'practical adequacy', (Sayer 1979), is necessary to a Realist account. For without the connection between practices and ideas we would be committed to an Idealist separation of beliefs from the practices on which they are based.
Consequently, ideology is not to be confused with brainwashing, propaganda or any other form of mental conditioning which seeks to distort our normal mental processes. The conflation of ideology with these only occurs if it is believed that our perceptions of the social world are exhaustive of it. Positivist theories of ideology are misleading because they are predicated on just an assumption, prompted by the tenet of the epistemic privilege of observation. In the following discussion I shall be exclusively concerned with ideology as it arises in social theory.

The Criteria for the Identification of Ideologies

If ideologies only take appearances as their object they will be blind to structures. The consequence is that a series of category mistakes will be made and these category mistakes will be their hallmark. Fundamental to the concept of a category mistake is the idea that ideological explanations will transgress the historical specificity of individuated social structures. It was noted earlier that explanations in terms of generative mechanisms and tendencies are grounded in specific social structures. As such they cannot legitimately be extended to explain the occurrence of events beyond them. In other words, there is a prohibition on explanations with a trans-historical premiss.

Two category mistakes of this kind can be identified (Sayer 1979). The first occurs where the explanation for an historical event is based on trans-historical premises. An example would be explaining the laying off of a group of men
in terms of the individual capitalist's greed, where the inherent greediness of human beings was posited as a trans-historical law from which individual acts of greed could be deduced. The point here is that whether the man is greedy or generous is irrelevant; it is the enabling conditions of capitalist social relations which explain this particular act. The men may have been laid off to be replaced by more profitable machines or because the demand for the capitalists products has been reduced. Whatever the reason, it can be independent of the capitalist's greed or generosity.

Turning to the second category mistake, in this case a valid observation is extended beyond its historical boundaries. This is illicit because it generalises a set of conditions unique to capitalism to all societies. There may well be strikes under the productive relations of non-capitalist societies but, where there are, their causes will be different.

The effect of these category mistakes, which have been variously called reifications, legitimations and fetishisms, is to make natural and inevitable what is historical and changeable. The political consequences of this are of course considerable, for people will not try to change what they believe is natural and inevitable.

There is a further category error which produces ideology under conditions of social conflict and oppression. This can be termed mystification and it occurs in those cases where events are divorced from their generative mechanisms.
Mystification necessarily follows in those cases where the generative mechanism is one which produces oppression and exploitation. An example may help to clarify the point.

I noted in Part I that Liberal researchers identified a causal relationship between working class kids and failure at school. Their explanation for this did not refer to the generative mechanisms at the source of the problem, namely, a capitalist mode of production which generates a working class and a working class culture antithetical to the demands of schools. Rather, their explanations were couched in terms which suggested piecemeal remedies without touching on the underlying economic structures. The result, to be expected, was that these piecemeal reforms failed within the terms which had been set for them.

There were, of course, good reasons why the capitalist mode of production should not feature in the explanation for the educational failure of working class kids, since what the Liberals hoped to do was promote meritocracy within the framework of capitalism. But as Bowles and Gintis (1976) have pointed out it is contradictory to believe that meritocracy is possible under capitalist social relations.

Typically, theories which are ideological, are so because of a combination of category mistakes. For example, in Technological-Liberalism the concept of technology is a reification precisely because Liberals consider the development of technology, and the consequent impact it makes on society, as an inevitable process, independent of the decisions made by
capitalists to introduce new technology. Ideological theories such as Technological-Liberalism are not, however, outrightly false. This is because the perceptions of ideological theories are grounded in the everyday world. As such they may have an accurate but limited (partial or one-sided) view of society. Where a theory has a partial or one-sided view it has committed the error of mystification. Technological-Liberalism committed this error by taking the rapid social mobility of the middle fifties to middle sixties as indicative of the development of a meritocracy. The mistake Technological-Liberals made was to divorce the observation of the trends in social mobility from the underlying expansion of the relations of production which had triggered the social mobility. Consequently their prognosis concerning the development of a meritocracy was based on false assumptions.

If the above category mistakes are the criteria by which we identify ideology, then a further requirement needed to generate a charge of ideology is a description of the social conditions under which ideology is produced. These have to be conditions of conflict and oppression, for what distinguishes ideology from merely making a mistake is that it is politically potent.12 If an oppressive social order is seen as natural and if the generative mechanisms which produce it are obscured, then this is clearly advantageous to the oppressors.

I have developed a theory of ideology which depicts it as an unintended consequence and not the product of an intentional activity such as brainwashing. It is necessary to stress this point to obviate the kind of crude equation
between ideology and class interests where the former is seen as intentionally perpetrated by the latter. Though, as I have noted, there is a connection between the two. If the generative mechanisms which produce class society are obscured through ideology it must be in the ruling class's interests. When Marx talked about Marxism as being the science of the working class it was because he thought it revealed the mechanisms of bourgeois dominance - theories which did not could only be the latter's unwitting servants.

Marxist theories of ideology frequently give the impression that there is one dominant and coherent ideology which is imposed in the interest of the bourgeoisie to gain the compliance of the working class (Althusser 1971). Such impressions are misleading because (a) under late capitalism there are many ideologies, often conflicting, and (b) the majority do not emanate directly from the economic sphere. Nowhere is this more apparent than in education where over the past decade we have witnessed the ideological struggles of Progressives, Liberals and Black Paper Conservatives. Acknowledgement of this plurality of ideologies has given rise to an opposing tendency which has either discounted the possibility of a general theory of ideology which can relate the plurality of ideologies to the capitalist mode of production (Urry 1981), or rejected their explanatory significance in maintaining dominance systems (Abercrombie et al. 1980).

The difficulty with this latter tendency is that it undercuts the materialist position. In the former instance the connection between beliefs and practices is maintained but
the more general connection between a particular mode of production and beliefs supportive of it is not. In the latter case beliefs are simply severed from practices and have no explanatory value.

I want then to suggest a middle path which concedes the plurality of ideologies, where each is supportive of a particular group or class interest, but which also retains the overall connection with the capitalist mode of production.

In these cases the charge of ideology is laid according to the above criteria but in addition it must be shown that the ideology is in the interests of a specifiable group and that it either reifies what is historically specific to capitalism or divorces a surface feature of capitalism from its generative mechanism. In both cases not only will the ideology be in the interest of a specific group or class but it will be in the general interests of the maintenance of capitalism.

In chapter 7 I shall describe the class situation of teachers and in chapter 8 show how one specific ideology, that of Liberal-Rationalism, is both supportive of teacher's current class position and of capitalism. The point of exposing the ideological nature of Liberal-Rationalism is not merely to show that it is supportive of a particular set of oppressive conditions but that it cannot guide practice adequately. Ideological theories do not make reference to the real relations that obtain. As such, we have good grounds for believing that the descriptions and explanation employed by ideological theories
will be inadequate as a basis for the prescriptions they offer. And it is in the sense that an ideological theory's prescriptions are unable to guide the fulfilment of a specific aim(s) that such a theory cannot adequately guide practice. For example, in Liberal attempts to engineer a meritocracy, Technological-Liberal theory failed to guide practices which could bring about the aim of equality of opportunity because it did not take into account the generative mechanisms of the capitalist mode of production. Similarly, I shall argue that the ideological descriptions of Liberal-Rationalism preclude the achievement of the laudable aim of autonomy. It should, however, be emphasised that due to the complex nature of ideology individual ideological theories require close analysis to establish (a) the respects in which they do not adequately guide practice and (b) the historical conditions which limit their application.

It is, then, important that we can draw a distinction between science and ideology not merely because ideological theories serve to disguise and legitimate real and oppressive relations but because there are good grounds for believing ideological theories cannot adequately guide practice. I now turn to a discussion of how the distinction between ideology and science can be drawn.
The Distinction Between Ideology and Science

The distinction between ideology and science must necessarily be relative to particular historical circumstances. A theory which could grasp the real relations of Feudalism could not grasp those of capitalism. Marx believed that the classical political economists could in fact grasp reality prior to the French Revolution. Their theory was therefore scientific. After the Revolution, with the emergence of the proletariat, he argued that their theory was ideological; since their theoretical framework could comprehend the rise and development of the bourgeoisie but could not admit the significance of the proletariat. Yesterday's science becomes today's ideology. A movement from one social structure to another requires a new set of theoretical categories, because the causal mechanisms of the former will not be the same as the latter, and people by definition will be entering new sets of social relationships. A social revolution demands a parallel theoretical revolution.

The criteria by which we can make a relative distinction between science and ideology are as follows. A scientific theory:

1. will have greater explanatory breadth than its competitors. It will be able to explain a wider range of phenomena from within its explanatory framework. It will be more progressive than its competitors by Lakatosian criteria.

2. will have greater explanatory depth than its
competitors. Specifically it must be able to identify (a) what category mistakes a competitor has made (i.e. why it is ideological), (b) it must be able to explain what it is about the competitor's theoretical categories which generate the ideology and (c) it must explain the social circumstances which make the ideology in the interests of a dominant class.

3. will provide criteria of reflexivity by which it can explain the conditions under which it remains a science. The point here is that if the putative scientific theory is only valid insofar as it explains the real nature of extant structures it must be able to given an account of the social conditions under which it was produced and under which it would no longer apply - that is when there is a transformation from one social structure to another. The ability to specify the conditions for the redundancy of the scientific theory should not be confused with prediction; it is merely a question of noting whether the individuating criteria for a particular social structure still hold.

The demand of reflexivity is necessary because a theory which charges others with committing the relevant category mistakes must not commit them itself; it must at least be able to meet its own criteria of validity.
A Marxist theory can in principle meet these demands, (Therborn 1980). In particular its development would seem in the context of the development of the proletariat under capitalism. And it can specify when it would not longer apply, as for example when there is no longer a proletariat.

Where a theory fulfills these criteria it may be considered scientific, while competitor theories which do not meet these criteria must be considered candidates for the charge of ideology.

The criteria by which we can explain a particular theory as ideological have now been developed. If we are to reflect critically on the social relations which characteristically set limits to our actions we must also critically examine the theories we are using. Theories which are ideological cannot adequately guide practice. On the other hand by using theories which recognise the objective constraints under which we act we can transform them. As Giddens has put it:

"the reproduced unintended consequence of intended acts ... are malleable in the light of the development of human knowledge ... it is fundamental to recognise that 'objective' causal conditions that influence human action can in principle be recognised by men, and thus incorporated into that action in such a way as to transform it."

I now want to use the position I have developed to sympathetically criticise an Althusserian inspired account of the role of ideology in education, as it has been articulated
by Harris. His book *Education and Knowledge* (1979) is significant because it was the first work within the context of education to discuss the relationship between social structure, epistemology and ideology. It departs from the position advanced here in two major respects. Firstly the ideology/science distinction is rejected and secondly the analysis of social structure is functionalist.

By critically examining Harris' work the theory I have developed may be clarified and its strengths and weaknesses evaluated against a competitor. Moreover through a discussion of the position of education in capitalist society as Harris sees it, we can consider the general requirements for an adequate Marxist theory of the school-society relationship.

**Harris on Ideology**

Harris argues that in a class society education is a political act having as its basis the protection of ruling class interests. In particular it has the function of stabilising society by reinforcing the dominant ideology, by keeping people ignorant of the real nature of class society, and by socialising them for work. Following Bowles and Gintis he argues:

"the conduct and process of education in a capitalist society corresponds neatly with the conduct and process of the workplace; and so what is learned via the process of education can be carried over directly by and in individuals as part of the ongoing perpetuation of the existing modes of production and social relations."\(^{16}\)

Rather than producing critical and enquiring minds as Liberals would have us believe, education gets people to see the world
in a distorted way, one which misrepresents reality to the advantage of the ruling class.

The means by which reality is misrepresented is through ideology imposed by the state which:

"is controlled by the ruling class, the capitalists, to serve their interests, and thus it functions against the best interests of the majority of educands."17

There are then, two major issues for Harris. The first concerns the nature and epistemology of ideology, where he discusses what ideology is, how it can be identified and how it is generated. The second is concerned with the transmission of ideology, particularly through education, where he sees the relationship between state and class as central to this process.

I shall begin with a discussion of the issues surrounding Harris' account of ideology and then move to an examination of the view of the social world he takes, in which ideology arises and is transmitted.

Harris draws a distinction between lived ideologies and their theoretical rationalisations. Now this distinction is important for him because it parallels a distinction he makes between educational processes and content.

Lived ideologies are the practices and routines through which people are socialised; the former are ideological because both the practices and the beliefs they produce are functional
for the reproduction of capitalism. He says:

"Rulers and ruled both live the family ideology, the marriage ideology, the religion ideology, the school ideology .... and so on .... the essential point (is) that this lived experience is class interest-serving".¹⁰ (Author's emphasis)

Placed in the context of the school, this means the processes and practices of the hidden curriculum which act as lived ideologies socialise people for capitalist work relations.

Theoretical rationalisations are a coherent body of beliefs which take the form of a Lakatosian research programme and can be judged accordingly. It is these theoretical rationalisations which constitute theories about education and the theories used in the 'official' curriculum, and it is on them attention will be initially focused. Harris' formulation of theoretical ideologies is such that he cannot explain why they are ideological nor the specific social conditions under which they arise. The consequence is that a theory of the ideological production and transmission of the official curriculum is greatly impaired. At the root of the problem is his failure to draw the ideology/science distinction.

Harris' argument may be set out as follows:

1. Under conditions of social conflict ideology is necessarily misrepresentative. Conditions of social conflict are characterised by conflicts of interests and differentials of power. Societies where these conditions occur may be termed class societies.
2. Theoretical practices can never shake themselves free from the above condition of social conflict.

3. Therefore: Conclusion 1: science cannot be divorced from ideology.
   Conclusion 2: science is qua ideology misrepresented.

On the basis of this argument Harris introduces the possibility that we can, however, make judgements of critical preference between theories according to Lakatosian criteria. Hence:

4. The best we can hope for is to make a judgement of critical preference which provides the best representation of the world.

This forms the basis of his reluctance to draw the ideology/science distinction. Before I criticise this reluctance however, some of the advantages of this position should be pointed out. Harris argues that Historical Materialism is the most progressive theory; by using Lakatosian criteria he deflects the usual kind of simplistic argument critics mount to the effect that Marxism regards itself as epistemically privileged (Seliger 1977) such that it is immune from falsification. For he is content to back it against competitors and if it should lose so much the worse for it. By this strategy he overcomes a standard objection made from outside the Marxist tradition. But he also overcomes an important problem from within. Attempts to draw a distinction between science and ideology have forced Marxist theoreticians onto the horns of
a dilemma: either they have espoused idealism in order to preserve the rationality and truth content of science, \(^{19}\) (Althusser is but the most recent example\(^{20}\)), or they have embraced an unacceptable reductionism where the truth of Marxism emerges spontaneously under the right social conditions (a consequence of this being that epistemology is redundant)\(^{21}\).

Harris avoids the first horn of the dilemma by refusing to make a science/ideology distinction while stressing that knowledge is socially produced. By the same token he avoids reductionism by employing Lakatosian criteria of critical preference.

His solution is theoretically neat but it vitiates his aim of showing that schools are primarily concerned with the transmission of ideology. For how are we to know that is what they do unless we have some criteria by which we can distinguish ideology from science? The problem lies with Harris' initial premiss, for either he has asserted a priori that, under conditions of social conflict, ideology is necessarily misrepresentative - in which case it might be wondered what the grounds for the assertion are, or his argument contains a suppressed premiss which enables him to make the science/ideology distinction which is necessary if the claim that schools transmit ideology is to hold up. The suppressed premiss would be one which asserts that by the relevant criteria harmonious societies do not, in fact, produce misrepresentative ideologies while societies in conflict do; this claim presupposes a distinction between ideology and science. Without this added premiss there
is no clear warrant for the initial assertion, and without a science/ideology distinction he cannot show that schools transmit ideology.

Moreover, in failing to make this distinction Harris conflates two problems. The first concerns the way theories are supportive of ruling classes or groups - the problem of ideology; the second centres on the general epistemological problem of the degree of correspondence between a theory and the real world. One reason for maintaining the distinction is simply that where we see that a theory is serving the interests of a dominant class we are inclined to doubt its veracity. In other words by making the distinction we have a further set of criteria by which we can appraise a theory's correspondence to the real world. As it is Harris employs in practice a tacit distinction between ideology and science, and it is on this basis that he analyses the process and content of knowledge transmission in schools. However, because he does not articulate explicit criteria for the identification of ideology he cannot take a specific theory concerning the curriculum and show the theoretical categories which generate the ideology and the interests it serves. He cannot, in fact, engage in the kind of critique which gives the charge of ideology its potency.

On the other hand, the theory of ideology I have developed in the last section avoids the dilemma of the Marxist theoretician because it grounds the production of ideas in particular social structures while at the same time articulating
criteria for the identification of ideology. In addition the condition of reflexivity provides a further check on the degree of correspondence between theory and reality. For, in principle, we can judge a theory's account of its own genesis against competitors.

Harris' Model of the Social World

For Harris the explanatory structure used to chart the connection between ideology and education is functionalist and determinist with no possibility for people to act as agents or to reflect critically on their circumstances. The reasons for this are understandable, for Harris also wants to disassociate his theory of ideology from the crude notion that ruling class individuals cynically impose distorted ideas in order to gain working class acquiescence. He therefore emphasises the need to get away from the idea that ideology is a form of conspiracy. However, in wanting to get away from the individualistic and intentional explanations for the existence of ideology he correctly stresses the objective transmission of ideology but only at the cost of reducing individuals to ciphers:

"the individual, or theoretical labourer, although presuming himself to be the subject of knowledge and theorizing, is really only a bearer of relations and his theoretical activities are determined by the production process which includes the concepts and theoretic tools determinate to the process. The individual 'drugged by immersion' in the social relations he is living ... fails to see himself as bearer rather than subject of certain relations, and is thus unlikely to recognize the illusions and anomalies built into theoretic and social relations that he himself is bearing"23

(my emphasis)
In this view people are no more than the instruments of the system. Given that the individual is only the bearer of relations and 'drugged by immersion', we can only conclude that the qualifying 'unlikely' rings hollow.

Within this explanatory context he articulates a two-class model of capitalism and a view of the state as a tool of the ruling class. The following quotations are representative of Harris' position:

"Education, provided as it is by the ruling class, would stabilise the functioning of the society and help to maintain and perpetuate a status quo which would essentially serve the interests of the ruling class."

"Education's very function is to instil in people a particular way of seeing the world.....In this way it brings about the large scale consensus spoken of previously."

"Education forms and reinforces the dominant ideological views in a society and the consciousness that accompanies them: it can never 'raise consciousness', or create the conditions or promote the 'critical awareness' whereby the dominant ideology of an era can be recognised".

"Education, again as a state institution, serves to disseminate and reinforce the received view or prevailing paradigm, which again is in the interests of the ruling class."24

Education then, is provided by the ruling class through the medium of the state. It transmits the dominant ideology produced by the ruling class which obscures and distorts any understanding of the underlying relations of oppression which obtain. As such, ideology is taken as explanatory for the acquiescence of the working class. The general picture, then is of a capitalist society which functions smoothly to reproduce the needs of the capitalist class through the imposition of
a monolithic and distorted view of the social world.

There are a series of objections I have to this picture. Firstly, rather than one dominant ideology there are many competing ideologies and this simply reflects the fact that capitalist society is made up, not of two homogenous classes, but rather comprises classes, class fractions and those in contradictory class locations; each group having relatively short term competing interests. If we are to understand education and the transmission of ideology through education then it is important to see education as a contested terrain. There is no area of social life which is more characterised by ideological conflict than education.

Secondly, no room is made in Harris' account for resistance and struggle either at the point where policy is made within the state or within the classroom itself. The state is not seen as a site of struggle because it is seen as simply the instrument of the ruling class. What this does is to eliminate the notion of class struggle from history and the formation of the state as a product of that struggle.

Resistance within the classroom is discounted because in Harris' view, the lived ideologies of family and school dovetail neatly together and are consistent with their theoretical rationalisations. One reason for objecting to this view is that it leaves no room for the explanation of Marxist theory as arising out of the historical development of the proletariat nor of the latter as having a culture, which is in many respects
oppositional to the hegemonic culture. The point is that the practices people engage in and the coherent theoretical beliefs generated from them are not a priori ideological. To believe they are is to commit a form of idealism under which Marxist theory itself could not be explained as the product of a particular set of practices and relations. It is precisely because it was that Marx called it the science of the proletariat.

Thirdly, it is claimed a priori that schools are successful in penetrating ideology and in getting people to believe it but no evidence is cited as to whether it is ideology rather than simply the necessity of work as Abercombe et al. (1980), have argued, which explains why class society is maintained.

