THE IDEOLOGY AND LOGIC OF SCIENTISM

by

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The assumption that science is exclusive of ideology is presently fundamental to most research and teaching in the social sciences. An evaluation of this assumption constitutes the proper study of this thesis. An examination of the problem of ideology, that is, the way a particular social arrangement of science predisposes us to deal with particular "paradigms", which are associated with particular social and political consequences, exposes the rhetorical character of this assumption. Furthermore, it is shown that an erroneous understanding of the philosophy of the physical sciences complements the rhetorical separation of science from ideology. Once scientific "facts", "theory", etc. are demystified and situated within the historical development of particular paradigms, the relevance of the problem of ideology for all science is recognized.

On the basis of the above argument, the implications of the problem of ideology for problems of logic in the social sciences are discussed. An examination of formal theories of logic shows that they function to reinforce the rhetorical separation of science from ideology, and, as such, to obscure the ideological orientation of different theories of knowledge. Because formal approaches to logic abstract both method and theory from the context and consequences of particular forms of knowledge, they cannot account for the implications of the problem of ideology for logic. Once we replace formal, idealized approaches to logic with a pragmatic working logic which has the task of assessing arguments rooted in ongoing inquiry and subject matter, we can undertake inquiry which accounts for the problem of ideology.
Finally it is argued that a reification of language underlies the formal, idealized approaches to logic. When language is situated in human praxis and the meaning of knowledge is approached in terms of this, the dichotomies between objective and subjective, theory and practice, fact and value which are implied by the rhetorical separation of science from ideology are exposed as ontological a priories which impede ongoing inquiry into human behavior and experience. The structure and function of the university is then examined to determine the roots and consequences of these dichotomies. It is argued that they complement the function of the university within the political economy of state capitalism. It is further argued that a schizoid praxis characterizes academia and that this is fundamental to the development of what is called the ideology and logic of scientism. Furthermore, because academics teach and research in terms of these dichotomies, they are unable to conceptualize the structural problems of our society or their own place within them. The possibility of reforming the university to become centers of such pragmatic inquiry while the structures of state capitalism exist is rejected.

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In particular, I want to mention those with whom I have lived who helped me with this study. Bob Laidlaw, Sandi Hackler, Arthur Milner, Nora Thorson, Ron Davis, John Braun and Colin Condit all made suggestions about my drafts which have helped me face and begin to solve my problems with language and communication. Fiona Karlstedt, who typed the thesis and suggested and made corrections, should be considered a co-author. Without labour that makes writing intelligible and shareable, there can be no knowledge. To destroy the mystique around science and ensure that knowledge (along with other social and economic relationships) become humanized we must begin to challenge the academic ego, most often expressed as male chauvinism, that complements alienated and exploitative intellectual work.

Since this study has roots in my past, it is also worth mentioning those who have especially influenced my thinking. Duncan Blewett of Regina Campus, Dan Sydiaha of Saskatoon Campus, Hube Wilson of Princeton University and Fred Brown of Simon Fraser University have all helped to rupture my thinking at a time when I was ready
to expand my perspective on the social sciences.

I want to dedicate the study to Reece Harding who will be five in September. He kept asking me when I would be finished "your phesis", and I always wondered whether the time spent on it would, in any small way, relate to the making of the social-scientific revolution required if he and his friends are to be able to look to their future without the fears and hopelessness that my generation generates. If it does not then my time would have been better spent with Reece.

Finally I want to thank the members of the I.W.W., No. 620, Vancouver, B.C. for letting us use their (and our) office for typing this thesis.
In bureaucratic social science - of which abstracted empiricism is the most suitable tool and grand theory the accompanying lack of theory - the whole social science endeavor has been pinned down to the services of prevailing authorities. - C. Wright Mills.

The inchworm procedures are chaotic and hebephrenic. They lead to piecemeal assemblies of material. They win scant respect. The hoptoad methods admit no limitations, set up new conceptualizations far afield, and before long they have concatenated their subempires into major systems. The result is not hebephrenic, but paranoid. - Gardner Murphy.
ERRATA

The Inchworm and the Hoptoad is (xv) not (i).

Pages 316 and 377 have been omitted in numbering.

There are two pages numbered 359 and they have been designated "a" and "b". The same applies to page 521.

G. B. Rush
Senior Supervisor
Introduction

An introduction should provide the reader with insights born from reflecting on one’s study as it is taking shape. Though an author must be sure of the set of problems, in any study, he or she cannot be certain where that study will lead. An introduction should provide the reader with the perspective on the study that the author develops as he or she is consolidating the argument. (1)

Proper Study

This thesis has, as its “proper study”, the concern with how ideology and social science can or cannot be clearly distinguished. A study of a variety of approaches to the “problem of ideology” led to the conclusion that ideology and science cannot be treated exclusively.

The same question is then studied from a second stance. If ideology and science cannot be clearly distinguished, then the relations between theories of logic used in the social sciences and ideology are open to study. Several important theories of logic are studied from this perspective and the conservative function of formal, academic logics is contrasted with the more radical function of pragmatic logic. The differing characters of social sciences that utilize the contrasting logics are described and all versions of the value-free doctrine criticized. Most important it is argued that only a pragmatic approach to logic is able to account for the problem ideology presents for the social sciences.

This is only a capsule of the study. At this point, it is vital to know something about its development. Studies in three areas - the sociology of
knowledge, the philosophy of science, and the sociology and philosophy of education were undertaken to attempt to clarify how best to approach the problem of ideology and the social sciences. This led to an accumulation and scattering of relevant ideas, sub-problems and hunches, but not to a skeleton of an argument that could take them into account. The first area of study made me skeptical of a solely academic description of scientific ideas. The social and political relevance and function of ideas has always concerned me and I began to apply this analysis to social science itself. The second area of study convinced me that even an academic approach to specialized problems in the philosophy of science and logic was highly questionable. Formal logics seemed to lack a footing in human praxis; and yet functioned to mystify knowledge in the social sciences that did have such a basis. The third area of study convinced me that it was in a study of the social relations in educational institutions that I would locate (situate) the processes (uses of authority in teaching and research, uses of language, etc.) that would explain how and why such an academic and falsified treatment of knowledge occurs. Though I have not developed this matter in depth in this study, it affected the conceptualization of the thesis profoundly.

Obviously, the development of the line of thought was not as neat as the above outline suggests. It took time to even begin to realize that these three areas of study were relevant to the problem at hand. And with study in these areas, the "problem" itself was transformed. Such is the "dialectic" of inquiry. (2)

It is worth commenting on the origin of the problem. My interests in the social sciences have always had an interdisciplinarian, even "transdisciplinarian", character to them. My formal education has included problems in political science (B.A.), psychology (B.A. Honours and M.A.) and sociology (B.A. and Ph.D.). More
important, my ongoing independent and committed studies have included, among other
things, the fields of economic history, social theory and philosophy. This range
of study, and the personal experience that complements it, has forced me to "trans-
disciplinarian" questions which I found were reducible to the problem of "ideology
and the social sciences". This inquiry is then rooted in years of thought and
study and serves as an important junction in my intellectual work. The orienta-
tion developed here will definitely affect all my future social research.

Method

As I said, the three areas of study did not provide a method of organization
for the thesis. While reflecting on problems encountered in my Master's Thesis (3),
I realized that what appears to be an uneconomical method was required to enhance
my learning at this stage in my studies of ideology and logic. A more concise
statement of the problem and development of the argument was possible, but it
would suffer from the trappings of what Mills called "grand theory" (4). My M.A.
suffered from what Mills called "abstract empiricism" (too much data, too little
critical thought) and there was nothing to be gained from going to the other
extreme.

My method is therefore dialogical. I have selected certain authors
strategically and outlined and critically evaluated their ideas as a basis for
developing my own argument. Agreement with an author was not a criteria for
selection. I have dealt with each author in depth and not skipped over points
even if they are similar to ones with which I had already dealt. The alternative
to this so-called redundancy would have been a formalized and eclectic argument,
combining points from several theorists to make my own point. Such an approach
would not only fail to do justice to the arguments and to expose their shortcomings in depth, it would also contradict the main emphasis of the thesis. Taking "ideas" from a number of sources to help develop my own argument would, in effect, abstract these ideas out of their original context, dissociate them from the perspective of the author and in the process my own argument would take on a reified character. For my thesis to be alive, it must grow out of a dialogue with the real arguments of other humans; not with "straw men".

I have thus sacrificed economy for criticism. I have attempted to make the argument as thorough as possible without specifying or generalizing the problem too much. For example, I have deliberately excluded a study of the implications of psychoanalysis for the study of ideology and logic and of questions of method derived from phenomenology. Both these fields are relevant to the broad considerations of this thesis, and, in my opinion, a study of them would reinforce the general approach taken. I have had to deal with many problems since "ideology and the social sciences" is an almost endless area of study, but I have tried to integrate the study in terms of certain themes (e.g., the question of "fact and value") and my dialogical, critical method.

Organization

Certain chapters, in particular, carry the argument. In Section I, the first five chapters develop my approach to the problem of ideology. It relies heavily on an interpretation which stresses the latent pragmatism of Marx and Engel's approach. Chapter Six, "Ideology in the Natural Sciences", plays a pivotal role in broadening the bounds of the study. Many points raised in that chapter are not followed up until Section II.
The following chapters in Section I do two things. First, they relate the approach taken to ideology to political matters and thus provide clues about how scientific and social processes (e.g., changes) interrelate. Second, they explain why academia has failed to generally articulate these relationships. The first section concludes by discussing Sartre as one of the few theorists who has developed an understanding of knowledge which accounts for ideology.

Section II is both a demystification of theories of logic that do not account for the problem of ideology and a development of an approach to logic that does. The sixteenth chapter, on Toulmin, is the "turning point" in this process, and hence has an added importance. Chapter Nineteen sets out the more significant ideas of the thesis, but it depends too much on the whole development of the argument to stand by itself. Chapter Twenty attempts to sum up the type of logic which is able to explicitly account for the interdependence of ideology and logic vis-a-vis the function of science in society.