Fourthly, the particular objective mechanisms by which educational ideologies are generated and disseminated are not identified. Harris provides an excellent account of how the process of school encourages conformity rather than criticism, ignorance rather than knowledge, but he does not discuss how particular theories are generated and passed off as 'knowledge' either about or within schools. The reason for this being that power is theorised as emanating from the 'system' rather than from particular groups engaged in specific struggles. Explanations of the generation of ideology are therefore in terms of the 'system's' purposes or needs, in this case the ruling class' need to maintain the subservience of the working class through the imposition of a dominant ideology.

Underlying those features of Harris' account to which
I have objected, is the functionalist mode of explanation and its attendant emphasis on the coherence and harmony of social systems. As was suggested in Part 1 of this thesis, there is a tendency in functionalist explanations to posit the sub-systems as smoothly cohering with the overall purpose of the system. It is this pressure, which I believe, accounts for Harris' view that the state is merely a tool of the ruling class, that capitalist society is not characterised by resistance and struggle but rather by acquiescence and subjugation through the effectiveness of the ruling ideology.

A further undesirable feature of functionalist explanations as they are used in Marxism is that they view concrete phenomena such as education as necessary to the functioning of the system. Consequently education is seen as reproducing the system's needs. There is, then, an important sense in which the outcomes of education are read off *a priori*, as for instance when Harris assumes the imposition of the dominant ideology through education explains people's acquiescence.

In my alternative methodology, I have argued that education as a concrete phenomenon must always be empirically investigated. At this level, outcomes are always a contingent matter and they simply cannot be 'read off' or deduced from some higher level set of postulates. This does not mean that ideology plays no part in peoples' acceptance of class society, but it does mean that there may be other mechanisms at work, and it is a matter of empirical research as to which outcomes are produced and which mechanisms are most causally effective.
in their production.

The alternative view of class society I shall argue for owes much to Marx and something to Weber. For I shall claim that competing groups produce ideologies supportive of their positions but, in doing so they also obscure the oppressive nature of capitalist social relations of production. The day to day struggles between groups are the product of short term subjectively perceived interests, the unintended consequence of which has been to reproduce the capitalist mode of production.

Capitalism provides the framework within which these struggles take place; it is the unacknowledged premiss of class struggle. But capitalism is itself reproduced by daily practices and struggles. If we are to overcome those features which best characterise education under late capitalism - inequality, ignorance and antagonism - we need to understand the mechanisms present in daily life which produce them. It is upon such self-reflexive understanding that rational change is made possible. On this point it is worth noting a significant contradiction in Harris' position: for importantly, he argues that we can make judgements of critical preference which can guide our theory choice but his determinist social theory which views people only as bearers of social relations precludes the possibility of such epistemic choice. Whereas, I have avoided this contradiction by arguing that people are capable of critical appraisal of their circumstances by choosing the most progressive theory. However, the obstacles to a critical
understanding of education and the means to effectively changing education should not be underestimated. I discuss them in the next two chapters.

My discussion of Kevin Harris' *Education and Knowledge* has been extensive but this is because he has provided a much needed focus on the interrelationships between epistemology, ideology, social structure and education. It is through a consideration of his position that we have been able to get a better understanding of what is required for a more satisfactory analysis of the social world and education's place in it. It is to the pursuit of this task I next turn.

**Summary**

In this chapter I have provided a metaphysics which relates individuals to social structures, where the latter impose limits to the possibilities of people's lives. I then discussed the relationship of knowledge to these social structures pointing out the fact that they can give rise to theories which are either ideological or scientific. I delineated the criteria by which theories which are ideological can be distinguished from those which are scientific. Finally I turned to a criticism of Harris' attempt to articulate a theory of ideology by which the transmission of ideology in schools could be understood. I argued that in order to understand the transmission of ideology in education a distinction has to be drawn between ideology and science, one which he fails to draw. I also argued that his view of society in which ideology is embedded is too determinist, one consequence of this is
that it precludes the possibility of people being able to choose between theories which are ideological, and theories which are scientific.
Notes and References to Chapter Six

1. I am indebted to R. Bhaskar, *The Possibility of Naturalism*, Harvester, Brighton, 1979, and A. Giddens, *Central Problems in Social Theory*, MacMillan, London, 1979, for informing my understanding of the social structure - individual relationship. However, I think neither pay sufficient attention to the relationship of objective structures to subjective perceptions. I develop an account of culture as mediating between objective structures and subjective perceptions in this chapter, as a solution to this problem.

2. I do not believe culture and ideology as mediators provide a full explanation of the objective-subjective relationship. Part of the reason why people reproduce the nuclear family or capitalist relations is simply because they are 'there'. Moreover, all services which support the family are geared to the nuclear unit, as such it is harder to attempt alternative familial arrangements. Similarly anyone wishing to earn a living has little option but to enter capitalist relations. But these 'material' facts of life do not explain why people might willingly embrace the nuclear family or capitalist work relations. For this some account of culture and ideology is required.


4. The aim is, I think, laudable, but the model of internal relations delineates what the limits of liberal tolerance are in capitalist societies, at least with respect to Socialist thought. A teacher who expressed the views set out in this thesis in a secondary school would quite likely provoke a severe reprimand or worse.


6. More specifically practical consciousness comprises fragments of theories. For example the reference frequently made to the 'unconscious' as the basis for an explanation of a person's behaviour clearly is derived from Freudian
theory. Hooker (1973) points out that even dictionary definitions carry a tacit theoretical commitment. He cites the example of the concept of 'solid' as it is defined by the Oxford English Dictionary. It gives two components to the standard meaning of 'solid': (i) hard, resisting penetration, and (ii) completely filled up, lacking interstices. He comments, "pretty clearly component (ii) is a primitive theoretical attempt to explain why there are any solid objects in sense (i)."

7. The quotations in this paragraph are cited in DiMaggio (1979), p1464, and p1465 respectively.


9. For a discussion of intellectual traditions in philosophy, their continuities and discontinuities see R. Rorty, Philosophy and the Mirror of Nature, Blackwell, Oxford, 1980. There is an argument not clearly developed in this book which relates modern philosophy to the social developments of specialisation and professionalism, but no theory of the relation of intellectual traditions to the social world emerges. See also H. Wilson, The American Ideology, Routledge, Kegan and Paul, London, 1977, for a discussion of the connections between science, technology and bureaucracy as they have been understood in capitalist societies.

10. By this I mean where an event which cannot be related to a social structure constitutes an anomaly for the theory. Insofar as a theory such as Marxism cannot account adequately for a systematic range of events concerning racial discrimination and sexism, a reasonable conclusion is that other dominance systems and structures are at work in society.

11. Since according to this tenet what we see we know with certainty, it follows that any distortion or misapprehension must be caused by neural dysfunctions. It will be apparent that Logical Positivism simply cannot articulate an adequate theory of ideology. For, in addition the aim of establishing universal laws denies the possibility of explanations predicated on historically individuated societies. But it is just the possibility of being able to individuate societies which allows us to develop a theory of ideology: see the discussion below on this page.
12. While ideologies are a mistake in epistemic terms I do not mean to imply their production is also accidental. The social conditions which cause ideologies to be produced requires detailed investigation for each ideologically contaminated theory.

13. Abercombe et al. (1980), provide an interesting discussion of the 'dominant ideology thesis'. They state it as follows: "Through its control of ideological production, the dominant class is able to supervise the construction of a set of coherent beliefs. These dominant beliefs of the dominant class are more powerful, dense and coherent than those of subordinate classes. The dominant ideology penetrates and infects the consciousness of the working class, because the working class comes to see and to experience reality through the conceptual categories of the dominant class. The dominant ideology functions to incorporate the working class within a system which is, in fact operating against the material interests of labour. This incorporation in turn explains the coherence and integration of capitalist society." (ppl-2). They reject the notion of a dominant ideology under late capitalism because they argue, correctly in my view, "the limited ideological unity of previous periods has collapsed". However, the fact that there are many ideologies under late capitalism, some of which conflict with each other, does not mean they do not also mask the real relations of capitalism, a point I shall try to establish. Moreover while there is no dominant ideology under late capitalism in the sense defined by Abercombe et al. it is my view that the Liberal ideology prevalent in the mid-fifties to mid-sixties was accepted by the majority. However, with the move to the right by governments in Western societies the 'Liberal consensus' has now broken down.

14. For an excellent discussion of Marx's analysis of classical political economy as ideology see E. Sprinzak, 'Marx's Historical Conception of Ideology and Science', Politics and Society, 5, 1975, pp395-416. Following from this analysis Sprinzak draws out the relative distinction between ideology and science which Marx makes. This paper has been particularly helpful in developing the theory of ideology I articulate here.


19. Idealism in the sense that the rationality and truth content of science is regarded as independent of social processes.


22. Harris frequently refers to ideology as obscuring the real relations which can be apprehended by the Marxist research programme. Since Marxism apprehends real relations, by implication it is a science.


24. Harris, (1979), these quotations are to be found, respectively, on pages 140, 141, 141, 157.
CHAPTER SEVEN

THE STATE, CLASS AND EDUCATION

In this chapter I develop a model of internal relations and tendencies of class, state and education through a series of mutually consistent middle range theories. The view underlying these theories is that the state and education as a branch of the state, are a product of the demands of capital accumulation on the one hand and the struggle between various classes and class fractions on the other.

Two functionalist Marxist theories of the state are examined, and are rejected in favour of a relational Marxian account of the state. The necessary relations between the demands of capital accumulation, the state and education are then traced. This is followed by a discussion of the Marxist criteria of class. It is argued that insofar as we are concerned with the forces which currently shape education and the ideologies they produce then reference to the relations of production alone is not sufficient to fix class locations; reference must be made to market forces. This argument is developed in the context of the class interest of teachers, where it is suggested that their semi-professional status while in the employment of the state is crucial to an understanding of the strategies they adopt, and the ideologies they produce in the preservation of their class position. This chapter lays the basis for an understanding of the conflicting class ideologies and consciousness characteristic of schools under capitalism, which are discussed in the next chapter.
The State and Education

Two predominant metaphors characterising the state in Marxist theory are those of the 'servant', where the state is seen as an instrument of the ruling class, and of the executive where it is regarded as the long term policy maker of the ruling class. Typically these models are used within functional analyses of the state but they cannot capture the complexity of a shifting and sometimes paradoxical set of relations. I shall elaborate by critising the presuppositions of both these models.

The State as Servant

The major objection to viewing the state as a servant or instrument of the ruling class is that it presupposes class essentialism, the teleological view that there is a purpose to be expressed in the nature of classes. As such it implies that classes are homogeneous groups with respect to that purpose. This in turn suggests either that there is, for example, a unified bourgeois class which perceives a set of common interests and agrees on how they are to be satisfied, or a view of history in which the fate of the bourgeois class is pre-determined. In the latter view, the purpose of the class is worked out according to some zeitgeist, irrespective of the perceived interests of members of that class.

If it were possible to postulate either view of class it would make sense to view the state as the servant of the bourgeoisie because there would be some coherent set of interests and purposes it could serve. But the idea is
problematic because it conflates the long and short term interests of the bourgeoisie. The bourgeoisie is a class because it extracts surplus value for private accumulation, and its long term interest will be the maintenance of this. But it does not follow that their short term concerns in making the most profit possible are similarly uniform. Capitalists make profit within different economic spheres, some directly through production others as financial intermediaries, such as, bankers, stockbrokers and the like. It would be an error to believe their short term interests naturally coincide.

It is recognition of this point which has led some, especially Poulantzas (1978) and his followers, to argue that the state, far from being the servant of the ruling class, is in fact its executive.

**The State as Executive**

In this view the state is regarded as serving the long term interests of capital while remaining relatively autonomous with respect to the short term frequently conflicting interests of the class fractions of the bourgeoisie. This view has some merit because it acknowledges the empirical reality that the short term interests of the bourgeoisie are not uniform and it can thereby explain why different groups within it may make different, often contradicotorly, demands upon the state.

However, both this and the previous model fail to recognise that the state is not immune from the deeper contradictions of society; that the form the state takes and the policies
it produces are the outcome, not only of the demands of capital but of the struggle between capital and labour. To see why this model cannot incorporate what may be regarded as a fundamental feature of the capitalist state, the method used for theorising the state needs to be examined.

I remarked earlier that these two models find their natural home within a functionalist mode of explanation. For example, in the previous chapter I noted that Harris argued that the state functions as the servant of the ruling class by, among other things, perpetrating mystifying ideologies in schools. Poulantzas also develops a theory of the state through functional analyses. In both cases the state is used to explain the persistence of capitalism. The trouble with theorising the state in this way is that the relationship between theory and the empirical world is tenuous. As Clarke (1977) in a strong attack on Poulantzas' theory of the state puts it:

"anything that happens in the concrete situation can be linked *ex post facto*, to the functional requirements of the system. The system persists so must have functioned. Any changes in the system must have been necessary in order to secure the persistence of the system".  

The error, then, lies in asserting what the state does *a priori*; a 'success' criterion is built into the analysis: as long as capitalism is maintained it follows that the state, whose purpose it is to maintain it must have done so. As Clarke remarks there is a tautological element to this theory. As a consequence the U-turns, the reversals, and the apparent concessions which characterise state policy are all seen as 'functional' in the long term for capital. The result of this is that what
has forced the state into changes, the threat, potential or realised, of class struggle drops out of the picture. For the apparent concessions to the working class are all seen as part of the grand design by which capital accumulation is maintained.

Consequently, the notion of conflict as integral to the formation of the state is rejected in favour of the view that its designated purpose is smoothly executed. But this further assumes that the state is epistemically privileged, that it knows how to maintain the long term interests of capital. However insofar as this depends upon following the right economic policy then the state clearly has no privileged knowledge, for bourgeois economists are themselves in constant disagreement as to the best policies to pursue. The state may want to satisfy the long term interests of capital but there is no guarantee it will do so.

An alternative to these models which overcomes their defects is one which views the state as constrained by the necessary relations obtaining between state and mode of production on one hand, and the resistance and pressure for change emanating from the working class on the other. In viewing these as the primary structural constraints I follow Gough (1979), Panitch (1977), Stephens (1979) and Wright et al. (1976). These writers have argued that the formation of the state and the policies it pursues are a product of the conflicting demands of capital and labour. Within the framework of these structural constraints middle range theories are employed to provide an account of the relationship of state to polity
and class. By this means we can generate testable hypotheses regarding the nature and outcomes of education under late capitalism. In doing so no a priori assumptions are made concerning the causal efficacy of the state in the maintenance of capitalism. I shall begin by discussing the necessary relations between the capitalist mode of production and the state.

A Relational Model of the State

In advancing a relational account of the state I shall amplify the assumptions made in the model of internal relations discussed in Chapter 5. In doing so I shall draw on the work of Offe (1975) who suggests there are four necessary relationships obtaining between the state and capital: exclusion, maintenance, dependency and legitimation. I deal with them in turn.

(1) Exclusion. "The State cannot initiate production within private enterprises that is thought to be not accumulative by the private accumulating unit, and it cannot, conversely, stop production that is accumulative (profitable) by the accumulating unit" (original italics). It will be clear that this is a necessary condition precisely because were the state to interfere in this way the free enterprise of late capitalism would be transformed into a state controlled economy. This is not to suggest, however, that the state may not place constraints on the forms accumulation takes and in the 'national interest' take measures which have the unintended consequence of making certain enterprises non-viable. This leads into the issue of maintenance.
(2) Maintenance. The State has a mandate to create and sustain conditions of accumulation at various levels of specificity; the individual enterprise, industries and regions. Part of the maintenance of accumulating conditions is involved in meeting threats which cause problems of accumulation, such as industrial action and the violation of property. Offe suggests that the necessity for the maintenance of the conditions of accumulation is equivalent to establishing control over destructive possibilities and events. Again this constitutes a necessary relationship which is clearly seen in the case of property rights. The notion of profit is dependent on the notion of property. Some kind of maintenance of property rights is therefore clearly required as a condition of accumulation.

(3) Dependency. The existence of the State depends upon the accumulation process in capitalist societies since it is from the taxation derived from wages and profits that the State is able to maintain its activities. Offe points out that this dependency acts as a selective principle upon State policies. Consequently, "The criterion of the stability of accumulation is thus incorporated in the pursuit of interests and policies, that considered by themselves, may have little or nothing to do with accumulation." Accumulation therefore acts as a constraint criterion but not necessarily as the determinant of the content of policies.

(4) Legitimation. It will be apparent that these necessary relationships leave the State precariously balanced. In Offe's
words:

"How is it possible that, at the same time, the state gains power, applies this power in a way conducive to and maintaining the conditions of accumulation, without thereby subverting its own existence as a capitalist state by adopting policies that would transcend the reciprocity relationship between state and accumulation?" 7

The means by which capitalist states achieve this precarious balance is by advancing the ideology of neutrality. The state appears to be neutral with respect to competing interests when in fact it depends upon and is supportive of capital. The state must be seen, then, as an organisation pursuing common and general interests, allowing equal access to power and responding to just demands if it is to maintain its relationship to capital. Offe sums up the relationship when he says, "The existence of a capitalist state presupposes the systematic denial of its nature as a capitalist state".

Given Capitalism generates systematic inequality, it is easy to see why the doctrine of equality of opportunity should become its 'official' ideology. For it offers the promise of neutrality - everyone will have an equal opportunity - while providing 'legitimate' grounds for the prevalent inequality. However, as with all ideologies, this one retains a slender link to the real world, for there is an aspect of capitalism which is genuinely promotive of meritocracy.

Since capital is concerned with profitability as its 'raison d'être' and people's labour power and skills are viewed as a means to that end, then it is important for efficient
production and profitmaking that people are allocated to positions commensurate with their skills. This demand encourages the meritocratic ideal, and its partial fulfilment can be seen in the recruitment of middle managers and technicians from the working class during the period of post second world war expansion. But of course this particular tendency runs counter to the privileges of property and wealth capitalism also confers. Most crucially these privileges have been extended into the educational domain, as I have noted. Nevertheless, some aspects of the meritocratic ideal have been institutionalised in schools, primarily through the idea of competition for credentials; although the net effect has been the antithesis of that intended. But the organisation of schools according to the tenets of meritocracy has been only one shaping influence of the demands of capital on education, and I now turn to a fuller discussion of the relationship of capital to the educational system.

Capital Accumulation, The State and Education

The class division between capital and labour has also created a distinction between mental and manual labour. Following Browne (1981) I suggest this is the source of the fundamental constraint by capital on education, one reinforced and legitimated by the meritocratic ideal.

The Mental/Manual Division of Labour

It is important to see the mental/manual division as one which is embedded in a particular social context and which has social, political and educational consequences. As Browne
puts it:

"It is necessary to reject any technical/empirical conception of this division, for example based on the division of labour between different forms of work or technological processes, or 'brain work' versus physical work for technical divisions and descriptive criteria do not in themselves explain why mental and manual labour are hierarchically separated and why there are real economic, ideological and political distinctions between them." 8

The point is that the distinction is predicated on the capital/labour relationship in terms of both the technical and social relations of production. Capital has appropriated both the technical expertise and the general decision making powers concerning production. This is clearly necessary in order to retain control over the productive process. If workers had the knowledge and skills both to maintain the relevant technology and make policy they would pose a threat to the capitalist mode of production. As it is workers are unable to exercise power and responsibility over either the technical or the social relations of production.

A necessary constraint imposed by capital on education through the state is that the latter reproduces the mental/manual distinction. The failure of the education system to do so would pose the kind of threat to capital suggested above. In terms of Offe's classification the reproduction of the mental/manual division through education is necessary for the maintenance of capital, and the means through which this is done is by an educational system which disenfranchises the majority from access to more skilled levels of thought and reflection and enfranchises a minority. Moreover, schools
preclude those most concerned with education, parents and kids, from any significant decision making powers and responsibilities. In these respects schools parallel the mental/manual division which characterises the capitalist mode of production. The basis for the reproduction of the mental/manual division in schools is the principle of 'meritocratic' organisation in which the educational emphasis is on a narrow range of technical and intellectual skills and abilities.

'Meritocratic' Selection in Schools

The second fundamental characteristic of education systems under Capitalism is that they are organised ostensibly according to meritocratic principles of selection. It is important to note that the meritocratic element is derivative of the mental/manual division. For what defines merit⁹ in this case is a certain narrow range of abilities variously described as 'intellectual' or 'academic', and whatever the claims to developing and valuing 'character' in all its manifestations, the fact remains that it is the ability to pass a certain set of 'academic' subjects which distinguishes educationally the privileged from the unprivileged. It is not merely other aspects of the individual such as moral worth, wisdom and creativity which go unconsidered but in addition the area in which these qualities should find a significant focus - the exercise and organisation of democracy - is ignored. The Greeks called those who did not participate in the responsibilities of democratic decision making 'idiotes' (private men), a term of disdain. In our society education itself is organised on authoritarian principles and attempts
at any measure of democracy in schools are usually perfunctory. Moreover, the discussion of the social and political organisation of work under capitalism rarely enters the curriculum. In these respects the arguments of Bowles and Gintis and Harris must surely be correct: education prepares people for the authoritarian relationship of the workplace. Our education system produces 'idiotes', valuing only the technical contribution they can make and dismissing the wider range of qualities required to organise and participate responsibly in a democracy.