Section III (Chapter Twenty-One) is only a brief outline of the implications of the thesis for education. I have only raised two aspects of this question: the way social relations in education underlie the mystified and reified view of science ("scientism") which ignores the relations of ideology and logic; and the implications of the "student revolt" (and the larger social movement of which it is a part) for our approach to knowledge in the social sciences.

It is fitting that a thesis that stresses "praxis" and a pragmatic understanding of knowledge should conclude by referring to the conflicting social relationships that underlie the problems studied in the thesis itself.
Footnotes

1 This introduction was drafted after Chapter Eighteen. In a sense, the thesis was "down-hill" from that point and it was the best place from which to reflect critically on the study.

2 It is vital to understand how a study is transformed as it progresses or knowledge tends to become mystified. See C.W. Mills: On Intellectual Craftsmanship, in The Sociological Imagination. New York, Oxford University Press (1959); and Two Styles of Social Science Research, in I.L. Horowitz (ed.): Power Politics and People. New York, Ballantine (1963).

3 J. Harding: An Empirical Clarification of Motivational Variables Among Saskatchewan People of Indian Ancestry. Saskatoon, University of Saskatchewan (1964).

4 C.W. Mills: The Sociological Imagination, Chapter Two.
Chapter One

Ideology as False and Elitist Ideas: Marx and Engels

Though the term "ideology" was used before them, it was Karl Marx and Frederick Engels who developed the first theory of ideology. Their theory about the relations between ideas, class structure, power and revolution arose from their criticisms of Feuerbach and the young Hegelians of their time. Though it was developed over one hundred years ago, it remains an important basis for any serious consideration of the problem of ideology.

It is necessary to outline the theory in depth since it is not widely discussed at present. The excessive use of the word "ideology" today is not indicative of an intelligent use of the term. It has taken on such a broad meaning that the ordinary use - usually loosely associated with a political programme and strategy - is of little value. Nor do the politics of a person seem to relate much to an intelligent, let alone intelligible, use of the term. People in North America often use the term as it became distorted during the Cold War period. During that period it came to be associated with an irrational anti-communism. All theory of ideology was lost. One result of this anti-theoreticalism is that today political leftists often use the term in a sectarian way, i.e., to refer to their own position. We shall see as we proceed that the theory of Marx and Engels provides us with a far different meaning; one having ramifications for both method and theory in the social sciences.

Ideology and the Division of Labour

A general theory of consciousness underlies Marx and Engels' theory of
ideology. In their words:

"Consciousness can never be anything else than conscious existence, and the existence of men is their actual life-process. If in all ideology men and their circumstances appear upside down as in a camera obscura, this phenomenon arises just as much from their historical life-process as the inversion of objects on the retina does from their life-process ..."³

To clarify what they meant, they continued:

"That is to say, we do not set out from what men say, imagine, conceive, nor from men as narrated, thought of, imagined, conceived, in order to arrive at men in the flesh. We set out from real, active men, and on the basis of their real life-process we demonstrate the development of the ideological reflexes and echoes of this life-process. The phantoms formed in the human brain are also, necessarily, sublimates of their material life-process, which is empirically verifiable and bound to material premises. Morality, religion, metaphysics, all the rest of ideology and their corresponding forms of consciousness, thus no longer retain the semblance of independence. They have no history, no development; but men, developing their material production and their material intercourse, alter, along with this their real existence, their thinking and the products of their thinking. Life is not determined by consciousness, but consciousness by life."⁴

Without discussing what they meant by "empirically verifiable" and "material premises" we cannot be sure what form of consciousness Marx and Engels would call ideological. This shows the intricate relationship between so-called epistemological questions and social theory that I will be discussing throughout this thesis.

Lefebvre, one of the few contemporary sociologists to deal with the notion of ideology in Marxism, can help us understand Marx and Engels' statements. He described their approach to consciousness by contrasting it with an opposite approach.

"Either we start from consciousness; in which case we fail to account for real life. Or we start from real life; then we come up against this ideological consciousness that has no reality, and must account for it. Historical materialism puts an end to the speculation which starts from consciousness, from representations, and hence from illusions ..."⁵

To understand the difference between these approaches, we need to consider how Marx and Engels' theory of history shaped their theory of ideology. Their main
point was that the division of labour made human consciousness ideological because with it theory became abstracted from practice. The

"Division of labour only becomes truly such from the moment when a division of material and mental labour appears. From this moment onwards consciousness can really flatter itself that it is something other than consciousness of existing practice, that it is really conceiving something without conceiving something real; from now on consciousness is in a position to emancipate itself from the world and to proceed to the formation of "pure" theory, theology, philosophy, ethics, etc."6

This division of labour led to the development of illusions among the mass of people.

"The division of labour, which we saw above as one of the chief forces of history up till now, manifests itself also in the ruling class as the division of mental and material labour, so that inside this class one part appears as the thinkers of the class (its active, conceptive ideologists, who make the perfecting of the illusion of the class about itself their chief source of livelihood), while the others' attitude to these ideas and illusions is more passive and receptive, because they are in reality the active members of this class and have less time to make up illusions and ideas about themselves."7

From this they concluded:

"The ideas of the ruling class are in every epoch the ruling ideas: i.e. the class, which is the ruling material force of society, is at the same time its ruling intellectual force. The class which has the means of material production at its disposal, has control at the same time over the means of mental production, so that thereby, generally speaking, the ideas of those who lack the means of mental production are subject to it. The ruling ideas are nothing more than the ideal expression of the dominant material relationships, the dominant material relationships grasped as ideas; hence of the relationships which make the one class the ruling one, therefore the ideas of its dominance ... (therefore) the ruling class rule also as thinkers, as producers of ideas, and regulate the production and distribution of the ideas of their age: thus their ideas are the ruling ideas of the epoch."8

This is a complicated theory where the term "ideology" has a far different meaning than is common today. Lefebvre outlined the relation of the division of labour to ideology as follows.
"So far as the development of ideologies is concerned, the most important division is that between physical and intellectual labor, between creative action (operations upon things with the aid of tools and machines) and action on human beings by means of non-material instruments, the primary and most important of which is language."9

According to this theory, the organization of social relations within the division of labour of capitalism separates the creation of ideas from the mass of people. Yet these ideas represent the interests of the "ruling class" and pervade the whole society due to the control they have over "mental production", e.g., education. From this comes ideology, or false ideas that do not reflect the experience of the mass of the people. Ideas come to be treated as abstractions. In Marx and Engels' words:

"Once the ruling ideas have been separated from the ruling individuals and, above all, from the relationships which result from a given stage of the mode of production, and in this way the conclusion has been reached that history is always under the sway of ideas, it is very easy to abstract from these various ideas 'the idea' ... as the dominant force in history ..."10

Ideology is thus created through a reification11 of ideas. According to Marx and Engels this occurs through "three tricks". First "one must separate the ideas of those ruling for empirical reasons, under empirical conditions and as empirical individuals, from these actual rulers, and thus recognize the rule of ideas or illusions in history". Ideas become abstracted from their historical origins and social functions in this way. Second "one must bring an order into this rule of ideas, prove a mystical connection among the successive ruling ideas ..." Thus a logic is imposed on these "ideas" that have become abstracted from their origin and function. Third "the mystical appearance ... is changed into a ... series of persons ... into the 'thinkers', the 'philosophers', the 'ideologists' who again are understood as the manufacturers of history ..."12

Those that impose a logic onto the ideas that are abstracted from their origin
and function come to be seen as the creators of the ideas.

Here is the key to their theory of ideology. Ideology is the abstraction of ideas from their origin and function; their formalization and their dissemination as 'true' ideas through the socialization and educational institutions. This theory does not imply that ideologies are false in the sense that they have no reality. The problem of ideology for Marx and Engels is not the truth or falsehood of ideas per se, but the relation of theory to practice or of mental to physical work.

Lefebvre outlined six characteristics he saw in this theory of ideology which can help us understand this point. According to his interpretation of Marx and Engels, ideologies present us with "... a fragmentary, partial reality..." Though they distort reality "... they culminate in systems (theoretical, philosophical, political, juridical) " Consequently, they are both "... general, speculative, abstract..." and "... representative of determinate, limited, special interests." Thus "... ideologies are not altogether false." Because they are rooted in reality, scientific insights are often "... mixed up in ideological thinking." They differ from science in that they "... make room for non-scientific abstractions..."¹³

Another way to specify Marx and Engels' concept of ideology is to discuss the way ideology affects the relations between human praxis and consciousness. Lefebvre comments that "Ideologies are ... ignorant of the exact nature of their relations with praxis - do not really understand their own conditions and presuppositions, nor the actual consequences to which they are leading."¹⁴ Ideologies do have "conditions", i.e., they are related to human praxis, but this relationship is not articulated within a system of ideas which is ideological.
The social function of the ideology is not an object of study within a system of ideas which is ideological, but instead the "ideas" are treated in abstract.

Lefebvre further simplified Marx and Engels' theory of the function of ideologies. He wrote that "Ideologies mediate between praxis and consciousness (i.e., language)." They are not necessarily false ideas though their abstract nature leads to a distorted view of praxis. It is the formalization of limited ideas and their dissemination as abstract, general truths then that leads to ideology.

Could it be that the ideas of Marx and Engels have themselves been abstracted and disseminated by the same means they describe? What is now being called "vulgar marxism" could be the result of political elites in communist countries doing just this. The simplistic and distorted images of Marx and Engels in capitalist countries could also result from the political elites there doing much the same thing. In the former case, the ideas are treated positively and in the latter they are treated negatively, but in both they are treated abstractly. In this way, according to the very process they have described, the ideas of Marx and Engels may have become a marxian ideology. Some of those who identify with the ideas of Marx and Engels may themselves treat the "ideas" in an ideological, rather than historical manner. Clarification of the problem of ideology thus may aid us to understand the uses of political ideas at the present time.