If the narrow values enshrined in the exam system emphasise on the one hand what is necessary for the reproduction of capital and on the other exclude what is threatening to it, then the form which meritocratic selection takes also serves to reproduce capital. For examinations seek to test for limited sets of measurable abilities. There is consequently a stress of the 'objectivity' of standards as they are defined by, for example, the IQ test, where the standards are set relative to the achievements of others. Consequently, students are primarily assessed against the performance of other students rather than their own past performance. The emphasis is not then on how well the student has developed in his/her own terms but on producing a 'standard product', sorted and graded for employers.

The meritocratic principle as it is interpreted under capitalism in turn supports the mental/manual distinction. By selecting on the basis of a narrow range of technical and
intellectual skills and ignoring the wider range of abilities necessary for democracy, it serves the educational demands of the technical relations of production and those of the social relations. For if the skills necessary for democracy go unexercised and unrewarded the outcome is that school leavers enter the social relations of capitalist production without the ability to challenge or transcend them, which is precisely what the authoritarian relations of capitalism require.¹¹

In these respects the state through education maintains the capitalist mode of accumulation. It necessarily serves this end, for as I suggested in Chapter 5, it is the only organisation which is in a position to provide free and compulsory education and a central body which can standardise, supervise and legitimate (in virtue of its neutral stance) selection procedures needed to service capitalist relations of production.

But while education serves to maintain capital accumulation, a contradiction emerges in times of crisis between its necessity to legitimate itself as 'neutral' and its dependency on the accumulation process: a contradiction which points up certain differences in interest between capital and elements of the state which we should explore.

*The Contradiction Between State Ideology and the Demands of Capital Accumulation*

So long as capital accumulation was of a sufficiently high level to give credence to the notion of equality of
opportunity through expanded educational provision, the interests of state and capital were in relative harmony. With the latest crisis in capitalism, educational budgets have been cut and the expressed ideology of equality of opportunity for all has largely been sacrificed to the demands of capital accumulation. A contradiction has appeared between state practices and ideology with respect to education.

The response of the state has been to switch ideological positions, for once it is visibly appreciated that it can no longer sustain the legitimating ideology of equality of opportunity, some alternative position is required by which the state can be seen to maintain its neutrality. The move by the state in Western societies has been from that of projecting the image of the 'neutral referee' in the meritocratic contest to that of 'physician' to an ailing economy and society. In this latter role it has pinpointed education as partly responsible for the economic crisis, since it claims schools have not adequately prepared kids for work. Ideologically this enables the state to deflect criticism away from where responsibility in fact lies, with the process of capital accumulation itself, and it provides a rationale for the changes the state seeks to make in educational policy. For example, in Britain the Great Debate in 1976 which, signalled the shift in the state's ideological stance in relation to education, was centred on the issues of the relationship of school to work, and greater centralised control of the curriculum. Clearly this was an attempt by the state to gain greater control of education in the interests of capital accumulation.
However, the state's policy of contracting the education system, while attempting to gain greater control of it, runs counter to the interests of teachers in a number of respects. Materially, it threatens teachers with possible unemployment and a diminution in their power and autonomy. Ideologically it goes against teacher's beliefs in equality of opportunity and a wide ranging humanistic education which attempts to cater for all aspects of character development.

The state should not, then, be regarded as a homogenous entity which simply serves the bourgeoisie, but should be seen as the focus of shifting class alliances. To see what these are and what their significance for education and for teachers is we need to discuss the general nature of class under late capitalism.

**The Class Structure Under Late Capitalism**

I observed in Chapter 5 that there has been controversy over whether a Marxist theory of class can adequately capture the changes in the social world over the past eighty years. In particular, critics have pointed to the development of the welfare state and the expansion of a middle range of occupations between capitalist and workers as anomalies which they have claimed Marxists cannot resolve (Parkin 1979). Since it is part of my argument that it is precisely people in this middle range of categories, and especially educationists employed by the state, who are instrumental in the reproduction of the class structure, it is important to show that these anomalies can be resolved within the Marxian research programme.
To see what is at issue here I shall begin with the 'classic' two-class Marxian model of capitalist and wage labourer. This will bring out the criteria employed for the identification of class and we will then be able to understand why the changes which have occurred this century do pose problems for Marxian analyses. The solution I offer to these problems may be judged against the objections which have been raised.

What distinguishes the class of capitalists from the class of wage labourers are their relationships to production on the one hand, and their opposing objective interests derived from their different situations within production. The capitalist owns the means of production, where ownership is enshrined in a set of legal property rights. These rights confer privileges with respect to control over production. The capitalist decides what market he will enter, how he shall produce, what people will be employed and the terms of employment. The wage labourer, on the other hand, has only the right to sell his or her labour power. Once the contract is made the two classes enter into a relationship in which the capitalist holds the whip hand.

The key power accorded to capitalists is that of being able to extract profit from the wage earners' labours for private accumulation: the fundamental divergence of interests between capitalist and workers arises from this. For it is in the interests of capitalists to make as much profit as possible, not merely for personal gain, but also because
without sufficient profits they will be put out of business in a competitive market. Profits are made by keeping wages as low as possible and by getting the workforce to produce as much as possible. On the other hand it is in the workers' interest to get as high a wage as possible under reasonable working conditions. And it is for this reason workers have resisted the excesses of capitalist exploitation by forming unions in order to impose their only possible sanction, the withdrawal of labour.

Marxists, then, view class in terms of discrete groups with opposing interests derived from their respective positions in the productive process. But it is also argued that it is not only in terms of immediate interests of survival that the two classes differ, but with respect to their long term objective interests. The capitalist class which has wealth and leisure time has an objective interest in maintaining the status quo. The working class on the other hand has an objective interest in transcending a mode of production in which others make profit out of them, in which they have no control over their working lives, and in which they are always significantly poorer than capitalists.

The difficulties involved in theorising the middle strata between capitalists and working class, and the employees of the welfare state can now be clarified. In the former instance those of the middle strata are working class insofar as they are wage earners. On the other hand it is not clear they all have an objective interest in socialism. This is because we
recognise that this middle strata is in many respects better off than their working class counterparts, in that they derive more benefit from the welfare state (Le Grand 1982), especially education; they are better housed and their work is for the most part more interesting; and part of a career structure which guarantees a certain amount of security.

What, however is most significant about this group is that they have taken on some of the functions which were previously embodied in the capitalist class. This is to say responsibility has been delegated to this middle strata for some of the decision making involved in the capitalist enterprise. Instead of the classical image of a capitalist we are now confronted by managers with responsibility for investment, marketing, personnel and so on. Part of the reason for this devolution of responsibility lies with the move to joint stock companies and the notion of public ownership of shares. Coupled with the drive to economies of scale, this has served to increase the size of capitalist enterprises and replace the notion of an owner with a number of shareholders. We should not, however, be deceived into believing the concentration of wealth or ownership has consequently been broken up. Despite the apparent separation of ownership from control through public shareholding and the replacement of capitalists by managers, the evidence strongly suggests, that in this case appearance belies reality (Scott 1979): ownership is still concentrated in the hands of a few. And the few exercise significant control over the companies they own.
In the case of state workers, the problem is to see how they are related to production, for what characterises this group is that they do not produce wealth; profit cannot be made out of them. It is unclear, then, how they are to fit into the class structure since it is difficult to see how criteria of class predicated on production apply to unproductive state workers. Furthermore it is also difficult to fix their objective interests since there is no straightforward reason why state workers should retain an objective interest in either capitalism or socialism. What is therefore required is a middle range theory which can explain the tendency of capitalism to produce this middle strata and which can establish its location in the class structure. One to have advanced such a theory is Erik Olin Wright.

A Middle Range Theory Of The Middle Strata

The most satisfactory solution to the problem of the middle strata in capitalist corporations is that proposed by Wright (1976-77, 1979a, 1980). His theory has shown itself to be functional, is relational in approach, is more parsimonious than its competitors, and is to be interpreted realistically. He argues that the theoretical entities he identifies are "the real stuff of class relations" in capitalist society, and not "merely analytical dimensions dervied from a priori reasoning". I shall therefore use Wright's account as the basis for a discussion of the relationship of class to education.
Wright bases his theory of class relations on three interconnected structural changes in the course of capitalist development: the loss of control of the labour process by workers, the differentiation in the function of capital and the development of complex hierarchies within capitalist enterprises. Since it is from these social changes that Wright generates his model of the necessary relations of class structure, it is important we say something briefly about each of them.

(i) The Loss of Control of the Labour Process by Workers. Wright notes there have been changes within capitalist production from cottage industry where workers often owned part or all of their immediate means of production to the derogation of worker autonomy within factories.

(ii) The Change in Control Over the Process of Capital Accumulation. As capital accumulation units expanded with the move from cottage industry to factory a more flexible organisation of capital investment and control was required. Wright points out that with the ascendancy of the joint-stock company a partial dissociation has occurred between formal legal ownership on the one hand, and the dissociation of control over the immediate labour process (possession) and control over investments and resource allocation (real economic ownership) on the other.

(iii) The Development of Complex Hierarchies. The concentration and centralisation of capital accumulation units generated
internal differentiation within the respective dimensions of ownership. From the simple cottage industry where one individual owned and supervised the physical means of production and the labour process, to the corporation hierarchy there has been increasing division and specialisation within and between control of capital equipment and labour. The same kind of process can be delineated for the ownership and control of monetary capital.

On the basis of this historical review Wright identifies three central processes underlying the capital-labour relation, control of which determines class position. These are (1) control over investments and resource allocation; (2) control over the physical means of production; (3) control over labour power. Control over all three processes marks out the capitalist class, whereas control of none of these processes distinguishes the working class. A third class, the petit bourgeoisie has control over the first two processes, but since this class consists only of the self employed, the third element of control does not apply. The petit bourgeoisie are not employers and therefore do not extract profit from the work of others. Consequently they must be considered as a class based on a different mode of production - a remnant from the early period of cottage industry capitalism; which may be termed simple commodity production.

Between these three classes are various groups which occupy what Wright calls contradictory class locations. The most significant of these groups is located between the
bourgeoisie and the proletariat. This group comprises the managers and technicians of capitalist enterprises to whom some of the modalities of capitalist control have been delegated. The class position of this group is contradictory because it has divided class interests. The point is that the class location of this group of managers and technicians is well accounted for at the point of production in terms of the tendencies of capitalist economies (Walton and Gamble 1976); the difficulty in determining their class position comes in establishing the second criterion of class, that of their objective interests. Wright argues that the class interests of managers and technicians are divided between the capitalists' interests in perpetuating the status quo and the working class' interest in socialism. As such they do not form a class in the Marxist sense. Objectively it is possible to abolish this group without doing away with capitalism; subjectively they need to devise strategies for maintaining their privileges for themselves and their offspring.

Two further groups Wright defines as being in contradictory class locations are small employers and semi-autonomous workers. The former are divided between the bourgeoisie and petit bourgeoisie. This is because in all three cases there is a concern to make profit out of production. The petit bourgeois does this by relying on his/her own labour, whereas the bourgeois does it by extracting surplus value from the labour of others. The small employer falls between the two, usually relying in part on his/her own labour to make profit and partly on the labour of others. For Wright it is the ratio
of people employed to the amount of surplus value extracted which fixes the position of these three groups. The less people employed, and the less surplus value extracted, the closer the small employer is to the petit bourgeoisie, the more people employed, and the more surplus value extracted, the closer she/he is to the bourgeoisie.

The final group in a contradictory class location are semi-autonomous employees who are located between the petit bourgeoisie and the proletariat. They are wage labourers, but they enjoy a high degree of autonomy over the nature and pacing of the work they do. Examples Wright gives of people in this position are university professors, researchers in laboratories, white collar technicians and skilled craftspeople.

To summarise Wright's account, the class locations under late or corporate capitalism may be depicted by the following diagram from Wright (1979a, p67).
The Relationship of Contradictory Class Positions to Class Forces in Capitalist Society

This account is particularly useful in understanding the position of the middle strata in capitalist corporations. Wright, however, concedes that not all positions can be fixed solely by the economic relations of production and this is particularly so for state employees. He therefore follows Poulantzas (1978) in introducing the notions of ideological and political levels, which it is argued are necessary for fixing objective class positions. Principally these levels are defined in terms of their functions in the maintenance of capital. Class positions are not only explained in terms
of economic relations, but also as to whether ideologically and politically they are positions which function to reproduce capitalist relations.

In this account, high level state bureaucrats, for example, are regarded as members of the bourgeoisie because of their role in maintaining bourgeois domination. There are, however, a number of difficulties with the notion of 'levels', especially since they are regarded as relatively autonomous from each other. For example, Wright suggests that a strong union movement among white collar employees may push them closer to the working class. In this way political and ideological class struggle become determinants of the objective class positions of contradictory locations at the economic level. One of the problems with this idea is that it is likely to push a materialist analysis towards idealism. For, the ideological and political levels can now determine the economic class position. There is a danger in turning the original causal notion of the economic determining the ideological and political on its head. Wright is aware of this and so seeks to guard against it by the following injunction:

"the extent to which political and ideological relations enter into the determination of class position is itself determined by the degree to which those positions occupy a contradictory location at the level of social relations of production".12

The problem with this, however, is that with respect to state employees this safeguard misses its mark precisely because what is at issue is the fact that state employees are
not directly related to relations of production. We cannot use the additional criteria of ideological and political levels without first fixing their position in the class structure, and that is what is problematic.

Consequently, the introduction of the notion of political and ideological levels does not help. And there are further problems with this account of class, relating in particular to the contradictory class positions of small employers and semi-autonomous employees. One group whose class location we are particularly interested in fixing is that of teachers, since we are concerned to understand their relationship to the state. They also provide an interesting test case for Wright's theory, illustrating its problems and also pointing the way for a solution. Briefly, my argument will be that Wright tries to locate class positions at too high a level of abstraction; they cannot be established in all cases by reference to relations of production alone, market considerations must enter.

The Class Position of Teachers According to Wright

Wright (1979b) argues that teachers "fall into the contradictory location between the petty bourgeoisie and the working class at the level of production relations". This is because teachers have a fair degree of autonomy in their work, although it varies as to particular historical circumstances and at what level they teach. So for example, professors at prestige colleges are likely to have more autonomy than high school teachers. At the ideological level,
however, teachers occupy a contradictory location between the bourgeoisie and the proletariat. For while they are "actively engaged in the process of the elaboration and dissemination of bourgeois ideology" they may become 'proletarianised' at this level by the introduction of learning machines which will undermine their role in the promotion of bourgeois ideology.

I think there are severe problems with this analysis, such that it cannot explain teachers' political strategies or ideological production.

We can begin by noticing the criterion by which Wright fixes the economic position of teachers. He argues they occupy a contradictory location between the proletariat and the petit bourgeoisie, the reason for this being that while they are wage earners, teachers also enjoy an autonomy akin to that of the petit bourgeoisie. There are two criticisms I want to make of this argument. Firstly, it will be recalled, Wright fixes class position in terms of relations to the means of production and class interests. Now the petit bourgeoisie do have distinctive class interests. Their survival as independent producers is threatened by corporate capitalism which, because of the economies of scale it achieves, provides a greater variety of goods and services at a cheaper price. There is always the threat that the petit bourgeoisie will not be able to compete with the larger capitalist units. Similarly they are threatened by the objective interest of the working class in socialism, for again that would ensure their extinction. Caught between the two major classes
of capitalism they have interests apart from both. Given these interests it is hard to see what they might have in common with the interests of teachers. In fact Wright never tells us, for the simple reason that when he comes to discuss the petit bourgeoisie the criterion of class interests is dropped. So, in the case of the contradictory class location of the small employer what makes him similar to the petit bourgeois, according to Wright is solely the ratio of surplus value to numbers employed. Similarly the criterion of objective interests drops out of the picture when Wright fixes the position of semi-autonomous employees in a contradictory location between the proletariat and the petit bourgeoisie. The criterion which determines the similarity between semi-autonomous employees and the petit bourgeoisie is the degree of autonomy they share over their work conditions. In short, in the absence of defining the class interests of the petit bourgeoisie the criteria Wright uses to establish these contradictory class locations slides between the ratio of surplus value to numbers employed in the case of small employers, and the degree of autonomy workers have in the case of semi-autonomous employees.

I cannot see any grounds for believing teachers have class interests in common with the petit bourgeoisie nor do I believe that the nature of teachers' autonomy is related to that of the petit bourgeoisie. The autonomy of the latter class derives from its sole ownership of the means of production. But teachers are wage earners and do not own or necessarily produce what they disseminate - knowledge or what passes for knowledge. It makes no sense therefore to locate them between
the proletariat and the petit bourgeois.

Moreover, as I noted earlier, Wright gives no account of why teachers should be situated within the relations of production at all. Nor are there any grounds for believing they stand in some kind of relationship to the proletariat. His suggestion that their work may become proletarianised with the introduction of learning machines merely points to the fact that, under these conditions, they will share similar work conditions to the proletariat; it does not, however, establish that they stand in the same relationship to production as the proletariat.

The reason why Wright encounters these difficulties is that he is trying to establish class locations at too high a level of abstraction. The highest level of abstraction within substantive Marxian theory is that of the production relationship between capitalist and worker, and Wright has attempted to fix all class positions in terms of this production relation. But to fix the class location of teachers we need to refer to market forces and their extension. In saying this I am not denying the primacy of production in determining the nature of class under capitalism but I do not think it possible to establish all forms of class by direct reference to the means of production.

*The Class Location of Teachers: An Alternative View*

(1) Teachers, the State and the Capitalist Mode of Production.

As state employees, teachers owe their class position,
historically and currently, to developments within the capitalist mode of production. Historically, we have noted education has played a necessary part in the reproduction of capitalism by perpetuating the mental/manual distinction. In addition, because the capitalist state is dependent on capital accumulation for its revenue, teachers are indirectly dependent on the capitalist work structure and the taxes raised from it for their wages.

This means they are doubly dependent on the capitalist mode of production, not only as wage earners, but also in terms of the services they provide. They are only necessary to capitalism so long as the skills and competencies they transmit are needed: and so long as they are needed to transmit them. In neither case is their position assured. In the former instance the introduction of new technology to replace the functions of administrators and middle and low level managers means that the number of people who require educating for these functions diminishes. In the latter case there has already been a tendency toward the simplification of teacher's work. They have been stripped of the responsibilities for the organisation and content of the curriculum, to a large extent, and of administrative and pastoral care, and as Wright suggests, there is the additional possibility of the proletarianisation of what remains of their work, toward machine and childminding.

The tenuous nature of the teacher's position derives from the fact that the state is dependent on capital accumulation for its survival. As such it can be expected to act in a manner similar to that of the capitalist, especially
in times of crisis. Under these conditions we would anticipate that the state would maximise its return on investments, however that is written out in terms of social cost and benefits, and ensure that this is done by exercising greater control over the workforce. This is, of course what we are now observing. Teachers are being laid off because the state believes present or slightly higher staff-student ratios are acceptable, greater demands for teacher accountability are being made, and the state, particularly in Britain, is seeking to exercise greater control over the curriculum. Moreover, even in terms of economic prosperity the work conditions of teachers are little different to that of their counterparts in production. These are authoritarian and bureaucratic, and wages are fixed by negotiation with the state as employer in much the same way as wages are fixed between capitalist and workers. It is precisely because teachers have recognised the material reality of their situation that they have unionised. In respect of these material conditions, then, teachers are in a similar situation to that of the working class.

Nevertheless teachers' positions are not entirely analogous to that of the working class. What is most distinctive of the latter group is that profit is made out of their labour, at the point of production. But teachers are not so exploited and in this fundamental respect their situation is different. There are further important differences, for teachers have, as Wright observes, more autonomy, and better working conditions; they are typically more highly rewarded and have higher status that their working class counterparts. The reasons for these
differences are to be found in what they can exchange in the market.

What teachers bring to the market place are relatively specialised forms of knowledge and the skills to transmit them. In virtue of this they possess semi-professional status. What distinguishes semi-professionals from professionals is their failure to gain closure over their collective working conditions. To see why this is, we need to say something about the notion of the professional under capitalism.

(2) Teachers, Semi-Professionals and Professionals Under Capitalism

Professionals are characterised by their ability to appropriate and possess practical and theoretical knowledge in the form of a special competence. However professionals are confronted with two problems which they have to solve in order to obtain closure over a particular knowledge domain. The first problem is that knowledge is socially produced and public in nature, as such professionals have to make a private monopoly out of what is essentially public property. The second problem is that the attempt to monopolise knowledge runs counter to the ideology of a free market in which monopolies are, ostensibly, prohibited. In this case professionals must be able to legitimate their monopoly and the privileges which accrue because of it. I shall expand on both these problems.

Professionals seek to make of knowledge a commodity which can be rented out in return for certain privileges. The problem is that knowledge is quite unlike a commodity;
it is the product of a shared language, shared traditions and life experiences which in principle anyone can have access to. In short, knowledge is a contagious disease, and consequently, unlike, say, rental televisions it is much harder to protect and for that reason impossible to insure against theft.

But some professions like law and medicine have achieved monopoly control over their respective knowledge domains through the control of the production of special competencies. In particular, professionals regulate the numbers who enter their ranks to ensure control over supply, they exercise powers of discipline to ensure continued quality control; they subject neophyte professionals to long periods of training which is apparently highly specialised and is applied to practices of which, significantly, lay people have little experience.

The second problem confronting professionals is clearly expressed by Larson when she says:

"The revelation that socially produced knowledge is privately monopolised (and artificially limited) challenges the egalitarian and democratic legitimations built into the dominant ideology. If, however, it can be convincingly established that the springs of knowledge flow for all who care to learn and are mentally capable of learning, the revelation is no longer trenchant."14

It is the ideology of equality of opportunity coupled with the ideas of unequal distribution of natural intelligence and resolve which come to the rescue of professions, since their members may legitimate their privileged position on the basis of superior intellect and motivation.
The consequence of professionals being able to surmount these two problems is that they can establish a dependency relationship whereby the client who is denied knowledge must invest their trust and pocket in the competence of the professional. When we look at the situation of teachers we find it is disanalogous in certain crucial respects to the of the professional. Most teachers do not engage in long periods of training, indeed in some countries teaching is not yet an all-graduate profession. The knowledge teachers do have is applied to a set of practices of which everyone has experience and, in addition, part of the responsibilities teachers have is shared with parents: this is especially the case with the emotional and moral well-being of students. As a result some of their competencies are not seen as exclusive to them but ones which are publicly shared. However, the crucial difference between the paradigm cases of professionals and semi-professionals such as teachers is this: professionals can regulate the numbers entering their ranks and they can exercise disciplinary control over their members. In these respects professional groups are autonomous. But in the case of teachers it is the state which determines how many teachers there will be and what the conditions of employment are. If the account I have given of the relationships between capital, the state and education is correct, teachers cannot be permitted the autonomy of a professional body. The state needs to retain power over teachers in order to enforce those aspects of education which are necessary for the reproduction of capital.

Under capitalism teachers can only achieve a tenuous
semi-professional status but in this respect they are in a position similar to all those who owe their status and position in society to their educational credentials. The mass education systems which have evolved to service the developing middle strata in capitalist enterprises have had a profound impact on society. As Meyer puts it:

"It (education) has a network of rules creating public classifications of persons and knowledge. It defines which individuals belong to these categories and possess the appropriate knowledge. And it defines which persons have access to valued positions in society. Education is a central element in the public biography of individuals, greatly affecting their life chances. It is also a central element in the table of organisation of society, constructing competencies and helping create professions and professionals."15

More specifically, what education has done is to select and validate those who comprise what may be called the 'new middle class'. This group, of which teachers are members, has dominated the fate of education in the past twenty years through their alliance with state and capital.

The notion of a new middle class has been particularly controversial because, while it has been perceived as significant for an understanding of education (Bernstein 1977), it has derived its class grouping from the resources it has been able to bring to and secure in the market. It is not a class in Marxist terms (Sharp 1980) since it has not been defined in terms of its relationship to the means of production.

(3) Teachers and the 'New Middle Class'

The new middle class is typically taken to comprise the managers, administrators, technicians and semi-professionals
of state and industry. What these groups have in common is, firstly, an ambiguous relationship to the means of production. For those working in industry are in contradictory class locations between capital and labour, while those in state employment are in a similarly indeterminate position. It is common practice for both groups then to be both unionised and to have some form of professional association. Secondly, they are fundamentally distinguished from the working class by their possession of educational credentials (Giddens 1973). Thirdly, because of this they are more highly paid than the working class. Consequently they tend to have a common lifestyle, insofar as they will live in areas apart from both the bourgeoisie and working class and have distinct cultural pursuits (Bourdieu 1973). In addition they tend to be the major beneficiaries of the welfare state, insofar as they appropriate more than a proportionate share of its resources.

In view of these commonalities I suggest this group does have a uniform set of subjective interests with respect to education. By 'subjective interests' I mean those which are perceived by individuals as necessary to maintain their needs and wants, where their perceptions will be limited by their particular location in society. As regards education the wants of this group are uniform and they do not necessarily coincide with the interests of either the bourgeoisie or the working class.

For this 'class' the means by which they have attained their privilege has been through the acquisition of educational
credentials. This being the case it has been important that they exercise power and influence over the education system in order to maintain their privileges and transfer them to their children. There is nothing insidious or conspiratorial about this. Most parents will do what they think is best for the children, and for the new middle class this normally amounts to encouraging their children's educational aspirations because they see education as a means to betterment. But the pressure they apply is not only to their children but also to the schools and to state policy on education.

The involvement of this group, however, is not restricted to 'pressure' for their interests have coincided with the particular structural arrangements of education under capitalism. This is because the privilege of the new middle class is also predicated on the mental/manual distinction and the legitimacy for this privilege derives from the apparently open competition in which they have won their credentials. Their positions are predicated on the division between mental and manual labour because in Bernstein's phrase they are the agents of symbolic control. The new middle class, he argues, are primarily a class concerned with the production and dissemination of symbol systems be it in education, advertising or the computer industry. Their work in manipulating symbols is, then, paradigmatically mental work.

While in the past, therefore, the interests of the new middle class have coincided with those of capital, they have typically been in an antagonistic relationship to the working
class. This is because they have been in open competition with them for the resources the state has provided for public education. For the new middle class have enjoyed the advantages conferred by the mental/manual distinction; their children have grown up in a culture concerned with the same kind of abstract symbol systems which comprise the academic content of the curriculum and they speak a language code which is capable of manipulating the more abstract ideas which are embodied either in natural language or in the languages of other symbol systems be they those of art, music or high technology.\textsuperscript{16} In addition the higher earning power of this class enables them to live in the catchment areas of good state schools. In sum, it is no accident that the education system is suited to their particular culture and it is not surprising their children do so much better than working class kids at school.

Though as we shall see in the discussion of Willis' research in the next chapter, what I have offered by way of explanation of middle class educational success is only half the story; it explains why, in Willis' words, middle class kids get middle class jobs; it does not explain why working class kids let them.

In the struggle to shape the nature of education, the middle class have taken centre stage, for the reasons I have offered. But they have been able to do so because their interests have coincided with those of capital. Now, with the attack on education by conservative governments, cracks are appearing in the alliance between the middle class and capital heralding a new set of struggles\textsuperscript{17}; which I shall
discuss shortly. Before doing so I want to look at an issue which will lead into this discussion, namely the sense in which the view I have taken of the new middle class is consistent with a Marxist framework.

In Marxist theory, the new middle class as I have described it, is not a class; firstly, its objective interests are ambiguous as between capital and labour; secondly, this class is employed not only by capitalist organisations but also by the state. Moreover whether this 'class' survives or dies will make no difference to the essential class relations of capitalism. Nevertheless through their perpetuation of the mental/manual distinction they have been deeply implicated in the reproduction of capitalist class relations. And they have had a significant influence in the shaping of modern educational systems. The failure to locate this group according to Marxist class criteria leads to two difficulties for the Marxist perspective. Firstly, it appears hard to maintain the materialist thesis of the causal primacy of production, if classes cannot be tied directly to production. Secondly, in terms of a theory of revolutionary change, it is hard to see the role of a class without a clear objective interest in either capitalism or socialism.

I think, however, both these problems are overcome by the analysis I have offered. In connection with the first difficulty, I have pointed out that the new middle class owe their position, in the first instance, to the expansion of production relations under corporate capitalism. Moreover,
since they have perpetuated the mental/manual distinction essential to capitalism, they have been deeply implicated in its reproduction. Finally the fate of this class will be determined by the dictates of capital accumulation as I shall argue below. On this basis I think it is enough to say with Marx:

"In all forms of society there is one specific kind of production which predominates over the rest, whose relations thus assign rank and influence to the others. It is a general illumination which bathes all other colours and modifies their particularity." 18

It is therefore unnecessary to think all class relations must be tied directly to production.

The issue remains of how to understand the role of a class in revolutionary change whose interests are not necessarily coincident with either capital or labour. The answer to this is that I think it quite plausible to argue that many will come to see their objective interests as being the same as those of the working class. If we return to a consideration of teachers it is clear that the attack on education by the state reveals the nature of the threat capitalism poses to both their material and ideological interests. Their own jobs and status are threatened and they cannot fulfil the kinds of aims they desire as teachers. These cracks in the class structure in times of crisis afford the opportunity for people to reappraise the role of the state and its connection to capital accumulation.

In the long term there are identifiable tendencies which suggest that this class will, to a large extent, become
proletarianised. One predominant tendency during this century has been the proletarianisation of while collar workers through the introduction of technology (Braverman 1974), which has reduced their role to that of machine minders. With the introduction of micro-chip technology there are good grounds for believing that the tendency we have seen operate amongst white collar workers will be extended to the ranks of the new middle class. Under these conditions the class polarisation, which Marx suggested was a condition for revolutionary change, will occur. In other words it is precisely because the new middle class is a creature of capitalism that it is subject to its needs. On this basis it is possible to reconcile the presence of this 'class' with a revolutionary theory of change, through the thesis of proletarianisation.

Summary

In this chapter I have shown that the structure and organisation of education is the product of certain necessary relations between capital and the state. These relations do not entail a direct correspondence between school and work such as that suggested by Bowles and Gintis and Harris. Indeed in this analysis there is room for some degree of autonomy for the education system, especially in the early years of primary education where there is little need to enforce the demands of the mental/manual distinction. One consequence of this relative autonomy is that the necessary relations between capital and state are never assured. For this reason education is always a site of political and ideological struggle.
A notable aspect of my account is that it can explain teachers' economic and political strategies, and lays the basis for an account of the production of ideologies supportive of them. Teachers have used a dual strategy in the political arena, on the one hand they have used their status as semi-professionals and on the other they have employed collective (unionised) action to achieve their aims. This dual strategy cannot be adequately theorised by an account such as Wright's because, as I have argued, their semi-professional status can only be understood in terms of the knowledge and skills they bring to their work. This knowledge and skill is exchanged in the market place, and consequently their class position as semi-professionals cannot be understood solely in terms of the relationship to the means of production.

A further consequence of this analysis is that education should not be seen as an imposition by the ruling class, rather it is the product of the demands of capital accumulation and class alliances. This is an important point, because when these alliances shift the possibility of change, albeit of a limited kind, is opened up.

Finally I have laid the basis for an account of some of the relationships of class to consciousness as it pertains to education. In the next chapter I shall discuss working class culture and consciousness in connection with education. In the recent history of education this class has not featured predominantly. Part of the reason for this has already been given in terms of the congruence between middle class culture
and the school curriculum. In the next chapter I will explore further reasons why the working class has 'opted out' of education. I shall then turn to a critique of one influential teacher ideology, that of Liberal-Rationalism.
Notes and References to Chapter Seven

1. I use the term class fraction to denote the fact that while in the long term each class in the Marxian sense retains common objective interests, in the short term the interests of various groups within a class may conflict. Those groups within a class whose interests conflict in the short term are called class fractions. The term was originally coined by Poulantzas (1978). See also the discussion below.


Offe's analysis is couched in functional terms. I have translated it into relational terms.


5. The state can enter the economic arena if it is thought necessary for the support of private accumulation. It does so usually by maintaining an economy's infrastructure, the transport systems for example. Usually these are industries which cannot be privately funded.


9. The notion of merit used here is the one used by Technological Liberals and is consequently narrowed to a range of technical and 'intellectual' competencies.

10. I am not suggesting that attempts by some schools to introduce some form of democratic participation is perfunctory; rather the hierarchical structure in which schools are placed serves to militate against widespread and effective participation by both teachers and students in the affairs of the school.
11. This does not mean that those entering work from school accept their lot passively, but it does mean they are unlikely to understand in any coherent sense what it is precisely they are reacting against in the workplace. I discuss this in the next chapter.


17. One consequence of this change in class alliances is that in Britain a new political party has developed to defend the interests of the new middle class. See, A. Gould, 'The Salaried Middle Class in the Corporatist Welfare State', *Policy and Politics*, 9, 1981, pp401-418. See also the article by P. Kellner, 'The Rabbit is in his Right Hand Pocket', *New Statesman*, 4/12/81, p5.

CHAPTER EIGHT

CLASS CONSCIOUSNESS, CULTURE AND IDEOLOGY IN EDUCATION

In the previous chapter I argued that the mental/manual division is a necessary feature of schools under capitalism. I also identified certain tendencies, through middle range theories, concerning the development of the class structure. In consequence I was able to situate education, at an abstract level, as determined by the demands of capital accumulation on the one hand and class struggle and alliances on the other. It remains to give an account of the outcomes of education as a product of the meeting of the tendencies I have identified at the concrete level. This account will provide an explanation of the role of education in the reproduction of the class structure. It is, I think, worth reiterating that the model of internal relations can tell us what structures exist for a certain kind of society to be possible but it cannot explain how those structures are sustained and reproduced by people in daily life. How structures are reproduced in daily life can only be explained by reference to the concrete level. Primarily, the account I offer, of schooling under capitalism, at the level of the concrete will be concerned to show how the practical consciousness which is the product of class structure, also serves to reproduce it. To this end I shall offer a critical exposition of the work of Willis (1977) for he has pioneered a Marxian analysis of education as a concrete phenomenon consistent with the major tenets of this thesis. It presupposes a Realist epistemology and views the reproduction of class society in terms of the unintended consequences of people's actions.
Fundamental to his view is a theory of class culture which mediates between objective structures and subjective perceptions.

Against the discussion of Willis' seminal study I juxtapose an analysis of one teacher-ideology, that of Liberal-Rationalism, the educational theory of the 'London School' of philosophers of education. It will be recalled from chapter 6 that the criteria for identifying a theory as ideological are that it must be shown that the social conditions in which the ideology is produced are ones of conflict, and that it is in a specifiable group's interest. In addition I suggested that the ideology would also obscure the real relations of capitalism. Liberal-Rationalism fulfils these criteria, since it supports the class position and semi-professional claims of teachers. In doing so it obscures the real relations of capitalism with the consequence that it endorses the ruling practices and culture imposed upon the school which 'the lads' in Willis' study reject.

I have chosen Liberal-Rationalism as a representative teacher-ideology for three reasons. Firstly, it constitutes a reaction to the narrow instrumentalism of the Technological-Liberalism I described in chapter 2. On the one hand it is an attempt to provide a justification for a wide ranging humanist curriculum. On the other, it sees the justification for education in terms of the development of the autonomy and rationality of the individual. However, precisely because it is ideologically contaminated, I shall argue that the view of education taken by Liberal-Rationalism precludes the possibility of personal autonomy. In a sense, then, 'the lads' in Willis' study are right to reject the kind of educational practice which
is derived from theories such as Liberal-Rationalism because it could not provide them with the cognitive means for understanding the oppression which governs them.

Secondly, Liberal-Rationalism is a relatively clearly articulated theory, and this is helpful insofar as it provides a well defined target for criticism. If my arguments concerning the idea that theories are the basic epistemic unit are correct, then the unit to be appraised as ideological is the theory. Many theories in and about education are fragmentary and therefore difficult to analyse. Liberal-Rationalism has the merit of clarity and relative coherence and is therefore easier to get a grip on.

Thirdly, as a theory about the nature of education, it was, and still is, particularly influential in teacher training colleges and university departments of education in Britain and Australasia. It is therefore of some practical concern that it can be shown to be ideological, since there is no point in teachers attempting to following theories in practice which cannot deliver on their set aims.

Through criticism of Liberal-Rationalism I am able to sketch an alternative account of the relationship of educational theory to practice which I suggest is necessary if people are to understand the constraints on educational practice which exist. It is an account which I believe is consistent with Freire's notion of revolutionary pedagogy.

**Class Structure and Consciousness in Education**

Paul Willis' *Learning to Labour* appeared in 1977 and was hailed as a seminal contribution to an understanding of schooling under capitalism. Despite its widely accepted
importance, to my knowledge there has been no extended commentary or criticism of the research, nor any reported attempt to apply the analysis to other school situations. Yet the research requires such a critical commentary because while it makes a significant contribution to the literature, the theory Willis uses to interpret his observations is hard to understand. This is because on the one hand his ideas are quite original and on the other he has an impenetrable prose style. The following may be regarded as an attempt to provide a critical comment of his theory within the context of the discussion of the limits imposed on education by class consciousness.

For Willis:

"The difficult thing to explain about how middle class kids get middle class jobs is why others let them. The difficult thing to explain about how working class kids get working class jobs is why they let themselves." 2

In order to explain this problem he advances the following argument:

1. There is a symmetry between relations at school and relations at work; both are hierarchical, authoritarian, and impersonal.

2. These relations are expressed in the hegemonic practices and ideologies of work and school under capitalism. These ideologies and practices serve to reproduce the class structure.
3. But there is a working class counter-culture generated by the social relations of work reproduced in the school counter-culture. Paradoxically this counter-culture prepares and impels its members onto the shop floor, and thereby back into the working class.

This then, is the broad outline of Willis' argument. Its focal point is the counter-culture which may be defined, on the one hand, by its relationship to the hegemonic school organisation and culture, and on the other by its relationship to the world or work. Willis bases his study on a tendency first observed by Marx that:

"Upon the different forms of property, upon the social conditions of existence, rises an entire superstructure of distinct and peculiarly formed sentiments, illusions, modes of thought and views of life. The entire class creates them through tradition and upbringing." 3

How then does the working class view of life translate into the values and attitudes the kids bring to school? For Willis it is 'the lads' comprising the school counter-culture who most clearly express the oppositional working class view to the school. The contours of the counter-culture can be brought out by reference to 'the lads' relationship to school authority, their activities in school, and by their relationship to the wider culture of which they are a part. It is with Willis' description of the counter-culture I begin.

*Willis' Description of the Counter-Culture*

'The lads' distinguish themselves from the 'ear'oles', the school conformists, by their refusal to wear uniform and
their reputation for smoking, swearing and fighting. The substitution of fashionable clothes for the uniform announces their antagonism to the school culture and portrays them as people of substance, since they can afford what is considered 'up to date'.

Within the classroom 'the lads' specialise in a "caged resentment", which overlays a determination not to do any work. But their attendance in the classroom is infrequent, for they create an autonomy for themselves through the systematic subversion of the school-timetable. 'The lads' always have a reason for being somewhere other than where they should be; running fictitious errands, or 'helping-out' on special projects, and are generally to be found inhabiting the corridors and spaces behind the backs of authority. For those who are successful at this, notes Willis, there can be an embarrassment of riches. It can become difficult to choose between self-organised routes through the day. A typical comment from the staff, one familiar to every teacher, is that 'the lads' waste time. But they are not concerned with using time as a means of some future goal; it is to be spent now on what is most important - a sense of their own autonomy and self-image.

In their school adventures 'the lads' receive moral sustenance and a sense of practical wisdom and financial support from the wider working class culture.

Morally they receive the tacit or explicit support of their parents. One of the lads mentions the time his mother
received a letter from the headmaster:

"Our mum's kept all the letters, you know, about like the letters Simmondsy's sent (about their drinking). I says, 'What you keeping them for?' She says, 'Well, it'll be nice to look back on to won't it', you know, 'show your kids like you know, what a terror you was'. I'm keeping 'em, I am."^4

Their sense of practical wisdom derives from their carnal and economic knowledge. 'The lads' are already part of a patriarchal system in which sexual relationships serve to enhance their reputations while automatically diminishing those of the girls they go with. In addition to casual encounters they have steady girlfriends who are already serving apprenticeships as housewives and providers. Both sets of relationships with women emphasise their maturity and knowledge of the ways of the world.

But they also participate in the informal economy, the world of petty theft, of cheap goods 'fallen off the back of a lorry'. and manifold other shortcuts to the money needed to maintain their appearance and reputation. This provides 'the lads' with a practical sense of how the world 'really is' rather than the way it is depicted by teachers: a world in which people survive as best they can and where the sermons of teachers on honesty, reliability and industriousness count for little.

There is no possibility of dialogue between teachers and 'the lads'; even careers lessons, which would appear in their immediate interest, are rejected. The kind of work they eventually find is not a product of forethought or planning
but of chance.

In short, the official purpose of school is denied by 'the lads' use of it as a means of creative self-exploration; of establishing a sense of identity within working class culture, in which their physical prowess, their appearance and the ready availability of cash are important signifiers of what they have made of themselves.