Marx and Engels' theory of ideology, of course, requires a specific testing. One would need to study (1) the dominant ideas of the time, historically (2) the logics that systematize these dominant ideas and (3) the method of dissemination. In addition to looking at the philosophies of science of today, this would involve
a study of the mass media and educational institutions. Later, when I discuss theories of knowledge in the social sciences, I will be testing the kinds of relationships that Marx and Engels hypothesized.

Ideology and Epistemology

Marx and Engels recognized the need for such specific studies. "Empirical observation must in each separate instance bring out empirically, and without any mystification and speculation, the connection of the social and political structure with production. The social structure and the State are continually evolving out of the life-process of definite individuals, but of individuals, not as they may appear in their own or other people's imagination, but as they really are; i.e. as they are effective, produce materially, and are active under definite material limits, presuppositions and conditions independent of their will."¹⁶

The ideas people hold of themselves have to be treated with skepticism. This is one thing that follows from Marx and Engels' theory of ideology. Not from people's ideas, but from their actions, will we find out about the nature of people's experience. This anti-ideological epistemology is the foundation of Marx and Engels' approach to social theory.

About their epistemological premises, they wrote: "The premises from which we begin are not arbitrary ones, not dogmas, but real premises (from) which abstraction can only be made in the imagination."¹⁷ Their premises are not built from abstract theories of ideas, as is so typical among modern philosophers; in fact, epistemology per se is not considered problematic. According to them, the crucial thing is to recognize that we use our imagination to abstract knowledge, and that the validity of the knowledge is dependent not on the abstractions per se but on the relation of our abstractions to the practical lives of people. In their words:

"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 actual, empirically perceptible process of development under definite conditions. As soon as this active life-process is described, history ceases to be a collection of dead facts as it is with the empiricists (themselves still abstract), or an imagined activity of imagined subjects, as with the idealists.\textsuperscript{18}

Those who live in isolation from the practical lives of the mass of people (e.g., academics) and who, by Marx and Engels\textsuperscript{1} definition would be called "ideologists", often lack this kind of understanding. Rather than relating knowledge to the practical affairs of people, they develop abstract rationales for their knowledge. They make up new ideas that are used to argue that their ideas are valid or true. This abstracting of epistemology into the realm of theory is rooted in a failure to consider the social role of language. Ideologists are not self-critical of their uses of language, but treat language as if it existed in a realm autonomous from social interaction.

Marx and Engels\textsuperscript{1}' handling of the problem of ideology, and their related epistemology, was related to their understanding of the social nature of language. Sounding like George Herbert Mead, who wrote about language some eighty years later, they wrote:

"Language is as old as consciousness, language is practical consciousness, as it exists for other men, and for that reason is really beginning to exist for me personally as well; for language, like consciousness, only arises from the need, the necessity, of intercourse with other men."\textsuperscript{19}

Lefebvre commented on Marx and Engels\textsuperscript{1} awareness of the relation of language to ideology. To him, Marx and Engels\textsuperscript{1} theory of ideology "... tries to situate language within praxis."\textsuperscript{20} And, in doing so, it exposes the distortions of theory that is abstracted from practice. As Lefebvre said of Marx and Engels\textsuperscript{1} discussion of language and ideology:

"In analyzing language ... we must isolate its formal character but we must never separate it from its other aspects - content, development, history, social relations, praxis."\textsuperscript{21}
Those who fail to see that language, including intellectual language, arises from social intercourse, and who treat ideas as though they were individually created, can easily deceive themselves with abstract theories of knowledge. I will return to this point throughout the thesis.

We could say that knowledge and ideology are differentiated by Marx and Engels in terms of how the use of theoretical language relates to practice. Ideology results when theoretical language is developed without specifying its relation to the changing practical affairs of people. Knowledge (e.g., science) results when theoretical language is used to aid us to understand; and, as we shall see, change these practical affairs.

This distinction is best described by outlining Marx and Engels' criticism of Feuerbach's use of ideas. It is his tendency to deal abstractly with social facts that are themselves the result of human activity within certain social relations, rather than to work to change these social relations, that Marx and Engels criticized. They wrote that Feuerbach

"... only interprets the existing sensuous world, has only the relation of a theorist to it, while in reality for the practical materialist, i.e., the communist, it is a question of revolutionizing the existing world, of practically attacking and changing existing things."22

Or, further criticizing him, they wrote:

"He does not see how the sensuous world around him is, not a thing given direct from all eternity, ever the same, but the product of industry and of the state of society; and, indeed, in the sense that it is an historical product, the result of the activity of a whole succession of generations, each standing on the shoulders of the preceding one, developing its industry and its intercourse, modifying its social organization according to the changed needs."23

Here Marx and Engels made it clear that they did not consider the creation of knowledge to be an academic endeavour. Interpreting observations made in and of a society, in itself, does not constitute understanding. Instead there must
be activity to alter the historical conditions that underlie the social relations and the observations made of them. Theory is rooted in problems within the practical affairs of people. Theory is rooted in the division between physical and mental labour. Theory must be put back into practice to be of any value.

As an example of this, Marx and Engels discussed the existence of religious theory in Germany during their time. They wrote that to understand these religious ideas "... is only a question of explaining this theoretical talk from the actual existing conditions." But they went further than this. This explanation in itself will "solve", i.e., change, nothing.

"The real, practical dissolution of these phrases, the removal of these notions from the consciousness of men, will, as we have already said, be affected by altered circumstances, not by theoretical deductions."24

Here we see Marx and Engels' pragmatic view of ideas. Theory is seen as a practical tool. If theory is seen otherwise, say, in abstract from practice, then the theorists forget that "... for the mass of men, i.e., the proletariat, these theoretical notions do not exist and hence do not require to be dissolved ..."25 Marx and Engels are saying that theorists, by using their imagination, turn problems arising from the practical affairs of people into theory for clarification. If they ever forget this and come to believe that their "ideas" exist among the masses of people, they will not recognize that changing the practical conditions out of which the initial problem came constitutes the real solution. Ideologists are those who work within elitist institutions - have reified problems, methods and theories and are looking for "solutions" in the abstract linguistic system within which they are thinking.

Marx and Engels were clearly discrediting the "academic" approach to truth. "Ideology" comes from an academic development of theory. Such an academic develop-
ment of theory, then, as now, is centered in the universities. And it was not limited, then, nor today, to the social sciences. The natural sciences are often thought to be dealing with abstract, trans-human facts as if "... nature's secrets were being disclosed only to the eye of the physicist and chemist ..." (which is what Marx and Engels accuse Feuerbach of implying). Showing a similarity with Thomas Kuhn's approach to natural science, which will be studied later, Marx and Engels asked:

"... but where would natural science be without industry and commerce? Even this 'pure' natural science is provided with an aim, as with its material, only through trade and industry, through the sensuous activity of men."

The mystification of "Science" that is so widespread today was also occurring during the time of Marx and Engels. But they recognized that without technology, and more importantly, the "aims" or purposes for which technology is used, there is no science. That is not to say that scientific theory arising from the problems and techniques of a period cannot affect the existing technology. It is rather to put science and technology into perspective and not to treat science in a trans-human manner. Since it is humans who are treating science in a "trans-human" way, the scientistic view of ideas is absurd. What Marx and Engels said of religion also applies to the mystified concepts of science above.

Marx and Engels saw all sciences as ultimately rooted in the "sensuous activity" of people and they discredited any abstracting of ideas from this source. Solutions in all science are to be found by altering the circumstances or conditions from which the problems of social and natural science arise. The error of the academic or ideologist is that he relapses "... into idealism at the very point where the communist materialist sees the necessity, and at the same time the condition, of a transformation both of industry and of the social structure." They make
ideas into things, and being unaware of their own place within the social structure, they confuse their academic handling of ideas with the practical affairs of people. They are then caught within an isolated language system; within an "ivory tower".

Ideology and Revolution

The above discussion shows how Marx and Engels\(^1\) theory of ideology related to their understanding of the social nature of language and the practical roots of knowledge. Their epistemology was not an academic, but a pragmatic theory of knowledge. This related to their theory of revolution, for, according to their view of ideas, important theoretical problems reflect contradictions in social conditions. The relation between their pragmatic epistemology and their theory of revolution was shown when they wrote that their approach "... does not explain practice from the idea but explains the formation of ideas from material practice; and accordingly it comes to the conclusion that all forms of consciousness and products of consciousness cannot be dissolved by mental criticism ... but only by the practical overthrow of the actual social relations which gave rise to this idealistic humbug ..." From this they concluded "... that not criticism but revolution is the driving force of history."\(^{29}\)

A real solution to a problem that is rooted in human activity within particular social relations, and has been clarified by theory, is thus "... a practical movement, a revolution ..."\(^{30}\) that will alter conditions so as to free humans to act in new ways. The equation of a "practical movement" and "revolution" shows how Marx and Engels\(^1\) theory of ideology, i.e., of how ideas are reified, was the corollary of their theory of how revolutionary ideas relate to social change.
Ideological ideas function to justify existing conditions whereas revolutionary ideas can function to help change these conditions.