What is it about the intersubjective and common meanings of working class culture which issues in the practical consciousness of rebellion which 'the lads' express? Central to this culture is the sense of the worth of manual work. To understand its relevance in this context a brief digression is required to discuss the concept of general abstract labour under capitalism, for it is this which underwrites manual labour.

I want to draw attention to the following features of general abstract labour under capitalism:

1. Production is for profit. In the private sphere, failure to make profit entails the closure of production.

2. What is produced is usually of little intrinsic relevance; it is the profit made which is paramount.

3. It is similarly of no concern what the objects produced are used for, whether they are necessities or luxuries.
4. The extraction of profit through the exploitation of labour is the essence of capitalism.

5. The inner logic of capitalism determines that not only the objects of production but the labour which makes it should be standardised. This ensures maximum flexibility so that capitalists may produce whatever they think will make profit.

6. In the production process time is of the essence, since it is the speed with which goods are produced which is paramount. Both the working day and tasks set for labour are segmented to promote production. The fragmentation of the day by time schedules ensures a disciplined and uniform response by the labour force to the demands of the assembly line. The fragmentation of work promotes simplicity in task and speed in execution.

Given these general characteristics of the labour process Willis points out that any intrinsic meaning is bled out of work under capitalism. A craftsperson's pride in a job well done is rendered meaningless by a process over which she/he has no control and in which his/her contribution is repetitious and minor. But since a working life cannot be without meaning manual work must be invested with worth. For Willis the principle of general abstract labour, which has emptied work of significance from the inside, is replaced by a patriarchy which "suffuses it with meaning" from the outside. 'Manual work', as the adjective describes it, is man's work: to do it is to gain
a sense of masculine pride and self-worth derived from the physical strength and prowess it requires. Conversely, in the working class lexicon mental work is effeminate. The school conformists, the 'ear'oles' who do mental work are accordingly 'sissy'; they do not have the physical and sexual 'machismo' of the 'lads'. The wages of those who do mental work are not earned in the physical confrontation with the 'real world' and therefore cannot be said to be won in the proper masculine mode.

It is these meanings associated with the exploitative relations of work and patriarchy which the lads pick up and bring to the school, through association with parents, the informal economy and girls. And they can validly apply these meanings to the school situation because it is similar in structure to the workplace. The relations of school are authoritarian, the school day is fragmented and 'driven' by the timetable, projects begin and end arbitrarily according to the dictates of the bell. And the purveyors of knowledge are solely concerned with the abstract concepts of mental work, which 'the lads' experience as impractical, irrelevant and effeminate. Their rejection of mental work stems then, from their wider cultural experiences which conflict with the hegemonic form and content of schooling under capitalism. But, Willis goes on to argue that 'the lads' disavowal of the ruling culture and the rewards it offers is not only a product of the valuations and meanings of working class culture but also the result of a partial penetration of its ideological form: for its promises are false.
The unintended and ironic consequences of 'the lads' rebellion and 'perceptiveness' is that they are impelled, through their moment of creative self-assertion, to embrace an imprisoning manual labour.

By this analysis Willis is able to describe how the objective class situation of 'the lads' is translated through the common and intersubjective meanings of the culture into a practical consciousness, which by its confrontation with the hegemonic culture, unintentionally reproduces objective class structures. To explain why this occurs, and in particular why 'the lads' are said to have partially penetrated the ideological nature of the hegemonic culture, we need to look at the underlying theory Willis draws on. The diagram on the next page lays out the theory in schematic form and I shall refer to it in my exposition.

*Willis' Explanation for the Counter-Culture*

I begin with the account of the hegemonic culture depicted on the right hand side of the diagram. Central to the school process is the notion of the educational exchange.

This is defined as follows:

"This idea (the educational exchange) concerns teaching as a fair exchange - most basically of knowledge for respect, of guidance for control. Since knowledge is the rarer commodity this gives the teacher his moral superiority. This is the dominant educational paradigm which stands outside particular teachers but enables them to exert control legitimately upon children. It is legitimated in general because it provides equivalents which can enter into other successive exchanges which are to the advantage of the individual. The most important chain of exchanges is, of course, that of knowledge for qualifications, qualified activity for high pay, and pay for goods and services. The educational is, therefore, the key to many other exchanges."


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<th>Working Class Counter Culture</th>
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The exchange is fundamentally one of commodities. Knowledge is viewed as a commodity which can be cashed in for qualifications, the latter for wealth and the status attendant upon it. In turn people can look forward to work which is more intrinsically rewarding, and to opportunities which they would not have without qualifications.

But this contract is only closed when people are also prepared to view themselves as a commodity. For the acquisition of qualifications is fundamentally a form of investment, one which finds its return in the labour market where credentialled labour can sell itself for a career, job security and good financial rewards.

In addition to viewing knowledge as a commodity, this exchange presupposes a certain set of values, opportunities for advancement and a particular view of rationality. The values presupposed are those associated with the work ethic: honesty, reliability, punctuality and respect for private property, for it is upon these that capitalism rests. The opportunities presupposed stem from the idea that it is possible for working class 'lads' to enter the portals of the middle class through educational achievement with all that entails in terms of status and wealth. The view of rationality presupposed is a means-ends view in which the ends are given and unquestionable. It is one derived from the Liberal view that human beings are possessive individuals with an unlimited capacity for acquisition (MacPherson 1962).
On the left hand side of the diagram is 'the lads' response. Rejecting the educational exchange, their primary goal is to get money: for them money is central to their acceptance in the counter-culture and their own self-definition. One of 'the lads' makes the point graphically when he says:

"(.....) after all, you can't live without bread, let's face it, fucking money is the spice of life, money is life. Without money, you'd fucking die. I mean there's nothing fucking round here to eat, you couldn't fucking eat trees, you couldn't eat bark".  

The money is used to buy the commodities with which the counter-culture is defined, fashionable clothes, cigarettes etc. In stressing the importance of money the counter-culture does not reject the values of the dominant or hegemonic culture. In pursuing their anti-authoritarian stance 'the lads' create a space in which the rejection of school work brings its own autonomy and independence. And in using others as objects, in their violence towards the ear'oles, girls and black kids, they gain in status. For their use of others as objects, indeed as commodities for their self-aggrandisement, is distinctive of the macho man in capitalist society. Their's is a guerilla warfare in which no prisoners are taken, the values of the hegemonic culture are taken to their ultimate conclusion; honesty, respect for property and persons, are treated with a contempt born of their wider cultural experience. For them the real world of capitalism is presented, undistorted by mystifications and rationalisations, as one of exploitation and acquisition.

However, in their rebellion 'the lads' also partially penetrate the educational ideology of the hegemonic culture.
The notion of partial penetration is central to Willis' account of the relationship of underlying structures to practical consciousness and it is worth pausing briefly to discuss its nature and significance.

The Concept of Partial Penetration

The partial penetration occurs at the level of practice and derives from 'the lads' group activity which is itself a part of working class culture. To understand the nature of partial penetrations we have to remind ourselves of the basis for the 'the lads' practical consciousness.

The insights of practical consciousness are generated by the material conditions of the culture. For example, the nature of employment for the working class is transitory, people are more or less casually hired and fired and previous work experience counts for very little. The basis for the casual treatment of manual workers lies in the nature of general abstract labour precisely because this form of labour requires neither knowledge or experience for its performance. This material fact of life is reflected in the view, held by 'the lads' that the kind of manual labour they will do is irrelevant. 'The lads' opinion of work is informed by what they see of daily working life and the experiences of it which have been recounted to them. The insights they glean about work are fragmentary because the material reality of work is refracted through the meanings and values of working class culture. It is through these meanings and values that they interpret the evidence of their daily experience. They do
not 'see' that work is determined by the nature of general
abstract labour but they do see the casual way people are
hired and fired and infer that the kind of work they will do
is of little importance.

Nevertheless their perception that the kind of work
they will do is irrelevant constitutes a basis for an
understanding on their part of general abstract labour. It
also issues in their rebellion at school since they reject
the official school ideology which suggests that work is
meaningful. The claim that work is meaningful is part of what
the school offers in the educational exchange, but by rejecting
this claim, Willis suggests, 'the lads' penetrate the school's
ideology. By association 'the lads' also penetrate the claim
that qualifications are worth having as a route to meaningful
work. In Britain, qualifications for 'lower ability' kids
are called Certificates of Secondary Education (CSEs). What
these qualifications do is to differentiate those who will
do manual labour from those who will do low grade clerical
work, but 'the lads' reject the opportunity to study for CSEs
because they realise that low grade clerical work (which is
also governed by the principles of general abstract labour),
is as meaningless as manual work.

In rejecting the ideological claim that CSEs are a
passport to meaningful work they also penetrate the equally
ideological claim that there is equality of opportunity.
While it is true some members of the working class have been
socially mobile, particularly in the post war boom years, that
is not the experience of the class as a whole. Capitalism by definition, and in practice, requires a working class. The notion that if everyone had equality of opportunity and if they all achieved equally they would get equal rewards is simply false. There are not enough slots at the 'top of the pyramid' for everyone. In their rejection of the opportunities afforded for gaining qualifications 'the lads' implicitly recognise this. Were 'the lads' environment one characterised by the experience of social mobility, their attitude might be different. As it is they belong to a stable working class in which there is little belief and less prospect of mobility. The penetration is one predicated on fact.

What, then, makes these partial penetrations? Why doesn't the counter-culture 'see through' completely the ideology of the dominant culture?

Willis suggests there are three limitations which serve to blunt the perceptions of the working class and turn the insights it has back upon itself. First, there are racial and sexual divisions within the working class. The racial division of the working class, in which blacks constitute an underclass more heavily exploited than the white working class, provides "an ideological object for feelings about the degeneracy of others and the superiority of the self (thus reinforcing the dominant ideological terms which make the comparison possible)".⁷ Divided within itself the working class reproduces the exploitation it is subject to and fails to capitalise on the possibility for understanding the penetrations offer.
Similarly, the sexual divisions within the working class allow its males to exaggerate the worth of manual work at the expense of the exploitation of women:

"A member of the school counter-culture can only believe in the effeminacy of white collar and office work so long as wives, girlfriends and mothers are regarded as restricted, inferior and incapable of certain things." 8

It is the equation of mental labour and effeminacy which generates the third limitation, for with the inversion of the prestige of mental over manual labour 'the lads' reject the possibility of reflecting upon and theorising their experiences. It is through theory that their practical penetrations of the culture could be brought to consciousness, illuminated and made consistent. In turn, theory may feed back into a practice now informed by a more complete understanding of the nature of capitalism.

The notions of theory, practice, culture and ideology are fundamental to Willis' explanation. As they are consistent with the position taken in this thesis, some discussion of them will clarify the points I made in Chapter 6 where I criticised the work of Harris concerning the dominant and oppositional cultures and the possibility of resistance.

The notion of 'lived ideology' used by Althusser and Harris is close to the Gramscian notion of hegemony used by Willis. The merit of these notions is that they draw attention to the Materialist basis of ideology, which is practice. Williams has provided a very clear account of what is meant by Hegemony:
"It is a whole body of practices and expectations, over the whole of living: our senses and assignments of energy, our shaping perceptions of ourselves and our world. It is a lived system of meanings and values - constitutive and constituting - which as they are experienced as practices appear as reciprocally confirming. It thus constitutes a sense of reality for most people in the society, a sense of absolute because experienced reality beyond which it is very difficult for most members of the society to move, in most areas of their lives. It is, that is to say, in the strongest sense a 'culture', but a culture which has also to be seen as the lived dominance and subordination of particular classes."9

The hegemonic practices of schools are predicated on the division between mental and manual labour and on the 'meritocratic' principles of selection. Central to the process of selection is the educational exchange. In return for the good behaviour of its pupils the school offers the knowledge necessary for mental labour. Those who accept the exchange are selected for this kind of work. But according to Willis, knowledge in this exchange has lost all intrinsic value. It is merely a currency for purchasing the status and security that mental work confers. In this respect Willis argues Capitalism has a similar effect on both work and knowledge; they have both been bled of intrinsic worth. In the case of knowledge this is because it has been reduced to a means for material acquisition.

However, those who reject the educational exchange, like 'the lads', do not do so out of any Romantic impulse, they do not oppose the practices of material acquisition nor the values they presuppose. The irony of their rebellion lies in the fact that they have simply taken these values to their logical conclusion. For they too are concerned with acquisition
and status but they are not prepared to play by the rules of the game because through their partial penetrations they have some awareness that the rules have been rigged. Instead they reject the rules but hold on to the implicit meaning in the educational exchange - life is about acquisition and status.

In an important sense then, 'the lads' opposition is still part of what Williams called "lived domination". In this respect those such as Althusser and Harris are right to stress the pervasiveness of lived ideologies. But they also overlook that aspect of material reality which allows for opposition and penetration of the hegemonic ideology. In 'the lads' case it is their understanding of general abstract labour, as it presents itself in everyday life, which is the basis for their opposition to, and penetration of, the school's ideology.

We should not, however, exaggerate the significance of this opposition for social change; 'the lads' rebellion is grounded in the practices and values of the hegemonic culture, an unpromising basis for social change to something better. Nevertheless, as Willis points out, it is only the working class which has an objective interest in social change. As such, the resistance put up on the shop floor and in the schools may not presage much of a possibility for change but it remains the only possibility there is.

The account Willis offers here of practice, opposition and penetration makes certain epistemological assumptions and
I shall point these out, briefly, to show how they are consistent with the Realist position I have been developing. The practices of the hegemonic culture are overlaid by ideologies which mystify and legitimate them. The educational exchange serves to perpetuate the division between mental and manual labour and in a working class school, such as that studied by Willis, it serves to make manual labourers out of working class kids. But in order to do so the educational exchange must be legitimated, it must appear to be a fair exchange. For this reason the school stresses the meaningful nature of work, the necessity of credentials for doing such work, and the equal chance everyone has to attain credentials. Epistemologically this account of the relationship of theory to practice is only possible if a distinction is made between appearance and reality. And such a distinction can be made because practices are theory laden. What people do in practice is not known incorrigibly any more than observations in general present themselves as an immediate source of knowledge. Since practices are open to different interpretations it is possible to prise apart the ideological rationalisations from the reality of the practices. But it is precisely the material limitations which give the lie to the ideology and allow the possibility of an alternative conceptualisation of what is going on.

Practices are intimately tied to their conceptualisation and to the dominance systems within society. It is worth emphasising the connections between these relationships because they represent quite a different account from that of the received Logical Positivist view of theory and practice in
education. In that view practice is given; what occurs is grasped immediately through observation, and theory is merely an instrument for improving given practices. Ideologically and educationally this conception imposes an unwarranted and damaging constraint, for teachers must necessarily work within the confines of existing institutionalised practices.

**Criticism of 'Learning to Labour' and Possible Developments**

One methodological criticism which has been made of Willis is that his data has not been used to generate his theory, because his observations cannot support the theory he uses to explain them. Consequently, it is argued that he merely uses the ethnographic data to provide confirmation for the theory he is predisposed to. There is a sense in which I think this criticism is correct but does not carry the intended force, and in another sense I think it is mistaken. I consider it is plausible to assume the Willis went into the school he studied seeking to explain the concrete phenomena of education in terms of the tendency of classes to produce class cultures. But as I pointed out in Chapter 5 it is not possible to read off *a priori* what happens in the concrete from the identification of a tendency. In this respect his theory about what happens in the concrete had to be derived from his data. The data, after all, could have been such that he was unable to identify 'the lads' behaviour as part of working class culture. In this case not only would he have been unable to explain what happened in the concrete in the way he does, but doubt would also have been thrown on the middle range theories which are presupposed by the explanation.
In the case of a theory such as Marxism, explanations generated by retrodiction will be guided not only by regulative principles but also by substantive middle range theories. It is for this reason that one might misleadingly think Willis has deduced his explanation from them, but for the reasons I have given, I do not believe this to be the case.

A second objection which has been raised is that Willis does not establish whether the categories of 'lads' or 'ear'oles' are an accurate description of pupils' orientation with the school (Turner 1979). This is because Willis appears to take 'the lads' description of pupils' orientations as accurate without any attempt at independent validation. The distinction between 'the lads' and 'the ear'oles' also produces a number of substantive problems and puzzles. On the basis of 'the lads' behaviour Willis purports to explain why working class kids get working class jobs. But 'the lads' are in a minority, and their behaviour a-typical. As such, Willis could be criticised for generalising from what is extraordinary about working class adolescents' behaviour rather than from what is ordinary. Moreover, if manual work is so prized in working class culture how and why do the conformists cope with doing sissy work both at school and presumably subsequently, since many will be destined for low-level clerical work. Furthermore, there is a sense in which the notion of resistance or rebellion appears exaggerated, since 'the lads' and their ilk in other schools are not sufficient in number to fill all the manual jobs going (at least in times of full employment), some of the 'ear'oles' must also end up in manual jobs. As such it
cannot be resistance alone which explains why working class
kids get working class jobs.

The reason I think these questions arise is because
Willis tends to personify the counter-culture in 'the lads'
rather than see it as a set of options and resources open
to any working class adolescent at any time in their school
career. In order to explore this hypothesis I shall draw on
some ideas which arose out of a participant observation study
I undertook in an inner city school in London in the winter
of 1981-82.¹⁰

While it may well be that every school has its hard
core of kids who are members of the counter-culture, my obser-
vations were that the kids I taught were culturally ambiguous
with respect to the possibilities of the working class counter-
culture and the aims and goals of the hegemonic culture.
This meant that at times their classroom behaviour was conform-
ist (though never without an initial struggle), and other
times oppositional. Since opposition was frequent, especially
in the form of what could be called scholastic Luddism - the
breaking of pens and pencils, and the tearing of books - I
wondered what point they saw in coming to school. The obvious
conjecture was that since there was massive unemployment in
the area, the educational exchange had for them broken down.
Since legally they had to come to school they were simply
filling in time in the most entertaining way possible. In
fact, only a few kids took this line, most expected to get
work. Moreover, they were looking for jobs which required
qualifications. Their attitude was contradictory and puzzling, for when I pointed out the apparent inconsistency between their lack of work and the expectation that they would pass the exams necessary for the jobs they wanted to take up, they shrugged it off and nothing subsequently changed.

I remained puzzled, and the guerrilla warfare continued until I took a 'hard line' and tried to force them to work. There followed a series of exchanges of the following kind: most of the kids would knuckle under and begin to do what I wanted, albeit in desultory fashion, but there would always be one or two who would not. Since I had to be consistent, I gave them 'the hard word'. A shouting match ensued and invariably I would be called 'inexperienced' by the kids. In reply I asked them what they expected to do when they left school, they would answer by citing a trade; I would point out that they would need qualifications and they had better start working, to which the reply came, "I'll work on the day".

Both the charge of inexperience and the idea that they would work on the day were perplexing. I was, after all, doing what any teacher does which is to hold out the offer of the educational exchange. But while the aim of the exchange was accepted, the conditions which required its satisfaction, my offer of knowledge for their obedience and work, was not. What was going wrong?

Two things: firstly, I had not negotiated with the
kids but simply told them what to do, this aroused the charge of inexpérience since it was an affront to their sense of self-worth; they always forced teachers to negotiate and it had become part of the 'house'rules. Secondly, their understanding of what the exchange involved was imperfect. There is an assumption in Willis' study that the 'ear'oles conform because they understand and accept the educational exchange. This then creates two clear groups: those, who accept the educational exchange and those who do not. But in fact what the lads I was teaching did not understand was that in order to pass the exams, they had to work continuously throughout the year. The reason why I was told they would work on the day, was because they quite sincerely believed that they only had to work on the day of the exam. Of course, to anyone practiced in the certification game the idea is bizarre, so I sought corroborating evidence. This came from the attendance officers who pointed out that it was not unusual for kids who had truanted continuously, to turn up for the exam.¹¹

Further confirmation came from discussing with other teachers the kids' reaction to the marks they were given for their work. Their answers bore out my own experience, which was that their reactions to the marks they got were quite unrelated to their work. Kids who got bad marks would be furious, even though the work was bad and they had only spent five instead of forty minutes on it. Bad marks they thought, were the result of the teacher's caprice - not an assessment of their work, precisely because they did not understand what level of work was required of them.
It would follow that the business of mental work for these kids was a nightmare. They lacked confidence in attempting to do anything beyond the repetitious. Stepping into the world of the abstract was a minefield in which they were punished for taking a false step without knowing why. Under these conditions the counter-culture was a bastion from which they could negotiate to maintain autonomy and self-respect. For the mirror held up to them by the dominant culture was one of ineptitude, inexperience and lack of confidence. Hence the intermittent warfare in which yesterdays 'ear'ole became today's 'lad'.

If the interpretation I have offered is on the right lines it gives plausibility to Willis' general explanation of how working class kids get working class jobs. In particular my interpretation accounts for the puzzles raised by Willis' tendency to personify the counter-culture in 'the lads'. Once we see that for the majority either the aims and values of the dominant class or the oppositional working class culture can be taken up according to the practical demands made on them during the school day, then we can see how working class kids will oscillate between the two. On the one hand they will attempt mental work for the increasingly thin promises of reward it offers, on the other there is a set of working class values which, they will embrace because to some extent, it inures them to failure.