On the basis of their approach to consciousness, labour, language and ideas, Marx and Engels concluded that "The existence of revolutionary ideas in a particular period presupposes the existence of a revolutionary class..." For revolutionary ideas to develop there must be a social grouping that has come to see a collective or common problem and desires to alter the social conditions. People in this social grouping must break out of "individualism" whereby they defined their problems as personal and special and/or accepted the ideological ideas that served to justify the state of affairs that they experienced. According to Marx and Engels, once revolutionary ideas developed it was proof that people had come to understand "... conditions which were previously abandoned to chance and had won an independent existence over against the separate individuals just because of their separation as individuals ... and through their separation had become a bond alien to them." Ideology thus functions to fragment individuals so they do not understand how their personal problems relate to particular social relations. As long as people are fragmented or individualized, there is no change of altering social relationships that create problems for people. As Marx and Engels put it "... only by the action of individuals in again subjecting these material powers to themselves and abolishing the division of labour ... only in community with others has each individual the means of cultivating his gifts in all directions; only in the community, therefore is personal freedom possible." We have thus come the full circle. The division of labour was what underlay the separation of mental from material production. This separation and the control of the "ruling class" over both mental and material production was what
allowed ideology to develop. Now we see that ideology is what functions to keep the mass of people from understanding how many of their personal problems are rooted in the division of labour and its control by a ruling group. Ideology, the way Marx and Engels handled the problem, is thus related to "alienation".

Though they were not using the term in their discussion of ideology, the idea of alienation developed in Marx's earlier writings was implied when Marx and Engels wrote "... within the division of labour social relationships take on an independent existence, there appears a division within the life of each individual, in so far as it is personal and in so far as it is determined by some branch of labour and the conditions pertaining to it."^{34}

This "independent existence" of social relationships which are not in the control of the mass of people is what alienates people according to Marx and Engels' theory. But they were not reducing people to these social relationships. When they wrote "We do not mean it to be understood from this that, for example, the rentier, the capitalist, etc. cease to be persons; but their personality is conditioned and determined by quite definite class relationships ..."^{35} they are explicitly anti-reductionistic^{36} in their approach. This is important to note since many have tended to use Marx and Engels' ideas about ideology in a reductionistic way. We shall return to this point when we show the similarity between Marx and Engels and Jean Paul Sartre.

Ideology thus functions to maintain alienation. And, according to this theory, social relationships, including the State and law, which are alienating because they have "... won an existence independent of the individuals ..." become "... a power which in the last resort can only be broken by a revolution."^{37} Marx and Engels' main conclusion after their handling of the problem of ideology is that
"... to assert themselves, as individuals, they (people) must overthrow the State."38

The above discussion shows how Marx and Engels situated knowledge in human praxis and therefore had to ultimately deal with the relationship of ideas and the quality of social relationships. Their thesis relating ideology to alienation constitutes an original one in the so-called sociology of knowledge. Their argument that social science relates to revolution is a much neglected thesis - one of major concern in this study. It would have been superficial to discuss Marx and Engels' handling of the problem of ideology without having discussed how it related to these other questions. Otherwise we would be taking their ideas about ideology out of the larger context within which they were originally given meaning. This is what is typically done, especially as academia becomes over-specialized with disciplines and sub-disciplines, all with their special languages, i.e., this specialized praxis is one main reason why it is so rare for the problem of ideology and other general problems of the social sciences to be given serious consideration today.

What can we conclude from this discussion of Marx and Engels' handling of the problem of ideology? First it is vital to see that they began with a pragmatic view of ideas and saw theory not as truth-seeking in abstract from the practical affairs of people but as a means to clarify how social conditions affect us and to provide clues about how to change them to better the situation of humans. Second they saw ideology functioning to fragment people so that their problems within the social relationships could not be understood commonly. Third they argued that it was the elitist control over the production of ideas that allowed this to happen. From this it is clear that a social theory, critical of the
capitalist division of labour, including mental labour, underlies all else. Their specific theories, including that about ideology, have meaning only as a part of an overall criticism of capitalist society. Marx and Engels did not start with this overall criticism and then deduce the special theories. Their handling of the specific problems, like the problem of ideology, was a result of continually "shuttling" between macro historical concerns and macro problems rooted in specific social relations of the time.

This theory provides an excellent beginning for our study of ideology and science. In its comprehensiveness and its ramifications, it opens up questions which we must now confront. It is a classic critique of academic knowledge and because it places language and knowledge within a sociological dimension it provides us with a foundation for a broad critical examination of dominant epistemological ideas.

This theory also clarifies the problem of ideology and helps counter the confusion that is common about the term. As one author said "It is an irony of the history of 'ideology' that it probably began as a label for the scientific alternative to metaphysical speculation, and ended as the label for the metaphysical alternative to science." Marx and Engels' theory shows the usefulness of returning to the original meaning of the term and constituting the problem of ideology as a social scientific concern.

The interdependence of all aspects of Marx and Engels' social theory, including the problem of ideology, epistemology, etc., raises a specific problem with which we must deal before proceeding. Since "ideology" was a term used to describe false ideas, what is to stop people from treating all of the ideas of Marx and Engels, including their ideas about ideology, as ideological? A different social theory, emphasizing different social relations and based on a
different epistemology, could, theoretically, conclude this. This problem arising from our above discussion leads us to consider Karl Mannheim's handling of the problem of ideology.

Footnotes


3Ibid., p. 14.


6Marx and Engels, op. cit., p. 20.

7Ibid., p. 39-40.

8Ibid., p. 39.

9Lefebvre, op. cit., p. 67.

10Marx and Engels, op. cit., p. 42.

11I will be using this term throughout the thesis. It refers to the tendency to attribute a fixed, abstract quality to ideas; and to "thingify" an idea; or take it out of its historical and social context.

12Ibid., p. 42-43.

13Lefebvre, op. cit., p. 69-72.

14Ibid., p. 70-71.

15Ibid., p. 73.


17Ibid., p. 7.
18 Ibid., p. 15. Here we see Marx and Engels using the term "abstract empiricists" that C.W. Mills made central to his critical sociology.

19 Ibid., p. 19.
20 Ibid., p. 74.
21 Ibid., p. 74.
22 Ibid., p. 34.
23 Ibid., p. 35.
24 Ibid., p. 31-32.
25 Ibid., p. 32.
26 Ibid., p. 36.
27 Ibid., p. 37.

28 The term "pragmatic" is central to this thesis. A simplistic definition of the word would distract from the argument of the thesis since pragmatism gains its meaning only in the context of a comparison with and criticism of formal approaches to knowledge. One thing should be clear, however. I am using the term both to describe approaches to knowledge which emphasize the human praxis out of which ideas gain meaning, and in the more technical way to describe the pragmatic theory of logic. Chapter Twenty will specify the more technical use of the term.

29 Ibid., p. 28-29.
30 Ibid., p. 69.
31 Ibid., p. 40.
32 Ibid., p. 75.
33 Ibid., p. 74.
34 Ibid., p. 76.
35 Ibid.

36 This thesis shall wage a consistent critique against reductionism in the social sciences. Such reductionism, or the tendency to try to reduce explanations of human behavior to specialized disciplines (e.g., physiologism, psychologism, sociologism, etc.) results from the growing formalization and specialization of academic (e.g., ideological) approaches to knowledge. It is rooted in the one-dimensional praxis of academics teaching and researching within one-dimensional institutions. My discussion of Marcuse (Chapter Nine) will elaborate on this matter.
39 Marx and Engels' theory of ideology is consistent with the so-called "new working class" theories of today in that it focuses on the ideological role of mental labour in education. It remains debatable whether or not Marx and Engels were aware of the potential productive role of mental labour in advanced capitalism.

40 C.W. Mills used this term to depict the need to avoid both grand theory and abstract empiricism. Mills accredits Marx with this ability in his book *The Marxists*, New York, Dell (1962), p. 10-12.

Chapter Two

Ideology as a General and Total Problem: Mannheim

Karl Mannheim's handling of the problem of ideology discards some and relies on other features of Marx and Engels' approach. The features that are accepted were generalized into a position that tended to be absolutized and, consequently, it is of questionable value. Still Mannheim's discussion introduces us to a dilemma that clarifies our discussion of ideology. The dilemma arises from his turning the theory of ideology into problems in the sociology of knowledge.

Mannheim accredited Marxism with basic insights into the nature of ideology. He showed this when he wrote that "... the beginnings of the conception of ideology which marks the theory of useful myths may be traced largely to Marxism."¹ But Mannheim was also quick to criticize "the Marxian" notion of ideology. He thus continued that Marxism "... does not, however, bring every attempt at an interpretation of history into this category but only those to which it is in opposition."² Both his indebtedness and his basic divergence from Marx's concept of ideology (he ignores Engels' contribution) were shown by the statement that

"The sociology of knowledge actually emerged with Marx, whose profoundly suggestive anercus went to the heart of the matter. However, in his work, the sociology of knowledge is still indistinguishable from the unmasking of ideologies since for him social strata and classes were the bearers of ideologies. Furthermore, although the theory of ideology appeared within the framework of a given interpretation of history, it was not as yet consistently thought out."³

These statements can be taken at face value only at the risk of ignoring
a central issue for the problem of ideology. Mannheim's broad category of "the Marxian" theory of ideology ignored the possibility mentioned earlier that Marx and Engels' theory of ideology was itself reified by the social process that they claimed created ideology. Mannheim did not ignore this possibility completely since he did write

"... it could easily be shown that those who think in socialist and communist terms discern the ideological elements only in the thinking of their opponents ... As sociologists there is no reason why we should not apply to Marxism the perceptions which it itself has produced, and point out from case to case its ideological character."[^4]

Still he did not clearly distinguish between Marx and Engels' theory of ideology, as part of a particular social theory and a related epistemology, and the political and elitist use of the ideas about ideology in contradiction to that social theory and epistemology. In fact, it can be argued that Mannheim abstracted the theory of ideology, and, in an academic fashion, created a general problem without considering the important relationship of these ideas to other ideas within Marx and Engels' work. What are pseudo-problems, sometimes called the problems of sociological subjectivity,[^5] may have been the result.

The Sociology of Knowledge

With this possibility in mind let us look at Mannheim's handling of the problem of ideology. As already stated, the key to the analysis was his transforming of the theory of ideology into problems in the sociology of knowledge. A rejection of the treatment of ideas, i.e., any ideas, as absolutes and the related linking of all ideas to socio-historical conditions, is what underlay this transition. Mannheim thus wrote that "As long as one does not call his own position into question but regards it as absolute, while interpreting his opponent's ideas as a mere function of the social position they occupy, the decisive step has not been
What Mannheim called "ideological distortion" results from absolutizing any ideas. He argued that "we have a case of ideological distortion when we try to resolve conflicts and anxieties by having recourse to absolutes, according to which it is no longer possible to live." The reason why it is "no longer possible to live" by certain ideas is because they are "inappropriate" to the socio-historical conditions in existence. "Viewed from this standpoint, knowledge is distorted and ideological when it fails to take account of the new realities applying to a situation, and when it attempts to conceal them by thinking of them in categories which are inappropriate." What we mean by "new realities" and "appropriate categories" is, of course, the crux of the matter. The problem of ideology is partly rooted in conflicts about what categories reflect reality the best.

Because of the tendency to absolutize ideas - including Marx and Engels' ideas about ideology - Mannheim made his distinction between "the study of ideology" and "the sociology of knowledge". The former "... has made its task to unmask the more or less conscious deceptions and disguises of human interest groups, particularly those of political parties." The latter "... is concerned not so much with distortions due to a deliberate effort to deceive as with the varying ways in which objects present themselves to the subject according to the differences in social setting." Mannheim then argued that we should "... leave to the theory of ideology only the first forms of the 'incorrect' or untrue, while one-sidedness of observation, which is not due to more or less conscious intent, will be separated from the theory of ideology and treated as the proper subject-matter of the sociology of knowledge." This distinction is the basis of
Mannheim's handling of the problem of ideology. When we remember that Marx and Engels did not suggest that ideology was a deliberate falsifying of events, but resulted from the division of mental and physical labour and the functioning of dominant ideas to maintain the alienation of the mass of people, it seems that Mannheim may be creating, rather than clarifying, a problem. Since Marx and Engels' theory of ideology did include a consideration of problems that Mannheim classified under the sociology of knowledge, his distinction comes into question.

Mannheim turned the problem of ideology into a general and total academic problem. All ideas are related to socio-historic conditions and if older ones cease to apply to new circumstances, but are still perpetuated, they distort realities. Thus Mannheim wrote that "The attempt to escape ideological and utopian distortions is, in the last analysis, a quest for reality." What is meant by "quest for reality" is what is vital, and is not a simple matter. But it is clear that it is not a question that is "solved" academically. Mannheim stated what he meant by this statement when he wrote that ideological (and utopian) analysis

"... can be used to combat the tendency on our intellectual life to separate thought from the world of reality, to conceal reality, or to exceed its limits. Thought should contain neither less nor more than the reality in whose medium it operates."

This is a confusing statement, though it raises a relevant problem. The confusion is based on an academic rather than a pragmatic understanding of language and thought. For Mannheim thought must be linked with "reality". From this it follows that "thought" can potentially be separated from "reality". The fact that the concept of "ideology" (and for Mannheim the concept of "utopia" as well) signifies a problem for thought at all suggests that thought and reality sometimes do and sometimes don't relate. As he wrote "Both concepts contain the imperative
that every idea must be tested by its congruence with reality."12

But this concern with the relation of thought and reality is not the fundamental issue. First of all it is simply stupid to treat "reality" and "thought" as separate since language and thought are the key media within which humans exist. The separation of thought and reality is more a symptom of Mannheim's false epistemological ideas than of a useful understanding of ideology.

What is needed is a specific statement of what form of thought makes sense of what aspects of human reality. Mannheim did recognize that "... our conception of reality itself has been revised and called into question"13 by growing awareness of the problem of ideology; but by splitting "thought" and "reality" he got caught in a vicious circle about the "congruence" of the two. A person trained or oriented to using ideas academically, i.e., who looks for "solutions" within language per se, can go on endlessly trying to make (words about) "reality" and (words about) "thought" fit together nicely.

Marx and Engels' handling of the problem of ideology considered this question. They argued for a relation of thought or consciousness and praxis (this is a better term than "reality") that would replace the "ideology" that was being produced in abstract from the living experiences of the mass of people. This was to be done with the aid of "knowledge" of their common problems within the social relations of early capitalism. Marx and Engels argued that the separation of theory and practice, which made theory into ideology and practice into alienation, had to be overcome by changing the social relationships - including those between "theorists" and the mass of people - that underlay this split.

Mannheim also thought that the relation of theory and practice was a central question. Thus he wrote that
"Ideologies are the situationally transcendent ideas which never succeed de facto in the realization of their projected contents. Though they often become the good-intentioned motives for the subjective conduct of the individual, when they are actually embodied in practice their meanings are most frequently distorted."

From this we can conclude that for Mannheim the meaning of ideas in practice will determine whether reality is being distorted or not. If this is specified, as I will attempt to do as I continue, I do not disagree. Unfortunately this train of thought was not followed through by Mannheim.

Distinctions Within the Sociology of Knowledge

Mannheim attempted to further clarify the problem of ideology by making several other distinctions. Let us look at them, one by one, to see whether it constitutes a real clarification or is a lengthy but circular analysis back to his original dilemma. The distinctions I shall look at are those between the "particular/total", "specific/general" and "non-evaluative/evaluative" conceptions of ideology. Clarifying what he meant by these distinctions will show us how and why Mannheim turns the specific theory of ideology into a general academic problem. It will also serve to further our critical evaluation of this approach to the problem of ideology.

For Mannheim "The particular conception of ideology is implied when ... we are skeptical of the ideas and representations advanced by our opponents." By comparison the total conception refers to "... the ideology of an age or of a concrete social group, e.g. of a class." In both cases "... the ideas expressed by the subject are ... regarded as functions of his existence ... (and are) not taken at their face value". This is their similarity. Their difference lies in calling into question of "... the opponent's total Weltanschauung" when the total conception of ideology is being used. While the particular conception tends towards
"the purely psychological" interpretation of ideas the total conception touches upon "... the theoretical or noological level ... not merely the content but also the form ... even the conceptual framework of a mode of thought as a function of the life situation of a thinker." 18

Showing and recognizing a similarity with Marx, Mannheim concluded that "... an analysis of the correspondence between the situation to be known and the forms of knowledge" 19 constitutes a higher form of analysis than that focusing on the psychology of interests. According to this approach, the individual is not seen as "the bearer" of an ideology, but rather

"... the individual can only be considered as the bearer of an ideology as long as we deal with that conception of ideology which, by definition, is directed more to detached contents than to the whole structure of thought, uncovering false ways of thought and exposing lies. As soon as the total conception of ideology is used, we attempt to reconstruct the whole outlook of a social group, and neither the concrete individuals nor the abstract sum of them can legitimately be considered as bearers of this ideological thought-system as a whole." 20

This distinction is certainly justified, though still confusing. An individual is "the bearer" of an ideology in that he or she has experienced events in such a way that a specific "ideology" develops. But if by "bearer" we imply "cause" or anything like that we contradict everything known about the socialization of language and thought. Marx and Engels themselves built their theory of ideology on an understanding of the social character of language and thought. Since Mannheim implied that "the Marxian" treatment of ideology lacked this understanding and justified his distinction between particular and total concepts of ideology on this basis, we again conclude that he failed to distinguish between the original theory and the reification of the original theory of ideology.

According to Mannheim, the shift from the particular to the total view
of ideology occurred through three stages in the history of ideas. First there was the contribution of critical philosophy. In Mannheim's words:

"Philosophy played a part in the process, but not philosophy in the narrow sense (as it is usually conceived) as a discipline divorced from the actual context of living. Its role was rather that of the ultimate and fundamental interpreter of the flux in the contemporary world."21

This philosophy succeeded in establishing new perspectives of the world. Then, "After the objective ontological unity of the world had been demolished ..." with the aid of philosophy "the perceiving subject" became important. Thus philosophies of consciousness began to develop and these became a foundation for the theory of ideology.

"Henceforth the world as "world" exists only with reference to the knowing mind, and the mental activity of the subject determines the form in which the world appears. This constitutes in fact the embryonic total conception of ideology, though it is, as yet, devoid of its historical and sociological implications."22

Second there was the development of historical perspective and its integration with the new awareness of the perceiving subject. The subject was placed within a historical context. This development, that is, the awareness of "... the historically changing nature of mind was discovered not so much by philosophy as by the penetration of political insight into the everyday life of the time."23

The third and to Mannheim the most important step was awareness of the relation between social classes and intellectual forms. This provided a more specific hypothesis from which to study how the perceiving subject and historical setting interrelated. Once this transformation from the particular and psychological to the total and historical understanding of ideology occurred:
"The particular conception of ideology merges with the total. This becomes apparent to the observer in the following manner: previously, one's adversary, as the representative of a certain political-social position, was accused of conscious or unconscious falsification. Now, however, the critique is more thoroughgoing in that, having discredited the total structure of his consciousness, we consider him no longer capable of thinking correctly."  

At this point, the distinction between a "specific" and a "general" application of ideological analysis entered Mannheim's study. For this distinction "... the decisive question is whether the thought of all groups (including our own) or only that of our adversaries is recognized as socially determined."  

Mannheim argued that all ideas are socially determined. After combining the total and the general definitions of ideology, he concluded that "... the general form of the total conception of ideology is being used by the analyst when he has the courage to subject not just the adversary's point of view but all points of view, including his own, to the ideological analysis."  

On the basis of this, Mannheim developed a further distinction. A specific and particular or total application of ideological analysis in itself is insufficient as a sociological analysis since it remains a part of the "intellectual armament of a party". As Mannheim wrote "In attempting to expose the views of another, one is forced to make one's own view appear infallible and absolute, which is a procedure altogether to be avoided if one is making a specifically non-evaluative investigation."  

This non-evaluative or sociological approach is contrasted with the "evaluative" and, for Mannheim, was characterized by "a definite epistemology".  