On this interpretation Turner's criticism that Willis does not adequately establish the pupils' orientation does
not cut ice because it is largely irrelevant as to which kids belong to the culture and which do not - the counter-culture is not the property or preserve of a few individuals. In addition, this interpretation removes the puzzles about the behaviour of the 'ear'oles', for they are divided between the values and opportunities presented by mental and manual labour; they may value manual work but they also aspire to the aims set by the ruling culture. Similarly 'the lads' behaviour ceases to be a-typical, in the sense that it is in a discrete category apart from other categories of working class kids' behaviour. Rather it is simply a more extreme form in that they constantly utilise a set of resources available to and used by most working class kids in their school careers. Why these kids get working class jobs is not, then, entirely because they resist, rather it is because some are caught between two cultures. The result is they do not clearly understand the rules of the educational exchange, and are thereby likely to fail.

The particular interpretation offered does not turn solely on the one example of the school in which I worked. There, clearly, the educational exchange had broken down totally, but I would suggest that this merely presents an extreme form of what is the norm, that working class kids oscillate between accepting and rejecting the exchange. This conjecture can only be confirmed or disconfirmed by further ethnographic study.
If, however, Willis' explanation is on the right lines, and I believe it is, the consequences of the meeting of hegemonic and oppositional cultures is disastrous; the 'lads' leave without any critical understanding of the system which oppresses them and the teacher's leave at the day's end knowing they have fallen far short of the educational aims to which they aspire. But if the 'lads' do not penetrate the real relations of their existence, neither do the teachers, for their activities are also masked by ideology.

As Willis observes, teachers engage in an educational exchange which is embedded in the ideology of equality of opportunity. For them the ideology is doubly supportive: it legitimizes their privileges as semi-professionals because their educational qualifications are seen to have been won in open competition. It also legitimates their position as part of the new middle class, which owes its position, fundamentally, to educational qualifications. For many teachers the belief in meritocracy would accord with their own experience, since they would have been recruited from the ranks of the working class during the period of rapid educational expansion in the sixties.

However, the Humanist wing of Liberal thought has emphasised the virtues of education for personal development and teachers have typically held the ideology of equality of opportunity in conjunction with a theory which both defines what constitutes education and explains how it can issue in the aims of personal development and autonomy. One such theory
is Liberal-Rationalism and it is to an examination of this theory I now turn.

**Liberal-Rationalism as an Ideological Theory of Education**

The theory of Liberal-Rationalism is closely associated with the work of the 'London School' of philosophers of education, and in particular with that of Professors Dearden, Hirst and Peters. It is upon their work I shall primarily draw in this discussion. In what follows I shall argue that Liberal-Rationalism retains strong ideological elements which produce three consequences: (1) it is supportive of the precarious position of teachers as semi-professionals, (2) it masks the real relations of capitalism and (3) it fails to show how, through education, personal autonomy can be achieved.

I begin by elaborating on the Liberal-Rationalist notion of autonomy and then discuss the kind of education it maintains can contribute to the development of autonomy. The two major writers on autonomy are Dearden (1972, 1975) and Peters (1974a). Their accounts of the necessary conditions of autonomy have a number of general features in common. In particular, they both stress that actions which are to be described as autonomous must be the product of a particular form of rational deliberation. Moreover for both philosophers, the reasons for an action must in a relevant sense be those of the person who has made the decision to act: the person may not mimic or follow the actions of another uncritically. Rather than discuss both accounts it is adequate for my purposes to deal with Dearden's (1972) account, for what is crucial to my
subsequent argument is the view of rationality taken, and on this they are in broad agreement.

*The Notion of Autonomy*

For Dearden, in education for autonomy:

"what is being aimed at is the development of the kind of person whose thought and action in important areas of his life are to be explained by reference to his own choices, decisions, reflections, deliberations - in short, his own activity of mind." 

This does not mean that a person's deliberations must be original in every respect but where someone's ideas or reasons for action are not original, "they must have been actively worked over and so incorporated in his own understanding". This is to safeguard against a person uncritically accepting someone else's ideas. An autonomous person, then, acts according to beliefs upon which they have deliberated and made their own. But the deliberation must be rational, it cannot be on the basis of impulse or whim, for that would imply that a person is not fully in control of their actions. The notion of rationality, then, is central to Dearden's account and we should see what it involves.

Central to Liberal-Rationalism's theory of rationality is Hirst's thesis on the forms of knowledge, and to this Dearden defers. Since it is essential to an understanding of the education required for autonomy I shall briefly elaborate on Hirst's thesis.

Hirst argues that our experience of the world has become structured according to a number of what he terms forms of
knowledge, which are public, objective and necessary in order to make sense of the world:

"To acquire knowledge is to become aware of experience as structured, organised and made meaningful in some quite specific way, and the varieties of human knowledge constitute the highly developed forms in which man has found this possible. To acquire knowledge is to learn to see, to experience the world in a way otherwise unknown, and thereby come to have a mind in a fuller sense. It is not that the mind is some kind of organ or muscle with its own inbuilt forms of operation .... It is rather that to have a mind basically involves coming to have experience articulated by means of various conceptual schemata." 14

Rationality inheres in being able to see the world through the differentiated structures of these forms, for they determine, according to criteria Hirst identifies, the validity by which claims to knowledge can be assessed. Hirst suggests there are four distinguishing criteria by which each form of knowledge can be identified. These are, firstly, the central concepts which are distinctive of each form; examples he cites are 'gravity' and hydrogen in science, God, sin and predestination in religion, and ought, good and wrong in moral knowledge. Secondly, these and other concepts form a network of possible relations which result in each form having a distinctive logical structure. Thirdly, each form has distinctive expressions which may be testable against experience by the truth criteria relevant to each form. Fourthly, the forms have distinctive methods for exploring and testing their respective expressions.

By these criteria Hirst distinguishes seven forms of knowledge, philosophy, physical science, human science, history, mathematics, morals, religion and literature and the fine arts.
It will be apparent that in order to grasp the criteria Hirst claims are distinctive, of the forms requires a considerable amount of work. Indeed education for Hirst, as for Liberal-Rationalism in general, is defined as initiation into these public forms of knowledge. It is assumed by these theorists that children are born without minds, in Peters' unhappy phrase they are "barbarians" before the gates of civilisation: to be initiated into the forms of knowledge is, as Hirst says in the previous quote, to come to have a mind in a fuller sense. The mind then is an achievement concerning the ability to distinguish certain logical relations between and within the forms, where the ability to do this is constitutive of rationality. The initiation is conducted by a master practitioner who is on the inside of the forms, for Hirst says that acquiring knowledge of the forms is not something which can be done through solitary study.

Consonant with this view of education as initiation, Hirst and Peters (1970) developed an analysis of teaching, which, they argue, has to conform to the following criteria: (1) teaching must be conducted to bring about learning, (2) teachers must indicate or exhibit what is to be learned, (3) teachers must do this in a way which is intelligible to, and within the capacities of learners. It will be clear these conditions dovetail nicely into the initiation model, especially condition (2), since the teacher who is on the inside of a form must bring the child to see what its distinctive criteria are. If, therefore, the child is to be rational it cannot choose to study what is of interest to it, since it may not
choose that which will enable it to understand the forms. The business of education cannot be left to accident and for this reason the teacher must determine what is to be learned.

Once, however, people have been successfully initiated into the forms they are in a position to make rational choices and decisions in accordance with the demands for autonomous being. In Dearden's words:

"These forms of understanding would be important for autonomy, and even partially constitutive of it, in at least two ways. Firstly, in terms of content they contribute much to the background perspective from which choices, decisions, opinions and so on are made or formed in our society ..... Secondly, these basic 'forms' supply the general criteria in terms of which the validity of various claims is to be assessed. If these claims are to be assessed for oneself, or the authority of others to make such claims is to be assessed, then these criteria provide the relevant logical backbone to such autonomy."\(^{15}\)

This then completes the sketch of Liberal-Rationalism's account of how an education written out in terms of initiation into the forms can develop the rationality necessary for autonomy. I shall now argue that this view of education presupposes the educational institutions by which the mental/manual distinction is maintained.

*The Institutions Presupposed by Liberal-Rationalism*

We should begin by noticing that the forms of knowledge doctrine regards itself as epistemically privileged; it purports to lay down the epistemic categories by which cognitively meaningful, and hence intelligible, statements are made, and by which we come to know the world. While it is true that Hirst equivocates on the precise status of the forms\(^{16}\), he
does say:

"It would seem logically impossible to conceive of the growth of knowledge, either as a public deposit or as a personal development, outside this framework." 17

The forms then, are epistemically neutral and logically prior to particular substantive theories about the world. But in order to secure this epistemic neutrality in educational practice, Liberal-Rationalism assumes the state as guarantor of educational autonomy. This ensures the freedom of teachers to initiate children into the forms without threat of political interference or indoctrination. Hirst and Peters view the state as an arbitrator above sectional interest which by implication provides the conditions which guarantee educational autonomy. They regard the state as:

"an institution with many purposes - the provision of security, the protection of rights, arbitration between conflicting interests and the maintenance of minimum standards of welfare." 18

But of course as I argued in Chapter 7, the state is not neutral with respect to capital accumulation. One consequence of this is that it necessarily produces an ideology of neutrality to mask its partisan nature. It follows that the idea of the state as guarantor of educational autonomy and neutrality is also ideological. In particular the state enforces the mental/manual distinction central to capitalism, and it will come as no surprise therefore that Liberal-Rationalism reproduces this distinction in its theory.

It will be recalled from the previous chapter that there are two aspects to the division between mental and manual labour: on the one hand it divides those who have technical
knowledge of the productive process from those who do not, and on the other it divides those who have decision-making power within a productive enterprise from those who do not. Since manual labourers have neither technical knowledge nor the relevant knowledge and skills to make policy decisions they are powerless with respect to the organisation of their working life and in addition their work is commonly devoid of intellectual content.

Liberal-Rationalism reproduces this division in the first instance by distinguishing between education and training. Training concerns the learning of skills, while in contrast, education is concerned with the development of rationality. It is the latter which is the primary task of schools and of teachers. When applied to the relationship between education and work the distinction between education and training replicates the mental/manual division. This is brought out by Peters when he says:

"the instrumental aspects of what goes on in schools and university (vocational training) may have to be stressed. But anyone who reflects must ask questions about the point of keeping the wheels of industry turning. And the answer is not simply for 'survival' or living - whatever that means. It is necessary for the maintenance and extension of civilised life whose distinctive outlook and activities are those passed on in schools and universities." 19 (my parentheses)

This quote requires comment in a number of respects. Firstly, Peters assumes that work is not distinctive of civilised life (unless it is that which goes on in schools and universities). Secondly, it is education which is equated with civilised living where the latter is regarded as the point to life.
Thirdly, this dichotomy between education and work can only be sustained if a rather extreme version of the mental/manual division is assumed. This is because Peters apparently wants to disassociate any aspect of work from what is considered educational. As such it is not only manual labour, but all forms of work, which are non-educative and not part of a civilised life. There is a sense in which this view follows from an account of rationality such as that embodied in the forms of knowledge thesis.²⁰ For, work under capitalism is not only characterised by a distinction between the mental and the manual, but is also highly specialised irrespective of whether it is mental or manual work. But according to the forms of knowledge thesis, rationality is developed through initiation into a wide-ranging curriculum which encompasses the seven forms. However, since very little work is likely to be related, even tenuously, to the forms of knowledge it follows that work cannot be educational. It also follows that work is not concerned with the development of rationality and thereby civilised living.

Education then, is a highly specialised activity and it requires teachers whose primary task is the development of rationality. Teachers are epistemically privileged people because they have undergone initiation into the forms of knowledge. As such they have a rational understanding of the world and are thereby qualified to initiate others. But because education is such a specialised activity it requires a specialised institutional structure, which not surprisingly, approximates closely to current educational institutions in
three respects. Firstly, schools are physically removed from other social organisations, especially those of work. This represents a physical separation between education and work which endorses the mental/manual division. A separation clearly required by Liberal/Rationalism because the process of education cannot be considered as related to work in any way. In fact, according to Liberal-Rationalism education, is also separated from what goes on in the home. The separation between school and home is achieved by a distinction this theory makes between education and socialisation. Socialisation, which in our society is primarily the responsibility of the mother, is concerned with inculcating the relevant norms and rules of society and not with the development of rationality.  

Secondly, within schools Liberal-Rationalism endorses the mental/manual division by making a distinction between vocational training and education. The consequence is that working class kids, who will leave school early, do vocational courses which provide some minimal technical knowledge but not the means by which they can critically reflect upon the kind of work they will do. In contrast, middle class kids are channeled into 'intellectual' subjects, which provide them with the credentials for mental work.

Thirdly, Liberal-Rationalism endorses the present relationship between teacher and taught. This is because according to this theory, the teacher as an epistemically privileged person is an authority concerning the forms of knowledge while kids are considered ignorant. Consequently
learning must be strongly teacher directed. Moreover, it is worth pointing out that the strongly intellectual bias to the Liberal-Rationalist curriculum will favour those from middle class backgrounds precisely because, as I remarked in the previous chapter, the middle class culture in which these kids grow up is strongly oriented toward the understanding and manipulation of abstract symbol systems.

In sum, Liberal-Rationalism incorporates a radical version of mental/manual division within its theory and it thereby endorses the present school organisation which systematically discriminates against the working class. In addition, because it takes the mental/manual division as given, and also accepts the ideological view of the state as neutral, it both obscures and legitimates the real relations of capitalism.

Now I believe that the ideological roots of Liberal-Rationalism lie in the separation of theory and practice presupposed by its theory of rationality. Clearly, Liberal-Rationalism's account of rationality is central to the distinction made between work and education, and is the dominant influence in determining the kind of institutional form education should take. If it can be shown that this theory is untenable; that it merely reifies the distinction between theory and practice, presupposed by the division between mental and manual labour, then it would also follow that it cannot provide an adequate account of the rationality required for autonomous action.
I propose to develop this argument with some caution, because Hirst has never made clear what the forms of knowledge thesis entails in the respects I am concerned with. What I can do is point out where, it seems to me, the separation of theory and practice occurs; and then offer an alternative account which shows theory and practice, rationalility and autonomy to be closely related. I make these points exclusively with reference to what is required for a critical understanding of the social world. This choice is not arbitrary because I take it that one necessary condition for autonomy is that people can reflect critically upon their social circumstances.

*Rationality, Theory and Practice*

For Hirst, rationality inhere in being able to grasp the logical criteria distinctive of the forms of knowledge. He says:

"What is being sought is, first, sufficient immersion in the concepts, logic and criteria of the discipline for a person to come to know the distinctive way in which it 'works'."22

This is in order to provide the relevant structure to people's experience so that they can come to view the world rationally. What is required for this is a general understanding of the various forms of knowledge, rather than a detailed understanding. Hirst says it is:

"Not the ability to work out in minute particulars all the details that can in fact be discerned. It is the ability to recognise empirical assertions or aesthetic judgements for what they are, and know the kind of considerations on which their validity will depend, that matters".23

The model Hirst uses to convey what is meant by this general understanding is that of critical literary appreciation.
In this model it is not, for example, through writing a poem or novel that we come to understand a particular form of knowledge. Rather it is the ability to appreciate the good poem from the bad which is important. Consequently part of the process of initiation into the forms involves studying the major achievements or paradigm cases of a particular area to see why they are highly regarded. Now Hirst wants to distinguish a general critical appreciation of the various forms from specialist study within a form. A general critical appreciation is necessary for the development of rationality, whereas specialist study is undertaken to advance knowledge within a particular form.

It will be clear from the general tenor of Hirst's view that practice is not necessary for a general critical appreciation of the forms. However, Hirst equivocates on the precise role of practice:

"This is not to assert that 'critical' appreciation in any form of knowledge can be adequately achieved without some development of the understanding of the specialist or technician. Nor is it to imply that this understanding in the sciences, the arts or moral issues can be had without participation in many relevant creative and practical pursuits .... But it is to say that the aim of the study of a discipline in liberal education is not that of its study in a specialist or technical course."

There is the suggestion in this passage that Hirst is hedging his bets, for now he claims that some forms of practice might be required for rational understanding. The reason why I think Hirst fails to make clear the relationship between theory and practice is that he starts from the wrong premisses. It is not through the forms of knowledge that
we come to get a rational purchase on the world. Rather, if the arguments I have presented in this thesis are correct, it is through specific theories that we come to understand the world. Now in this latter view rationality inheres in being able to choose the best theory out of a series of competing theories. And by the same token, to act rationally is to act according to the best theory.

In this view practice is related to theory in two respects. Firstly, theories have unique world-views, therefore where a theory takes human nature as its object a theory will view people under a particular description. If we are to act according to the best theory then it follows that we will view people under the description given by the best theory and treat them in a way consistent with it. For example, in the case of 'the lads' we may view their behaviour as irresponsible and irrational through the Liberal lens. For they have rejected their chance to improve their lot in life through education and moreover their behaviour is consistently anti-social. However, in a radical view such as that of Willis' 'the lads' may be anti-social but they are not irrational because they have some understanding that the promises of reward for educational success are false. But if we view 'the lads' as irrational and anti-social we will treat them on that basis. An extreme option would be to refer them to the welfare service or to an educational psychologist, but a more likely reaction is that we simply dismiss 'the lads' as beyond understanding. From the radical perspective 'the lads' behaviour is at least comprehensible and that at least
allows the possibility of communication. However, I do not think that even for a good teacher dialogue with 'the lads' would be easy.

There is a further connection between theory and practice; as I suggested in Chapter 5, it is through practice that we test a theory. The only way in which we can test the limits to the possibilities of action which a theory postulates, is through action. Such action does not have to be undertaken personally, though I have no doubt that personal experience provides a cutting edge to the insights a theory offers. However, what is necessary is that there are examples of actions which constitute tests for the theory. To illustrate the point, consider the possibility of a form of evaluation in education which is primarily concerned to assess a person relative to their past performance; in the view I have developed this kind of evaluation is simply not possible under capitalism. One way of testing the theory would be to attempt to bring about this kind of change in evaluation. While it is through struggles of this kind that we may transcend the limits imposed on action, my view is that a change in educational evaluation would only be possible if a fundamental change in social structure was occurring.

There are then, two major points of contrast concerning the view of the connections between rationality, theory and practice I have sketched and Hirst's view. Firstly, rational understanding is not a question of understanding the logical criteria distinctive of the forms of knowledge.
Rather it involves being able to choose the best theory. In part this is a question of applying the relevant criteria for theory choice, but in addition it also involves the ability to be able to understand a particular world-view. Now this latter point constitutes a significant departure from Hirst's account, because to be rational involves more than being able to make the relevant logical distinctions. It involves coming to see the world from a particular standpoint. It is true that Hirst also talks about coming to see the world through a particular disciplinary perspective, but just as he never spells out the connection between theory and practice, so he does not say what it is to see the world from such a perspective. Nor indeed, could he, because we do not see the world from disciplinary perspectives but through particular theoretical world-views. Furthermore there is something politically innocuous about the idea of coming to see the world from a disciplinary perspective. Whereas coming to see the world from the perspective of a particular theory, say that of Marxism or Feminism may pose a threat to prevailing political and ideological beliefs. But by the same token coming to see the world from the perspective of theories of this kind may be very difficult precisely because prevailing ideologies obscure the world-view these theories present. To be rational, then, involves more than understanding certain criteria for theory choice; it also involves being able to grasp a world-view. I am not suggesting that theories like those of Marxism or Feminism are necessarily the ones a person would rationally espouse; there is always the possibility there may be better competitor theories, I am, however,
suggesting that the onus on the rational person is to make a serious attempt to grasp the perspectives which inform these theories. Given these theories run counter to prevailing ideologies that may be very hard to do.\textsuperscript{26} Moreover, the injunction that a rational person should at least attempt to grasp the world-views of these theories may constitute a threat to the established order - precisely because they may be the most progressive of theories which seek to explain the social world.

The second point of contrast between Hirst's view of rationality, theory and practice and mine turns on the role of practice. Here I have suggested practice is related to theory in two respects, firstly, to act rationally involves acting according to the descriptions furnished by a world view. This means treating people according to that world view. Secondly, it is through practice that theories are tested.

Hirst's account of rationality fails to make these connections or indeed any clear connections between theory and practice. Consequently it supports the division between theory and practice, and between mental and manual labour which I have suggested are implicit in Liberal-Rationalism.

However, if Hirst's account of rationality is in error it follows that any theory of autonomy predicated on it will also fail. The upshot is that Liberal-Rationalism cannot provide a theory of education which will guide the development
of personal autonomy. And this is because the theory is ideologically contaminated to the core.