We saw how Marx and Engels accepted an epistemology which related to both their social theory and theory of ideology. Mannheim also proposed an epistemology to complement his "total and general", i.e., "non-evaluative" application of ideological analysis. He saw two possibilities which he called "relativism"
and "relationalism", and he argued for the latter. His conclusion was that "... relativism combines this historical-sociological insight with an older theory of knowledge which was as yet unaware of the interplay between conditions of existence and modes of thought." In his view, relativism owed "... its existence to the discrepancy between this newly-won insight into the actual processes of thought and a theory of knowledge which has not yet taken account of this new insight." Instead of relativism, which rejects epistemological questions about truth and tends to see all ideas as equally worthwhile or worthless, Mannheim argued "... that it is not epistemology in any absolute sense but rather a certain historically transitory type of epistemology which is in conflict with the type of thought oriented to the social situation." It is unclear what Mannheim meant by the statement "... in conflict with the type of thought oriented to the social situation" but it could refer to the need for people to understand relationships between immediate social experience and larger social structures if they are to gain real knowledge. If this was the case, then we see a continuity from Marx and Engels' thought to that of Mannheim's; a continuity that continues in the work of C.W. Mills and Herbert Marcuse in our time.

Mannheim's Evaluative Epistemology

The main conclusion that Mannheim derived from these three distinctions and his idea of the sociology of knowledge as a non-evaluative study of ideology was that a new epistemology was required for the social sciences. He wrote "... epistemology is as intimately enmeshed in the social process as is the totality of our thinking, and it will make progress to the extent that it can master the complications arising out of the changing structure of thought."
He then hinted at the nature of the new epistemology. "A modern theory of knowledge which takes account of the relational as distinct from the merely relative character of all historical knowledge must start with the assumption that there are spheres of thought in which it is impossible to conceive of absolute truth existing independently of the values and position of the subject and unrelated to the social context." The "spheres of thought" of which Mannheim was thinking were not made clear. And if his statement about "absolute truth existing independently" is taken literally I would argue that no sphere of thought can avoid the effects of ideology.

It is noteworthy that when this new epistemology is applied to specific problems then the study of ideology becomes evaluative in a new way, i.e., a non-sectarian way. The sociologist needs to evaluate how his or her ideas about ideology relate to a social position and the values learned in that position. Mannheim thus ended up advocating an evaluative, or what we might call a self-critical, study of ideologies. This is where his general and total application of ideological analysis led. The relationship of "epistemology" and "the sociology of knowledge" was the basis of this study of ideologies. Making this quite explicit, he wrote "our point is not, therefore, that the sociology of knowledge will, by its very nature, supplant epistemological and noological inquiry, but rather that it has made certain discoveries which have more than a mere factual relevance, and which cannot be adequately dealt with until some of the conceptions and prejudices of contemporary epistemology have been revised." It is quite clear that epistemology is to remain a separate "discipline" and this, as we proceed, will be our main reason for rejecting Mannheim's handling of the problem of ideology.
This, in summary, is Mannheim's main contribution to the problem of ideology. His distinctions begin to clarify the interrelation of epistemology and the position of the person within historical conditions. But, in the process, the meaning of the term "ideology" may have been so generalized and totalized that it no longer makes any useful discriminations between different forms of ideas. Let us look critically at Mannheim's approach to the study of ideology to see just how useful it is.

I want to make it quite clear that I have no disagreement with Mannheim's criticism of ideological analysis that assumes the existence of absolutes. There is nothing worth preserving in a sectarian application of the theory of ideology and there is everything to gain from basic self-criticism about the problem of ideology within the social sciences. Thus Mannheim's distinctions do help us make important issues explicit that might otherwise be ignored or neglected. The distinction between the non-evaluative and evaluative conceptions of ideology forces us away from a narrow, projecting form of thought towards self-consciousness of our presuppositions and their relation to our time and place in society and history.

Mannheim's argument that all intellectual positions are built upon an ontology, and that it is better to evaluate this foundation than ignore it, challenges us to develop new levels and forms of consciousness and knowledge. It is on the basis of this argument that Mannheim advocates his "evaluative epistemology", i.e., a theory of knowledge which takes into account the relationships between a thinker's social position and his or her ideas. We must learn to confront our ontological presuppositions, not pretend they are non-existent and that we observe "reality" with a detached objectivity. Doing the latter
simply allows "ideological distortion" to have a more pervasive effect on our thought. Or, in Mannheim's words:

"The danger in presuppositions does not lie merely in the fact that they exist or that they are prior to empirical knowledge. It lies rather in the fact that an ontology handed down through tradition obstructs new developments, especially in the basic modes of thinking, and as long as the particularity of the conventional theoretical framework remains unquestioned we will remain in the toils of a static mode of thought which is inadequate to our present stage of historical and intellectual development." 36

Though the need to develop new levels and forms of self-consciousness is undisputable, I remain ambivalent about the value of Mannheim's approach to the problem of ideology. While it is clear that so-called "abstract empiricism" is an impossibility, it seems fruitless to try to resolve the problem at an academic level of analysis (e.g., ontological, metaphysical) as Mannheim did. This simply leads to another philosophical and technical language for the academic. It does not evaluate why a form of ideas exists for a certain social group. It is because of this that I remain skeptical of Mannheim's statement that "A clear and explicit avowal of the implicit metaphysical presuppositions which underlie and make possible empirical knowledge will do more for the clarification and advancement of research than a verbal denial of the existence of these presuppositions accompanied by their surreptitious admission through the back door." 38

Separating our language into "the empirical" and "the metaphysical" may show sophistication, even imagination, but it does not break us out of the dilemma with which Mannheim's distinctions present us. I am not rejecting Mannheim's plea for a more conscious evaluation of ideology. It is rather that I think an epistemological orientation, which he has, is the wrong one to the problem.
I am in full agreement with Mannheim's statement that

"We shall be forced eventually to assume an evaluative position. The tran-
sition to an evaluative point of view is necessitated from the very begin-
ning by the fact that history as history is unintelligible unless certain
of its aspects are emphasized in contrast to others."^39

But this does not necessarily mean that we need to debate, academically, our
various "metaphysics". To do this is symptomatic of the division of "mental
production", in Marx and Engels' words, from the practical affairs of the mass
of people. It is the tendency within the ivory towers of academics who have the
time to create, ad infinitum, new problems out of the critical analyses of old
ones. Mannheim tended towards this in some places, though he had the opposite
and more fruitful inclination, as well.

The fact that Mannheim concluded that we need a new epistemology shows
the predominance of the academic strain within his thought. Though he disclaimed
the search for "ultimate truth" on the basis of his discussion of the problem of
ideology, his very language suggests a clinging to the notion. When Mannheim de-
scribed the non-evaluative approach to ideological analysis, he stated that the
sociologist

"... will no longer be inclined to raise the question as to which of the
contending parties has the truth on its side, but rather he will direct
his attention to discovering the approximate truth as it emerges in the
course of historical development out of the complex social process. The
modern investigator can answer if he is accused of evading the problem
of what is truth, that the indirect approach to truth through social
history will in the end be more fruitful than a direct logical attack."^40

It is clear that he still saw "truth", whether approximate or not, as something
arising from an academic description of social history.

When Mannheim wrote "Knowledge arising out of our experience in actual life
situations, though not absolute, is knowledge none the less,"^41 you can sense his
own ambiguity about the question of ultimate truth. He is too apologetic for
rejecting the idea of ultimate truth to have obtained a qualitatively new understanding of what constitutes the validity of one idea over another. Still, on the basis of his statement, he could have dealt differently with the problem of ideology and the related problem of epistemology. Throughout his study, in fact, there are statements that could have served as a basis for an alternative.

On Mannheim's Contradictions

Instead of concluding that academics in the social sciences need an evaluative epistemology, we could conclude that all persons with intellectual skills must inevitably face choices about how their knowledge will be used. This would ultimately include choices about what problems were to be one's priority. Such would be a different conclusion than Mannheim's, though it would not necessarily contradict his underlying thesis. Actually, it would help avoid an abstracting of the implications of the problem of ideology within the ivory tower of academics.

Mannheim saw the need for the intellectual to make judgments, but he did not mean the same thing that I have stressed. For example, he wrote "... the more aware one becomes of the presuppositions underlying his thinking, in the interest of truly empirical research, the more it is apparent that this empirical procedure (in the social sciences, at least) can be carried on only on the basis of certain meta-empirical, ontological, and metaphysical judgments, and the expectations and hypothesis that follow from them." Here he showed both insight into the ramifications of the problem of ideology and his inability to understand how the isolation of academic institutions and specialization of academic languages
helps create and perpetuate ideologies that "distort" the social realities of the society at large.

At one point, Mannheim approaches this alternative perspective on ideologies. It is when he recognizes the possible relation between human freedom and critical knowledge. I will quote him at length since this relation is vital to my own thesis.

"Those who fear that an increased knowledge of the determining factors which enter into the formation of their decisions will threaten their "freedom" may rest in peace. Actually it is the one who is ignorant of the significant determining factors and who acts under the immediate pressure of determinants unknown to him who is least free and most thoroughly predetermined in his conduct. Whenever we become aware of a determinant which has dominated us, we remove it from the realm of unconscious motivation into that of the controllable, calculable, and objectified. Choice and decision are thereby not eliminated; on the contrary, motives which previously dominated us became subject to our domination; we are more and more thrown back upon our true self and, whereas formerly we were the servants of necessity, we now find it possible to unite consciously with forces with which we are in thorough agreement."

It is argued that choice can be enhanced by an understanding of the workings of ideology. But as long as this "understanding" is kept within the academic realm and a person looks for clarification only academically, an endless dilemma - what can rightly be called a pseudo-problem - remains. If there is no absolute truth and if ideology, as Mannheim defines it, affects us all, then it is impossible to ever "solve" the problems of knowledge in theory. It is possible to go on and on creating analysis after analysis about the dilemma, but to what end? Isn't the important question to find out the consequences of various forms of ideas for the mass of people? Shouldn't judgment and choice be used in this way? Asking these questions itself shows how human choice is ultimately relevant for social science.
Mannheim is perplexed by the dilemma of relative versus absolute truth. His confusion is typical of all who have taken seriously the possibility of having abstract and absolute truths only to find out that their thought has something to do with their existence, i.e., a particular kind of experience within a particular socio-historic position. Regardless of Mannheim's apparent rejection of a relativistic epistemology in favor of a so-called "relational" one, his language indicates that he is caught in this dilemma.

Early in his study he asked "What we are concerned with here is the elemental perplexity of our time, which can be epitomized in the symptomatic question 'How is it possible for man to continue to think and live in a time when the problems of ideology and utopia are being radically raised and thought through in all their implications?'" My reply would be that "man" won't have any major trouble continuing to think and live though academics may become confused by thinking through all the implications of the problem of ideology for their abstract views of knowledge. Since Mannheim argued that our awareness of the problem of ideology is based in insights into "the perceiving subject", in a growing "historical perspective" and a growing awareness that different and changing social groupings have differing idea systems, it is strange that he turned this problem into a perplexing intellectual dilemma. He saw the development of the problem in the past, but was unable to project its development into the future. His academic orientation to the problem made it impossible for him to situate problems of knowledge linked to the new awareness of ideology in the changing social relationships of his time.

Out of this dilemma, many pseudo-problems have developed. One interesting thing is how Marx and Engels avoided them though not ignoring the problem of
ideology itself. It is my contention that it was their pragmatic epistemology that kept them from these pseudo-problems. It is also my contention that Mannheim's generalized and totalized use of the concept "ideology", whereby all ideas became ideological, resulted from his own clinging to the possibility of academic, abstract truth. Only if there is an initial belief in truth per se, i.e., truth in abstract from the practical affairs of the mass of people, is there a reason to be perplexed about the total and general effects, i.e., "distortion" of ideology. Only if "ideology" is contrasted with "science" in abstract and the problem of ideology misconceptualized is there a reason for such confusion as Mannheim experienced. The fact that "ideology" is seen as "distortion" itself shows that there is a belief in true ideas. Primarily, Mannheim was right to emphasize the meaning of ideas in practice; in fact, this form of evaluation is the way that the validity of ideas needs to be shown. Though Mannheim referred to this "relational" approach and saw its validity, he was still caught in the search for truth in the realm of theory.

In one place in his study, Mannheim shows the way out of this dilemma. After discussing the use of the term "ideology" by Napoleon, he wrote "... common speech often contains more philosophy and is of greater significance for the further statement of problems than academic disputes which tend to become sterile because they fail to take cognizance of the world outside the academic walls." My sympathy with this anti-academic orientation to the problem of ideology is already clear but I am not sure that Mannheim rejected such an orientation himself. He was interested in "philosophy" and in "the further statement of problems", not in treating ideas as a part of the practical affairs of people, and it is this very approach that leads to the sterility of academia.
The important point is that were the problem of ideology to be consistently tackled in terms of an anti-academic orientation, i.e., in terms of the practical affairs of people (within which "common speech" occurs) we would avoid abstracting epistemology, ontology, metaphysics or whatever into academic languages and problems (i.e., pseudo-problems). Rather, we would recognize all variations of the value-free doctrine (e.g., abstract empiricism) as untenable and would begin to deliberately make judgments about the kind of consequences or ends we wish to see follow from the creation of ideas. Our intellectual work and the events of the time would then be in a constant relationship. Instead of creating more and more ideology, in Marx and Engels' sense of the term, we would work toward an integration of theory and the practical affairs of people - fully aware that there are political implications once people have ideas that clarify rather than mystify the relation of personal problems and the type of social relations that dominate the social structure in existence.

Mannheim recognized that with the insight into the problem of ideology there has developed "... a new kind of thinking in which theory could not be separated from the practice nor from the intent." This is a crucial insight. But, by his use of the term "collective unconscious" to describe the alienating (he talked of the "obscuring") effects of ideology, he also showed that he was willing to remain aloof from the task of developing this form of thought. Once the division of mental and physical labour is seen as basic to the separation of theory from practice and intent, and the system of authority that maintains this division of labour is understood, the task of developing radically new forms of thought becomes more than an interpreter of the world can handle.

Before concluding this discussion of Mannheim, it is important to note
that he did not consider his study to be a solution to the problem of ideology. This adds further support to my interpretation. When he was discussing the existence of an "ontology" in all thought systems, he wrote:

"This unavoidable implicit ontology which is at the basis of our actions, even when we do not want to believe it, is not something which is arrived at by romantic yearning and which we impose upon reality at will. It marks the horizon within which lies our world of reality and which cannot be disposed of by simply labelling it ideology. At this point we see a glimmer of a "solution" to our problem even though nowhere else in this book do we attempt to offer one."

Here Mannheim implies a skepticism of the total, general and evaluative view of ideology around which he built his study. In other words, it is possible that he began to recognize that, as we have argued, such a use of the term "ideology" had no lasting value. Language, thought and idea systems are part of the human condition so it is not useful to consider ideas per se as distortions of reality. Though Mannheim tried not to do this, his commitment to an academic view of epistemology made it impossible for him to develop a theory of valid ideas that could be useful to the mass of people. To do this, we would need to ask: (i) what ideas have what function and what effects on our lives?; and (ii) how does the method of creating and disseminating ideas affect these consequences? As a hypothetical example of this form of question: what ideas, related to what form of praxis, have liberating effects and which have alienating effects for humans?

There is further evidence that Mannheim did not consider his study a definitive one on the problem of ideology. In a letter about the work under consideration, he stated that "... we should not conceal inconsistencies ... (when) our whole thought system in its various parts leads to inconsistencies." When he wrote that "The inconsistencies in our whole outlook, which in my presentation become more visible ...", he even suggested that his "study" could be
taken as an example of the fallacies of "our whole (read "academic") thought system". 49

As part of their theory of ideology, Marx and Engels had to hypothesize about the kinds of questions listed above and they went beyond an awareness of the shortcomings of academic knowledge. They studied the relations between consciousness and praxis, and were thoroughly sociological. They did not separate theory from practice, as Mannheim did, and complain about the weaknesses of reified ideas. That is what makes their handling of the problem of ideology more inclusive, and it is what allowed them to avoid any abstract pseudo-problems about epistemology. It was Mannheim's separation of Marx and Engels' theory of ideology from their social theory and related pragmatic epistemology, without even analyzing the interrelationship of these ideas, that led him into the dead-end that is inevitable if the sociology of knowledge is made into an academic problem.

Footnotes


2Ibid., p. 139.

3Ibid., p. 309-10.

4Ibid., p. 125.

5The term "sociological subjectivity" has been given contrasting meanings. Bergmann, who is criticized in Chapter Five, argues that such subjectivity, which he attributes to Mannheim, results when "... one fails to distinguish between value judgments and statements of fact..." (G. Bergmann: Ideology, in Readings in the Philosophy of Science. May Brodbeck (ed.). New York, Macmillan (1968), p. 131.
6 Mannheim, op. cit., p. 77.
7 Ibid., p. 96.
8 Ibid.
9 Mannheim, op. cit., p. 265.
10 Ibid.
11 Mannheim, op. cit., p. 98.
12 Ibid.
13 Ibid.
14 Ibid., p. 194.
15 Ibid., p. 55.
16 Ibid., p. 56.
17 Ibid., p. 57.
18 Ibid.
19 Ibid., p. 58.
20 Ibid., p. 59.
21 Ibid., p. 65.
22 Ibid., p. 66.
23 Ibid., p. 67.
24 Ibid., p. 69.
25 Ibid., p. 77.
26 Ibid.
27 Ibid., p. 78.
28 Ibid., p. 79.
29 Ibid.
30 Ibid.
31 Chapters Nine and Ten will deal with the latter two authors in detail.

32 Mannheim, loc. cit.

33 Ibid.

34 Ibid., p. 287.

35 I use the psychoanalytical term "projection" purposefully because any comprehensive study of ideology would have to analyze the different modes of thought where an awareness of the mediating role of ideology between praxis and consciousness (i.e., language) does and does not exist. In the latter case, because consciousness would be more abstracted from praxis, there would tend to be a projecting mode of thought.

36 Ibid., p. 89.

37 This term refers to an investigation where a person thinks he acts as a detached and "objective" observer and records social facts that are thought to have a nature independent of him or her.

38 Mannheim, op. cit., p. 90.

39 Ibid., pp. 93-4.

40 Ibid., p. 84.

41 Ibid., p. 86.

42 Ibid., p. 89.

43 Ibid., pp. 189-90.

44 Ibid., p. 42.

45 Ibid., p. 73.

46 Ibid., p. 150.

47 Mannheim argued that "There is implicit in the word 'ideology' the insight that in certain situations the collective unconscious of certain groups obscures the real condition of society both to itself and to others and thereby stabilizes it." Ibid., p. 40.

48 Mannheim, op. cit., p. 88 (footnote).

Chapter Three

The Rhetorical Separation of Ideology and Science

The extensiveness of my examination of Karl Mannheim's thought reflects my respect for his discussion of the problem of ideology. Though differing from him on the question of epistemology, and concluding that his handling of the problem tended to create pseudo-problems, his study remains a classic in the area. He dissected the problem of ideology in all directions and thus exposed some ramifications, as well as dead-ends. It was his commitment to deal with both these matters that allows others to avoid the pitfalls of sociological subjectivism.

It is now necessary to contrast Mannheim's intellectual treatment of the problem of ideology with the widespread rhetorical approach to the problem. It is necessary to do this at this point in the study because the contrast is fundamental to this thesis. Since the time of Marx, Engels and Mannheim, the rhetorical separation of "ideology" and "social science" has dominated academic languages. It was necessary to begin with Marx, Engels and Mannheim to expose, by comparison, the ignorance which underlies the present scientism which totally ignores the problem of ideology.