I have discussed the issues concerning rationality, theory and practice at some length for two reasons. Firstly, to establish the point that a theory of personal autonomy cannot be predicated on Hirst's account of rationality. As a consequence, the path is now open to develop an alternative account of educational theory and practice promotive of autonomy which does not have the consequence of endorsing an education system in which working class kids consistently lose out. Secondly, the critique of Hirst's theory of rationality is strategically important because so long as it remained an acceptable view, the claim that Liberal-Rationalism is ideological counts for very little. For if Hirst's theory of rationality is acceptable, and if we are concerned to educate for personal autonomy, then we would have to persist with Liberal-Rationalism regardless of the consequences for working class kids. For the reasons I have given I believe this theory of rationality to be wrong. In the next chapter I shall provide some indication of an alternative view of educational theory and practice aimed at the development of personal autonomy.

I shall now summarise the grounds for believing Liberal-Rationalism to be ideological. It will be recalled from Chapter 6, that in order to claim a theory as ideological we first have to show that it is in the interests of a particular group and that it obscures the real relations of capitalism.
Liberal-Rationalism conforms to both these criteria. To begin with I think there is a good case for suggesting this theory is supportive of teachers semi-professional status.27

According to Liberal-Rationalism teachers are regarded as epistemically privileged persons who have attained this privilege through a long period of initiation. In this respect they have a specialised kind of knowledge which is not readily accessible to the lay-person. But this knowledge is also essential to the development of autonomy. Teachers, in short, have a specialised kind of knowledge which is of paramount importance to society; on this basis there would be good grounds for arguing that their epistemic privilege should be translated into the social privilege of professionals.

Liberal-Rationalism also incorporates certain features of capitalist ideology and presupposes an educational system which endorses the mental/manual division. The consequence is that Liberal-Rationalism obscures the real relations that obtain under capitalism and it legitimates a system of education which discriminates against the working class. Consequently this theory precludes the possibility of fulfilling its stated aim of educating for the development of personal autonomy.

By being able to explain why the categories and concepts used by Liberal-Rationalism are ideological28, and by sketching an alternative account of rationality, theory, practice and autonomy, I have fulfilled the criteria laid down in Chapter 6 by which theory can be designated ideological.29 In the
next chapter I shall elaborate on the implications for education of the account of theory and practice I have sketched here.

Summary

In this chapter I have discussed the relationship of class consciousness to education. I began by discussing Willis' account of the unintended consequences of an educational system in which the hegemonic culture is confronted by an oppositional working class culture. There are two particularly noteworthy features of Willis' account; it is an analysis of education as a concrete phenomenon in which the tendencies for different classes to produce different class cultures, ideologies and consciousness result in conflict within the school. Moreover, in his account the school, as the site of conflict, is predicated on the mental/manual division distinctive of capitalism. I then turned to a discussion of one ideology, Liberal-Rationalism, which is supportive of teachers' semi-professional status. I have shown how its incorporation of a division between theory and practice endorses the mental/manual division in schools. Consequently, the theory cannot provide an adequate guide to educational practice concerned with the development of autonomy.

This completes my account of the school-society relationship. In Chapter 1, I suggested that any adequate account of this relationship has to satisfy three criteria. Firstly, it must explain the relationship of the organisation and structure of schools to the wider society. I have done this
by showing how schools are organised, ostensibly, according to meritocratic principles which are governed by the demands of the division, engendered by capitalism, between mental and manual labour. Secondly, any account of the school-society relationship must be able to explain the relationship between the school curriculum and the wider society. In this case I developed a theory of ideology by which elements of the school curriculum could be identified as ideological. I then undertook a study of one theory, Liberal-Rationalism, which has assumed prominence in the education of teachers. Here, I explained why the theory is ideological. Thirdly, the account of the school-society relationship has to explain the impact of the school organisation, structure and curriculum on educational outcomes. I have satisfied this criterion by showing how educational outcomes are the product of various tendencies under late capitalism. In particular, that the systematic discrimination against working class kids is a consequence of the mental/manual division as it is reproduced in schools in conjunction with the consciousness generated by various class cultures and ideologies.
Notes and References to Chapter Eight


5. Willis, (1977), p64.


10. This study was done over a three month period at the school where I had worked for three years between 1974-1977. The ideas arising out of it are conjectures which would require more systematic study for their validation. I use them by way of suggesting some possible solutions to problems posed by Willis' account.

11. The kids which did sit exams had, for the most part no clear idea of what was required of them. They would talk, argue and look at each others' manuscripts whenever they could. It has been suggested to me that the reason long term truants turned up for the exams was that they thought they would be able to negotiate a pass in the exam since every other aspect of their lives, including school, was negotiated.
12. I am not suggesting that the explanation Willis offers is all encompassing, there are no doubt other factors involved in working class failure. In addition the influence of culture should not be regarded as wholly determining the fate of those within it. Halsey et al. (1980) points out that through the sponsored education of the grammar school a number of working class kids enjoyed educational success. In fact unless this was possible, capitalism could not be as flexible as it is. During the post war boom years it clearly needed to recruit from the working class for its middle strata managerial positions. The importance of working class culture lies, I believe in the fact that it enables working class kids to accept failure when confronted with a school situation which is so totally at odds to their own cultural assumptions.


14. P. Hirst, 'Liberal Education and the Nature of Knowledge', in P. Hirst, Knowledge and the Curriculum, Routledge and Kegan Paul, London, 1974, pp40-41. My account of the forms of knowledge thesis will be taken from this paper. Hirst has subsequently changed his position but not in any respect which bears on the argument I shall develop.


16. For criticisms of Hirst on this point see J. Walker, Autonomy, Authority and Antagonism, Ph.D thesis, Department of Education, University of Sydney, 1981. Walker documents the various changes Hirst has made to the forms of knowledge thesis but argues convincingly that they do not help to make the thesis more credible.


20. I have phrased the point in this way because at the time when Peters wrote the passage I have quoted he did not espouse the forms of knowledge thesis as such. Then he was arguing for a view of education as an initiation into the 'modes of experience'; the notion of 'modes of experience' was a forerunner to the forms of knowledge.


25. Under these conditions there is a sense in which the welfare organisations of the state serve to 'police' the anti-social.

26. Under conditions of oppression it is particularly difficult for people to grasp a world-view which runs counter to prevailing ideologies. Sheila Rowbotham makes the point very clearly when she says:

"The vast mass of human beings have always been mainly invisible to themselves while a tiny minority have exhausted themselves in the isolation of observing their own reflections. Every mass political movement of the oppressed necessarily brings its own vision of itself into sight. At first this consciousness is fragmented and particular. The prevailing social order stands as a great and resplendent hall of mirrors. It owns and occupies the world as it is and the world as it is seen and heard. But the first glimpse of revolutionary possibility leaves a small but indestructible chink in its magnificent self-confidence. Capitalism now carries not chinks but great slits and gashes. It bears the mark of revolution.

In order to create an alternative an oppressed group must at once shatter the self-reflecting
world which encircles it and, at the same
time, project its own image onto history.
In order to discover its own identity as
distinct from that of the oppressor it has
to become visible to itself. All revolutionary
movements create their own ways of seeing.
But this is a result of great labour."

From, S. Rowbotham, Women's Consciousness, Man's World,

27. To my knowledge Jim Walker was the first to point out
that Liberal-Rationalism is an ideology which supports
teacher's claims to professional status. I am indebted
to him.

28. It should be stressed, that the ideological constitution
of Liberal-Rationalism is unintended. The theory was
developed at the time of the Liberal consensus during
the mid-sixties when there was some reason for believing
that capitalism had been transcended. In addition
the theory should not be dismissed out of hand. It
contains a number of valuable insights, perhaps the
most important being that knowledge is public, and
objective. The error here was that Liberal Rationalists
believed knowledge was embodied in the forms of knowledge
rather than in theories.

29. I have not provided an explanation of why Liberal-
Rationalism was produced in the form it was, that
would take detailed investigation. However some
clue as to why it incorporated such a strong mental/
manual distinction can be gleaned from an interesting
book by L. Johnson, The Cultural Critics, Routledge
CHAPTER NINE

CONCLUSION: THEORY, PRACTICE AND CHANGE
IN EDUCATION

In this chapter I shall discuss the ways a Realist guided social theory can inform and further educational aims. I shall then widen the discussion by examining the relationship of the Realist social theory I have developed to other methods and substantive theories which it has been suggested can guide educational practice. In particular I shall look at three issues. The first concerns the relationship of the various contributing theories which may guide educational practice to educational aims. In this thesis I have developed a social theory which can inform and further the education aim of personal autonomy.\(^1\) What I have not done is to spell out in general terms the connections between educational theories (those theories used to further educational aims) and educational aims. It has been generally accepted that educational theories presuppose educational aims but the precise relationship between the two has been subject to controversy.\(^2\) However, the account I have developed of the nature and structure of social theories can help to clarify the general relationship between educational theories and educational aims.

The second issue concerns the question of how we can validly make comparative judgements of critical preference between the various methods which may be used to guide the
construction of educational theories. For example, I have argued that it is possible to apply the Realist methods of natural science to develop an understanding of the social world. But it is a further issue as to whether and in what sense a naturalistic form of social science is more helpful in providing an understanding of educational processes than other methods.

The third issue concerns the relationship of the kind of social theory I have been developing to theories in other subject domains like that of psychology, which may also be used to further a particular education aim. This issue is important since clearly there is no one theory which provides an account of all the processes which constitute education. Consequently, we need to discuss how theories used to guide educational practice can be related to each other in a consistent way.

Finally, I apply my analysis of the relationships of theory to practice and of school to society to the question of how we can develop educational practices which will promote the development of personal autonomy. In this way I shall show how the Realist guided substantive theory I have developed can inform educational practice.

Realist Guided Educational Theory and Educational Practice

According to the account I have developed, a Realist theory of the social world will delineate the social relations which impose limits to the possibilities of action. In addition such a theory will provide an account of the tendencies
generated by particular social relations. Tendencies provide us with an account of how particular social relations have developed and how they will develop. However, I have argued that at the level of the concrete, where tendencies interact, the outcomes of their interaction are always contingent. For this reason Realist social theories cannot be used as instruments for predicting and controlling certain aspects of educational practice. As such they cannot dictate in any specific sense what we should do in any particular situation. For instance, a Realist social theory cannot tell us what to do if a fight breaks out in the classroom or how to cope with a kid that does not want to learn. For these specific situations good sense and experience are required. In the context of specific problems such as these, teachers are on their own and it is this aspect of teaching which may be considered a craft. Older teachers can pass on the benefit of their experience which may be of genuine practical help but ultimately how individual teachers handle these kinds of problems will be a matter of practical judgement.

However, the kind of Realist theory I have argued for can guide educational practice in three respects. Firstly, I have suggested that according to the Realist method, theories are initiated in order to explain particular problems. Now, in the context of educational practice, explanations for problems help to provide the basis for their solution by relating the development of problems to enduring underlying structures. They therefore point to those deep seated social arrangements which will have to be changed if the problem is to be solved.
As I suggested in Chapter 6, Realist social theories are not a means for providing temporary solutions to problems. They are not instruments of expediency; they cannot help the teacher in any immediate sense when confronted with the kind of antagonism shown, for example by 'the lads'. But a Realist social theory can explain the general context in which 'the lads' antagonism has arisen and point to those structures which will need to be changed if the antagonism between teachers and working class kids, in particular, is not to recur. Realist guided theories can be considered to be like cognitive maps (Putnam 1978). The more accurate they are the better they will guide us across the social terrain. But in practice, we cannot expect to follow the directions provided by the map in every detail. Roads may be closed and other routes may have to be negotiated. But the map can tell us the general direction we should take. Realist guided theories, then, are more like maps than instruments, which we can apply to particular problems or blueprints, which we should follow in every detail.

Secondly, while a Realist social theory may not be able to guide the teacher with respect to specific problems in the classroom, it can provide a means of structuring problems and reflecting on them. This, I have suggested, is because it is rational for us to treat people in a way which is consistent with the best theory's description of human nature. As such a Realist social theory provides a further guide as to how we should understand and treat people. For example, in Chapter 2 I discussed the concept of social engineering, implicit in
Technological-Liberalism, with reference to the question of alienation. I pointed out that because the theory interpreted human beings as passive, alienation was considered a function of role conflict. The Technological-Liberal solution was to change aspects of the environment to make people feel less alienated. In this view the environment is manipulated or engineered in order to elicit certain behavioural responses. Critical debate and dialogue with people who experience alienation is seen as irrelevant precisely because it is assumed that people are passive. However, in the theory I have developed, the problem of alienation cannot be solved in this way because I maintain that people can be critically aware of their circumstances. Initially this awareness, as part of practical consciousness, will be fragmentary. But by engaging in dialogue people can achieve a more coherent understanding of their alienation. This coherent understanding is achieved by reinterpreting people's feelings and beliefs, according to the relevant theory, in such a way that the causes of their alienation can be explained. This does not, of course, solve the problem of alienation but it gives people the understanding necessary to do so.

Thirdly, Realist guided social theories enable us to take a critical view of the world. They provide us with a method which allows us to extend our ontological reach to the underlying political power structures which determine the context for our actions and which are not accessible to everyday experience. Moreover they enable us to critically analyse competitor theories which are ideologically contaminated
This is significant because, as I have argued, the ability to explain and expose ideological theories in education is crucial since ideological theories cannot adequately guide practice.

In education a theory's ability to guide practice is always measured against a particular aim. In the development of my substantive theory I have suggested that the social structures generated by capitalism preclude the possibility of autonomy as an educational aim. If we are to fulfil this aim, capitalist social structures need to be transcended. (For further discussion on this see the final section of the chapter.) This raises the general question of what the relationship is between a Realist theory and educational aims and it is to this issue I shall now turn.

Realist Guided Educational Theory and Educational Aims

I want to clarify two points concerning the relationship between educational theory and educational aims. Firstly, any specific educational theory exercises a determinate influence on the range of possible educational aims which can be espoused. Secondly, educational theories delineate the criteria for the satisfaction of an educational aim and they provide a general account of how the aim can be satisfied. I deal with these two points in turn.

Educational theories furnish a description of human nature which constrains the range of possible educational aims that can be held. For example, I have argued that people have
certain cognitive abilities which enable them to develop a critical understanding of the world. And I have suggested that this critical understanding enables personal autonomy. However, there are some views of human nature in which the aim of autonomy is precluded, at least according to the account I have given. Within the class of theories which preclude autonomy are all those theories which on the one hand view people as determined by causal regularities, and on the other do not permit reference to those mental entities necessary to describe autonomous thought and action. I argued in Chapter 1 that theories guided by the tenets of Logical Positivism fall within this class. For theories of this kind some alternative educational aim such as that of happiness may be possible because, arguably, there is no direct connection between autonomy and happiness. A happy person does not necessarily have to be an autonomous person.

Theories of this latter kind have a more limited range of possible aims than the kind of theory I have developed. While theories guided by, for example, the tenets of Logical Positivism cannot take the aim of autonomy, the theory I have developed could take either the aim of autonomy or happiness. In this thesis I have assumed personal autonomy to be the most desirable aim for educationists to pursue, but the theory I have developed need not have this aim. To illustrate the point, it might be argued that although the present educational system precludes the possibility of autonomy for most people, it nevertheless can provide an education which promotes happiness. According to this argument an attempt to achieve the aim of
autonomy by making major changes in education and society will fail, and it will create greater misery than now exists. In this case it would not be inconsistent for a person to accept that my theory is substantially correct and, yet, opt for the aim of happiness. My theory, then, can admit a wider possible range of educational aims than those guided by Logical Positivism.

In addition educational theories can inform aims by providing a resource for making judgements between competing aims. For example, it might be possible to defend the aim of autonomy against the argument cited above in favour of happiness, by pointing out that it is wrong to assume the present educational system will remain unchanged. Here, we may be able to identify tendencies under capitalism which indicate that the breakdown which is already occurring in education will become worse. In consequence the idea that we can educate for happiness, under the existing system, would be mistaken. As such we may continue to pursue the aim of autonomy.

To summarise: educational theories determine the range of possible aims education may have, but a particular educational aim is not entailed by any particular theory. Furthermore, educational theories can provide some of the resources for making judgements between competing aims.

Turning to the second relationship I referred to above, I think it will already be clear how educational theories delineate the criteria for the satisfaction of particular aims.
For I have already shown what is involved in autonomous thought and action according to the theory I have developed and I have contrasted it with the view taken of autonomy by Liberal-Rationalism. Whereas in my theory the rationality necessary for autonomy involves choosing and acting according to the best theory, for Liberal-Rationalists, rationality involves an understanding in the various forms of knowledge. By the same token, my theory and Liberal-Rationalism differ as to the kind of institutions necessary to promote an education for autonomy. Liberal-Rationalism assumes that the present organisation of schools is adequate for the development of rationality. In contrast, I have argued that the present school-system is inimical to the development of rationality and thereby autonomy. It remains, however, for me to sketch out what kind of educational practices will promote autonomy.

Educational theories, then, determine the range of aims education may have and they interpret those aims according to their particular view of human-nature-in-society. I now consider the question of how we can validly make comparative judgements of critical preference between the methods which may be used to guide the construction of educational theories.

**A Realist Method and its Alternatives**

In order to make a judgement of critical preference with respect to the methods employed to guide educational practice we first have to establish the criteria by which one method may be judged in competition with another. In other
words, if we are to argue that a method such as Realism provides a better guide than other methods then we first have to establish that the methods which are to be compared with Realism are in fact in competition with it. I therefore suggest the following criteria by which we can judge one method as being in competition with another.

It must first be established that methods which are judged to be in competition have the same cognitive aim. For example, the cognitive aim of Realism is to provide plausible explanatory truths as a means to solving particular problems. Therefore any method judged to be in competition with Realism must also have as its cognitive aim the pursuit of explanatory truths. However, an alternative method may be advanced on the following grounds: it may be suggested that a cognitive aim such as the pursuit of explanatory truth is unobtainable in the social sciences therefore the methods used to guide educational theory can only legitimately have a cognitive aim such as that of description. On this basis a particular ethnographic method, which eschews the cognitive aim of explanation in favour of the cognitive aim of description, can be advanced. In other words the ethnographic method advanced here establishes its worth at the expense of a theory with a different cognitive aim. Clearly in this case the respective methods are in competition, despite the fact that they have different cognitive aims. Under these conditions making a judgement of critical preference between methods is more complex. In fact, confronted by the claim that it is not possible to establish plausible explanatory truths about the social world, all that can be
done is to point to a theory such as the one I have developed, defend the epistemic status of the explanations it generates, and emphasise the advantages such an explanatory theory has for guiding practice. If a person is still not convinced of the merit of seeking explanatory truths in the social world there is little more that can be done to convince him/her.

Given these criteria I shall now briefly discuss the claims of those methods which may be considered competitors to Realism as guides to the construction of educational theory.

There are at least two alternative methods to Realist methods which have been offered as guides to educational theory. These are methods which have been developed according to either the tenets of Logical Positivism or non-naturalistic modes of social inquiry. Of these, I think we can dispense with Logical Positivism guided theories straight away, for I have shown that Logical Positivism is inadequate as a theory of the natural sciences and as a guide to social science theorising. It is therefore simply not a viable alternative to Realist guided educational theories.

Non-naturalistic modes of social enquiry are usually thought of as being forms of ethnographic or qualitative research. However, as I pointed out in Chapter 4, Haig has shown that the ethnographic method described by Glaser and Strauss conforms to the RHI method. As such the received contrast between ethnographic non-naturalistic modes of
enquiry cannot be uniformly sustained. There may, of course, be alternative ethnographic methods to that advocated by Glaser and Strauss. In these cases we would have to examine their cognitive aims to see whether they were in competition with RHI. For example, most ethnographic methods rather than having explanatory truth as their cognitive aim, are concerned simply to describe teachers' performances as a means to evaluating them. Where, however, it was established that the ethnographic method had the same aim as RHI it would be considered a competitor, and judged on a comparative basis to RHI. To my knowledge, however, there are no candidate competitors, among qualitative methods of research, to RHI.

In advancing the claims of a Realist method such as RHI, I am not suggesting it is the only valuable method for guiding educational theory. Indeed there are at least two good reasons why a plurality of methods for guiding educational theory should be considered desirable. Firstly, there are many methods which can guide a complex practice such as that of education - a single cognitive aim like that of explanatory truth is insufficient to guide all aspects of education. For this reason methods with different cognitive aims are to be encouraged. Secondly, if we take the view of science advanced by Lakatos whereby theoretical pluralism is to be encouraged, then this view can also be applied at the meta-level to the methods by which theories are developed. This, I have suggested, is because the development of science has advanced by the refinement and improvement of method. As such the greater
the number of methods to choose from the more chance we have of finding methods which can effectively guide theory development. The injunction to proliferate methods arises in the context of the natural sciences and in those social sciences where the methods of the natural sciences can be profitably applied. But in the context of a practice like that of education, I see no reason why the injunction should not also equally apply to non-naturalistic methods.

**Realist Guided Social Theories of Education and Other Theories of Education**

In this thesis I have been concerned with the contribution of social theory to the fulfilment of educational aims. However, the nature and outcomes of educational processes are typically determined by a conjuncture of tendencies of various kinds. It is, for example, not only tendencies in the social world but also biological and psychological tendencies which contribute to educational outcomes. Consequently we cannot typically understand all facets of education from the perspective of only one theory. Rather we need to understand education from the perspectives of the best theories the disciplines of, for example, social theory, psychology and biology, have to offer. As such it is both a demand of educational practice and of rationality that where possible we should use those theories from the relevant disciplines which are consistent with one another.

Consistency among theories is achieved at the level of interpretive structure. This is because, as I showed in
Part 1 of the thesis, it is the interpretive structures which determine how human nature is to be viewed and how we can have knowledge of it. For example, the theory I have developed regarding the social world would be, *prima facie*, consistent with a psychological theory such as that of Piaget's. Both view people as self-reflexive beings and both are Realist in orientation. In contrast it would be inconsistent for me to hold a social theory such as my own in conjunction with Skinner's Radical Behaviourist psychological theory. The reason for this is that we have different interpretive structures and this leads to a practical incompatibility as regards the view of education the two theories take. For a start the two theories may have different educational aims. As I argued previously, my theory may take the aim of autonomy while Radical Behaviourism cannot, in any straightforward sense, be used as a means to developing autonomy, since it assumes people cannot be autonomous. Similarly, suppose I espouse a theory such as that of Piaget's to explain how children learn, then again, Piaget's and Skinner's theories of learning are incompatible, not only in their view of human nature but at the level of educational practice. For Skinner, learning is a question of shaping behaviour, primarily according to operant conditioning, whereas for Piaget learning moves through various stages as the child pursues its developing cognitive interests. As a consequence of these different models of learning, the educational practice prescribed by these two theories will be different. In the case of Skinner's theory the child will be subject to the regimen of operant conditioning. In the case of Piaget's theory the child will be allowed considerable
freedom to pursue its own cognitive interests.

In addition to the requirement for consistency it would have to be established that theories from the disciplines used to guide educational practice were not in competition. The principal means by which we understand the world is through theory. Now theories are usually developed in subject domains but there is no necessity for them to do so. The fact that most theories have developed in this way is a contingent function of the social institutions within which knowledge has historically evolved (Hooker 1975). There are, then, theories from various disciplines which are, in relevant respects, in competition with one another. For example, Liberal-Rationalism is not only inconsistent with, but also in competition with the views of the 'New' Sociologists. This is because, while attempting to capture the same object domain, they have different epistemologies and different views of human nature. Consequently they have different prescriptions for what is acceptable educational practice. Liberal-Rationalists regard initiation into the forms of knowledge as central to education, hence they believe a form of educational practice similar to the present educational system is necessary for the development of rationality. But the 'New' sociologists are epistemological relativists. As such they do not regard education as necessarily involving the learning of any set of concepts, whether they be related to the forms of knowledge, a Realist account such as my own, or any other account. Insofar as it is possible to tell, education for the 'New' sociologists would involve co-operative forms of practice in which views of the world
were constructed and explored rather like one would construct and reflect upon a piece of conceptual art. The result is that, despite the fact that Liberal-Rationalism and the 'New' Sociology are drawn from different disciplines, they are nevertheless in competition. This means that we need criteria such as those laid down by Walker and Evers, which I referred to in Chapter 4, to determine when theories are in competition.

One problem which arises, however, is that the best theories drawn from the various disciplines may not be consistent in their interpretive structures. This of course poses a problem when we call upon these theories to guide educational practice. The reason why this problem arises is partly because theories have evolved within subject domains. As such most theories' referents have been limited to that domain. Consequently we do not have global theories which can successfully integrate the knowledge claims from various subject areas. Hence the knowledge we have remains inconsistent and incomplete but that is a problem we simply have to live with.

Schools in Capitalist Society: Some guides to Educational Practice

The idea I want to pursue in this section is that education for personal autonomy involves getting people to reflect critically on the conditions of their existence and then acting to change them. Education in this sense necessarily involves both theory and practice. This is because we reflect critically by making judgements of critical preference between theories and where those theories relate to the social world we test them through practice.
It has been an argument of this thesis that the necessary relations of capitalist production systematically prevent such critical thought and action. There are a number of reasons for this. Firstly, the mental/manual division distinctive of capitalism is necessarily reproduced in schools as a condition for the maintenance of capitalism. The division between mental and manual labour means that the majority of workers are precluded from exercising control or responsibility for their working lives. They are divorced from both thought and action concerning the nature of the productive process. Similarly schools divide students between those who will do 'academic' subjects and those who will do vocationally oriented courses. Admittedly this division occurs only in the latter stages of secondary schooling; in this respect the overt enforcement of the mental/manual division comes late in a person's school career. But long before this time kids have developed a self-perception of themselves as 'brainy' or not. Moreover they also understand from a relatively early age that the major rewards in society are dealt out to those who are academically successful. The hidden curriculum has thereby prepared the ground for the enforcement of the mental/manual division long before it officially occurs in schools, and those who are not regarded as intellectually able have been 'turned off' any kind of thought which involves systematic critical reflection.

Moreover, just as the capitalist workplace is characterised by authoritarian social relationships, so also is the school. Because of this schools do not encourage genuine democratic participation nor can they offer more than token
rewards for kids who exercise social responsibility. In other words, the do not train kids for democratic participation\textsuperscript{5} in which they can exercise a measure of responsible control over their lives. The real rewards of school are conferred on the academically successful, not on those who act in a socially responsible way.

However, by not allowing students to actively participate in the decision making process, schools also discourage critical reflection on school life. For whatever critical ideas students have about school life there is no forum in which they can be actively discussed and applied in practice. By the same token the authoritarian relationships of the workplace discourage critical thought on the part of the workforce. When it surfaces it does so through confrontation and union pressure.

Secondly, the class structure under capitalism reinforces the mental/manual division and its consequences. It does this in two respects. On the one hand, working class culture serves to emphasise the worth of manual work while rejecting the value of mental work. One consequence of this is that working class kids also come to reject the kind of critical thought which would enable them to understand the oppressive conditions under which they live. On the other hand, middle and upper class culture, serves to emphasise the value of abstract thought. As such, middle class kids are well prepared for the mental work they encounter at school. But for the reasons I have given, schools do not encourage either set of kids to think critically about school or working life.
Thirdly, the practices of school and work are overlaid by ideologies which obscure the necessary relations between them. Consequently these ideologies are supportive of the ignorance and compliance these necessary relations promote.

How, then, can we bring about the kind of practices which will encourage the development of autonomy? I shall try to answer this question by looking at the social relations which need to be changed and then by examining the prospects for a pedagogy which may help to initiate change.

Change in the Social Relationships of School and Work

Clearly, the major social relations which require change are those which sustain the mental/manual division. In the first instance this would entail a change in the relations of production. From an educational point of view the broad changes that are necessary can be mapped out. Firstly, workers need to be able to participate in the decision making processes of the firm. There are two types of decision which can be distinguished: those that concern the day to day running of the firm and those which are concerned with broad policy. It is the latter which I am suggesting workers should participate in. For obvious reasons it would be impossible for workers to make collective decisions about every minor detail. However, I can see no major objection to decisions being made collectively about broad policy. Workers do not need to understand the technical aspects of production; specialists can be employed to deal with them. The specialists can also advise the workers
on matters of policy. It is precisely this principle that works for democratic governments such as those in Britain or New Zealand and I can see no clear reason why it would not work at the level of the individual firm. There is a curious inconsistency in the arguments of those who would, on the one hand, defend representative parliamentary democracy, and on the other argue for the maintenance of the existing social and technical relations of production. For their claim is that democratic governments are acceptable for nation states but that productive enterprises need to be run by specialists.

In mounting this argument such people also conveniently overlook the fact that joint stock companies, at least, are nominally run on democratic lines - the board of such a company is, in principle, answerable to the shareholders. The fundamental difference, as I see it, is that the workers would become the shareholders in the company. But they would take a more active role, than present shareholders in company policy, precisely because they would thereby have the opportunity to control their working lives.

The educational pay off for a change in the social relations of production to a worker participation model of this kind would be threefold: firstly, workers would be encouraged to understand technical aspects of production so that they could engage in informed dialogue with the specialists they have hired. Secondly, as controllers of general policy they would have to engage in critical and innovative thought about their productive enterprise. Moreover, they
would also have to think about the relationship of their productive enterprise to the wider society since what they do will affect other aspects of society and vice-versa. Thirdly, an education for workplace democracy would require a different organisation and structure to the present educational system. Let us see what an education for workplace democracy would look like.

To begin with, the authoritarian structures of schools would have to change according to the Aristotelian maxim that we learn by doing. As such pupils would have genuine participatory rights in the school's decision making process. Of course, not all pupils would get full rights from the time they enter school, since they would not be in a position to make resonable judgements about all matters of policy at the age of five or six. But I do not see the rights to participation as being something which is conferred in a single stroke at say, the age of fifteen or sixteen. Rather, students would have the right to participate in different kinds of decision at different ages. There are, no doubt, some aspects of school life about which a five year old has strong and reasonable opinions.

Moreover, because of the above change, schools would value students across a far wider range of abilities than merely those which would be termed 'intellectual'. The curriculum would be suitably expanded to take into account the kind of activities necessary for democratic life. Indeed the curriculum itself would be one area where students would participate.6 They
would do this through the process of curriculum development. My personal experience is that kids learn from each other just as well as they learn from adults, if not better. And yet under the present system they are not consulted about questions of curriculum development and presentation. Yet the research, organisation and presentation of a curriculum is clearly an area where kids of all levels of ability could participate.

In addition committees on various aspects of school life would have to be formed, responsibilities taken and delegated, and papers would have to be researched and presented in order to argue particular cases. In sum, students would be involved in a genuine participatory democracy and they would be evaluated according to the contribution they made.

Finally, the barriers which now exist between schools and the rest of society would have to be taken down. Students would spend more time in the community, particularly in the workplace, learning what is involved in particular kinds of work, and learning the procedures of particular workplace democracies. In this way they would gain a perspective on the relationship of school to the rest of society which would enable them to feed their outside experiences into discussions on school policy. They would also have a better understanding of the ways in which what they learn in school is relevant to what they learn after school.

By the same token, parents would not be restricted to raising money for the PTA in the way they now are. Rather
I would take it as essential that they took an active role in all facets of their children's education - including what goes on in school. Parents have a wide range of insights and skills and I see no reason why they should not be used in their children's education. It is partly teachers' claims to professional status, and partly ideologies like that of Liberal-Rationalism which support teacher's semi-professional status which tend to militate against active parent involvement. But given the kind of analysis I have offered, the involvement of parents in their children's education is essential. If parents do not value education and do not support their children's educational efforts, it is likely, as we saw in the case of 'the lads', that the children will not value education either.

There are two reasons for thinking a worker-participation model of production would encourage parental participation in their children's education. In the first place, the shift to a worker participation model would signal the decay of the class structure, and its attendant class cultures. The consequence of the development of class cultures is that both middle and working class parents have kept their distance from the school. Middle class parents frequently provide support at home for their children's educational efforts, but just as the semi-professional ethos of teachers tends to keep parents at arms length, so parents who are themselves semi-professionals tend to respect the relative autonomy of other semi-professionals. While there are many working class parents who are actively antagonistic toward education, and for good reason - it has provided little benefit to themselves or their children - there
are many who are supportive of their children's efforts at school. But in order to go further, to actively participate in their children's education they have to overcome two difficulties. The first is that when it comes to education these parents believe they have nothing to offer; they lack confidence. After all, they are likely to have been 'failures' at school themselves and they are confronted by teacher ideologies which tell them, that in some sense teachers are experts, that teachers 'know best'. The second is that, as Kohn (1977) has demonstrated, working class male parents are likely to reproduce in the home the authoritarian norms and attitudes they are confronted with in the workplace. They tend to emphasise conformity to external authority as the basis for their children's socialisation. As such their children go to school with a set of dispositions which are appropriate to a life subservient to an unquestioned authority.

It would follow that the decay in class and class cultures would signal the demise of these class-based attitudes to education. Active participation in education would simply be one more element in a genuinely democratic form of life. The confidence people would derive from being able to control their lives at work would encourage their participation in education. This participation would take various forms. Parents might take classes to impart the specialist skills they have, or they might use their skills in the administration and organisation of schools. Moreover in terms of history, geography and social studies parents have much to offer. Some will have travelled widely, all will have lived through major
historical events. They can, therefore, report first hand, on their experience of different cultures and on the events of modern history they have lived through. And if parents come from minority cultures they can provide the insights necessary to an understanding of their respective cultures.

It was conventional wisdom in the sixties that education had become too specialised to be left to parents. That view has had disastrous consequences. On the one hand it has served to divide parents from their children's education. On the other hand, the present school system simply wastes the talents and energy of both parents and students. It is hardly surprising under the present circumstances that some parents and many students are antagonistic toward what schools offer.

*A Pedagogy for Change*

An education for autonomy need not be confined to a particular location (i.e., schools) nor to a particular stage in a person's life (i.e., from the age of five to sixteen). Rather the process of critical reflection, dialogue and action which characterises an education for autonomy will be a permanent part of a person's life and will enter all the communal activities a person engages in. Similarly a pedagogy which promotes educational autonomy will not be confined to the institutions which we now define as 'educational'. However, my particular concern is with schools and education as we now know them and my discussion will therefore be confined to the contribution they can make toward a pedagogy promotive of autonomy. In particular, I shall begin with the role of teachers in this process.
In the process of change toward an education for autonomy teachers would be engaged in two sets of related activities. Firstly, they would be concerned with trying to bring about change in the social relations of schooling. Here there are some specific targets they can aim for. They can work toward changing the social relations of schooling to bring about more democratic participation in the school's decision making processes. In addition they can work to change the methods and criteria by which students are evaluated. A first step in the right direction would involve dismantling present national systems of evaluation and giving schools the responsibility for evaluation. This would be a move in the right direction for two reasons. On the one hand it would weaken the function evaluation presently has as a national screening device whereby students' success and failure is determined by how well they do relative to the performance of others. On the other hand it would give individual schools more opportunity to develop a curriculum which has been decided upon democratically and which reflects the needs of people in a particular locality.  

Achieved in isolation from other changes in society, these changes may help to make schools better places to work in but they would not change their fundamental character. It is for this reason, for example, that I said that a change to internal school assessment would only weaken the screening function of education. This is because so long as society is characterised by a competition for rewards which are unequally distributed, according to the Liberal ideology of meritocracy, educational certificates will be used as a basis for allowing
some access to those rewards while denying others. Similarly, for the reasons I have given, unless the class structure changes, school may provide the procedures for a more participatory form of decision making but it is unlikely parents will take the opportunity to participate.

There are two further comments to be made about teachers' contributions to change. If the analysis I have offered is correct then any move to break down the mental/manual division in schools will be met by resistance. However, the attempt to bring about change in itself constitutes an education for autonomy. This is because the reasons for change would be based on the kind of theory I have offered and the attempt to bring about change would be an example of the kind of practice by which I have suggested theories are tested. Moreover, there is a relevant sense in which the political struggle for change would also be educational, insofar as the reasons cited for change would provide a wider audience with access to a different perspective on the school-society relationship. In short, the attempt to bring about change may provoke adverse reaction, and indeed prejudice, but it could also be thought provoking.

Finally I turn to the issue of a pedagogy for change in the classroom. There are I think two relevant issues here, the first concerns what is taught and the second how it is taught. A curriculum for change must begin with the present curriculum and its contemporary developments. One of the major problems with idealist educational reformers such as Illich is that they offer a blueprint of what education should be
but suggest no plausible strategy for how it can be brought about. But if change is to be initiated we can only begin with existing practices. There have been some recent promising developments in this respect. A curriculum for change has to fulfil two conditions: it must offer non-ideological perspectives on the world and it must critically examine the world from these non-ideological perspectives. The recent introduction of science, technology and society (STS) courses and courses in multi-cultural and feminist education marks the beginning of opportunities for examining the world from a critical non-ideological perspective.

STS courses can provide an account of the relationship between science, technology and society which questions the purposes to which science and technology are being put in our society. For too long science and its technological progeny have remained aloof from critical examination by the layperson and in part this has perpetuated the myth on which Technological-Liberalism has rested. The myth that technology is independent of society and its impact on society is both inevitable and beneficial. However, since technology is produced by people within a particular set of social relations the aims of technology are candidates for critical scrutiny. Similarly, multi-cultural and feminist courses can offer the opportunity for a critical examination of the racist and sexist basis to society. In addition the more traditional curriculum subjects like history and social studies provide a forum for a critical analysis of society.
However, once more, we should not underestimate the resistance that would be encountered in attempting to provide a critical view of society through courses of this kind. Just as attempts to change the social relations of schooling would involve struggle so would the attempt to institute courses which offer critical perspectives. By the same token, we should not overestimate the impact they would have for they would be offering viewpoints which run counter to prevailing social relationships, ideologies and class-culture perspectives. They would be, however, a step in the right direction.

I now turn to the question of the form a pedagogy for change would take. Such a pedagogy is initiated, on the one hand, by a teacher who has an understanding of various theoretical world-views and on the other, by students who have common sense beliefs and insights. What the teacher offers the students are theories by which their fragmentary insights and perceptions can be made coherent. The teacher can reinterpret the world for students in such a way that what they find problematic or surprising can be adequately explained. In return the students offer the teacher the benefit of their insights and their understanding of the world. What this enables the teacher to do is to critically develop his/her theoretical perspective. There are two ways in which the students' insights and understandings can help develop the teacher's theoretical perspective. Firstly, theoretical perspectives are themselves never wholly coherent, they always have anomalies. As such, where these theoretical perspectives relate to the social world the insights and understanding students have
may help to provide solutions to problems within the theoretical perspective the teacher is trying to develop. The interaction between Paul Willis and 'the lads' provides an example of what I have in mind. For it was through their counter-culture activities, their attitudes and perceptions that Willis was able to generate an account of how working class lads get working class jobs.

Secondly, the most common teaching situation is that where a middle class teacher is teaching working class, racial minority or women students. Now since prevailing ideologies obscure the oppression of these groups it is, I think, particularly hard for a middle class teacher to understand the real nature and extent of what is involved in class, sex and racial oppression. As such, I think it is by relating the experiences of students to the various relevant theoretical perspectives that the teacher can gain a greater understanding of how these systems of oppression work, and hopefully a stronger sense of solidarity with his/her students as well. It should be stressed, however, that in the dialogue which takes place between teacher and students I am not suggesting that the teacher offers only one theoretical perspective. On the contrary I think that rationality would demand that various candidate theories should be examined and their perspectives, strengths and weaknesses examined.

The pedagogy for change I have described differs from the view of teaching of both Liberal-Rationalists and Progressives. It differs from that of Liberal-Rationalists
because the latter assumes people are ignorant and irrational until such time as they have been initiated into the forms of knowledge. In contrast a pedagogy for change values, and indeed stems from students' common sense beliefs. In contrast to Progressive theories it asserts that there are objective theories through which the world can be better understood. In this sense a teacher cannot leave students to follow their own interest; they have to be introduced to these theoretical perspectives. On the other hand, since the subject matter of a pedagogy for change begins with the students own perceptions and beliefs, and is concerned with revealing those structures of society which are against their interests, there is good reason to believe students will be interested in joint exploration of their world with the teacher.
Notes and References to Chapter Nine

1. It will be apparent that I have not developed a justification for autonomy. For a justification of the aim of autonomy which also regards worker participation as morally desirable see J. White, The Aims of Education Restated, Routledge and Kegan Paul, London, 1982.

2. The relationship of educational aims to educational theory has been discussed by P. Hirst (1972) and D. O'Connor, 'The Nature of Educational Theory', The Proceedings of the Philosophy of Education Society of Great Britain, Vol 6, 1972, pp97-109. However neither Hirst nor O'Connor provide a clear view of the relationship.

3. There may however be relevant specific theories that can help to provide short term solutions to problems in the classroom. Behaviour modification theories could possibly help in this respect.


6. I am not suggesting students would decide curriculum content; that would be a matter for discussion among all participants in schools. It would probably be the case that only older students would be party to making decisions about curriculum content.

7. The experience of work students have can be wide ranging and can feed into their more academic and artistic studies. For example, students could spend time in a theatre or in a research laboratory.

8. There would inevitably be a tension between local interests and the nation interest as regards the composition of the curriculum. This tension would have to be resolved by democratic procedures. But I think a participant democracy would involve far greater de-centralisation of decision-making processes than now exists. As such people at the local level would have far greater power to control their lives.


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