The rhetorical approach to the problem of ideology can be exposed with a sampling of the vast amount of literature that assumes, uncritically, that "social science" and "ideology" are essentially different. We will see from this sampling that the only way to "prove" this assumption is by burning Mannheim's book and purging all those who have critical ideas in the society. A one-dimensional, totalitarian society could enforce a standardization of ideas (e.g., ...
Ideology) and lead to the belief that those ideas are purely scientific, but objectively the ideology would still exist. This idea shows the absurdity of the position.

"Ideology" and "social science" can be defined in such a way that they appear to be completely distinct, but the problem of ideology will be ignored. Such is the danger of allowing verbal intelligence to develop without intellectual commitment and judgment. Such verbal intelligence without the commitment to critically evaluate ideas is what underlies the view, common in academia, that "ideology" results from the insistence that knowledge of society must act as an instrument for social change. This view of ideology sees any sign of passion, commitment or activism in a person as a distorting influence on the scientific search for truth. We are already beginning to see how meaningless this combination of words ("scientific search for truth") is without a detailed analysis of ideology.

The Personification of Ideology

Thinking along these lines, Ries wrote that "... science sees values as facts." The implication of this is that "facts" are abstract descriptions, uncontaminated by commitments or judgments, and that "values" are ideological. According to this view, the "social scientist" stands back and observes and studies those with values, but cannot support ideologies in any way if he or she is to remain a scientist.

In Chapter Twelve I will show how this "value-free" view of social science, the so-called value-free doctrine, is rationalized by an oversimplification of Max Weber's work. For now let me expand on the way the rhetorical approach to the problem of ideology is rationalized. First, in this view,
"social science" is stereotyped as "policy-related", but basically detached from political decision-making. Social scientists are seen as "experts" who provide informed opinion without making value judgments. Ries stated that social scientists inform decision-makers without providing a framework of values and he implied that this means they are value-free.3

This double-talk is further exposed as soon as one recognizes that the problems that many social scientists research are established within the "framework of values" of political decision-makers. Furthermore, the "position" is exposed as rhetoric (a sophisticated and convincing mis-use of words) when Mannheim's questions about the relation of a thinker and his or her social position are taken seriously. The very notion of "policy-related" research, which relates to the separation of "pure" and "applied" research,4 cloaks over these relationships. One could say that these terms are "ideological distortions" of the social realities of research today.

The second reason why a serious handling of the problem of ideology has not occurred in contemporary North American academia relates to the almost total integration of social scientists into the dominant ideology. Their functional integration into the dominant society as so-called "experts" is complemented by this ideological integration. Social science is increasingly used to aid political and industrial decision-making5 and therefore a rationalization to cloak the political ideology that helps establish academic problems and determine the uses of studies is required. Ries' rationalization is called "... the self-observation of society." He wrote:

"The self-observation of society in the form of a policy-related social science is a necessity under the present conditions of social organization. This is even more true of the democratically organized industrial state than the totalitarian. Without a dominating ideology, the democratic state requires information about itself as a means of social control."6
Ries is quite correct that the dominant social science is used for "social control". But the use of the words "democratic" and "totalitarian", with their particular connotations in this society, allowed him to ignore the problem of ideology. Nevertheless, we must accredit Ries with a sophisticated use of words. When he wrote that our society is "without a dominating ideology" Ries seemed to be neutral on a basic issue. He neither supported the dominant ideas on this continent nor did he critically analyze their ideological function. The result of this ambiguity was not a hypothesis for further study, but the implication, not the argument, that the scientist is free of the influence of ideology. With the growing integration of social science into the society and its use for social control, there has developed an end-of-ideology posture which has made the ideological basis of that research most difficult to discern.

There is also a third way that the problem of ideology is ignored. It is by creating a stereotype of "the ideologist" which makes the well integrated social scientist appear like a calm, cool and collected scholar. Ries was doing just this when he depicted such social scientists with the statement "... there have been men who have refused to play the role of Messiah even though the demand upon them was great." He continued this depiction by comparing "the ideologist" to the "maker of graven images".

"In the end the ideologist and the maker of graven images want the same thing. The ideologist cares only that his ideas have some active expression in the life of man and society. The image maker cares only that his images have some bodily expression in the wood that he carves. The image maker, unlike the artist, has no respect for the material in which he carves. It makes no difference to him what the quality of the wood may be, or whether he shapes wood, brass or stone, so long as the image stands apart from him and he can bow down to it. The ideologist in the end cares neither for the men nor the society which is to serve as the bodily expression of his idea. Men may be crushed and society torn asunder so long as this gives evidence of being effected by the force of an idea. Both image maker and ideologist seek deliverance by
giving the authority of a thing to its likeness, the one through the image of God, the other through the image of man. The one carves in wood, the other carves his fellow man.8

Again we must give Ries credit as a rhetorician though none as a clarifier of the problem of ideology. His basic error was to personify the problem of ideology into "the ideologist" and thereby avoid the needed consideration of how the position of a person in society affects the system of ideas he or she holds. He further errs by reifying "the idea" of the ideologist, i.e., giving it some trans-human and trans-social reality. In a sense this constitutes a double reification. His above analogy shows his own mechanism. Human beings are not like wood, that can be acted on by "an idea" the way a tool can shape a sculpture. And furthermore ideas and ideologies do not operate outside of human praxis as Ries implied. The effect of traditional or new and critical ideas must be understood in terms of the role they play within any social relationships. To do otherwise is to give "ideas" a conspiratorial nature; an existence over and above humans. Such necessitates the creation of a conspiratorial agent; hence, the creation of "the ideologist" by Ries.

The ironic thing is that judged in terms of the problem of ideology, Ries becomes an ideologist of the sort he is stereotyping. That is the risk one takes when dealing flippantly with serious matters. I will risk applying Mannheim's "particular" or psychological concept of ideology to Ries by speculating that the "publish or perish" cult may be more important to him than serious intellectual work.

A very simplistic view of the relation of theory and practice and thought and action is implicit in Ries' thinking. He showed this when he wrote that "... social science no longer claims to deliver man from the salient predicament of his existence, namely that he does not fit into his
own environment. If the solution to that problem is to come in human history, then the solution will have to come from some other agency than social science."9

On the one hand there is subtle arrogance in this statement about the relevance of "social science", as presently constituted, to practical affairs, i.e., "the predicaments" of people. When did the social sciences claim to "deliver man ..." anyway? On the other hand there is an ignorance about the vital effects of the presently constituted social sciences on the practical affairs of the mass of people. And it is important to note that they are effects on, i.e., out of the control of, the mass of people. The dominant uses of the social sciences do not aid people in developing insights into their common problems. Furthermore, though meaning something different from Ries, I would agree that people do not "fit into" the environment. By this I mean that the present social relations create immense conflicts for us all. The interesting thing is how social science helps fit people into, or adjust people to, these conflictful social relations.

Were social science to be committed to aiding people understand their predicaments, rather than doing "policy-related" research for the decision-makers of the dominant institutions, it would not mean that social science in itself would deliver anyone from their problems. Such is to confuse "ideas", academically conceived, with people using ideas to develop social alternatives. It would, however, mean that the mass of people would have available a vocabulary10 that allowed them to experiment to change the conditions that affect them.

Ries made a major error when he wrote

"If social science moves beyond ideology, it may make us conscious of the images and the false authorities in the history of man. There is always hope, of course, that this consciousness of society will make a difference. But what difference it shall make and how it shall make it we cannot ourselves say. The objective interpretive study of society may entertain the hope of liberating man from some of his idols. But it is a hope and not a promise."11
Firstly he again showed his naivete and/or ignorance by suggesting the possibility that social science can move beyond ideology. Unless he wants to argue that there are absolutely true ideas, which is unarguable, he has no case whatsoever. The question is not how to go beyond ideology, but choosing which ideological orientation one will work within. Secondly Ries introduced the words "objective interpretive study" without clarifying what this means in terms of the problem of ideology. Without doing this these words have only a rhetorical meaning. Thirdly and lastly Ries talked of ideas having a "liberating" effect by exposing man's idols. This could mean what Marx and Engels meant, i.e., making knowledge relevant to the mass of people, or what Mannheim meant when he saw the need to make intellectual judgments fully aware of the dangers of ideological distortion. Ries' failure to deal with the problem of ideology and his a priori and self-fulfilling separation of "ideology" and "social science" makes it clear this was not what he meant.

Just what did Ries mean? I agree that the liberating effect of ideas "... is a hope and not a promise." But without acknowledging the relevance of the problem of ideology the chances of this happening are decreased. There is a cynicism in Ries' words that is typical of those who use words in abstract from the practical affairs of the mass of people.

Sociologism as Ideology

There is another way that the problem of ideology is ignored. It is a more sophisticated rationalization, but nevertheless a rationalization. It combines a superficial awareness of problems in the philosophy of social science with sociological jargon. Underneath this there still remains the rigid dichotomy between "social science" and "ideology" which is untenable once the problem of
ideology is confronted.

MacRae, in an article entitled *The Crisis of Sociology*, ironically expresses the kind of thinking that reflects the deep crisis in contemporary social science. Since we have already looked at Marx and Engels' theory of ideology, it is useful to quote MacRae's impressions of Marx's ideas. Making an analogy between religion and marxism, similar to Ries' analogy between image-maker and ideologist, MacRae wrote:

"Contrary to popular belief, Marx was not a sociologist, nor has Marxism contributed much beyond ideology to the content of sociology which could not have been better derived from other writers. Such an opinion is, of course, unpopular. As the 20th century loses faith in Marxism so is the loss felt and expressed by such desperate expedients as trying to identify Marxism with sociology. One is reminded of the anguished shifts of some 19th century writers as they abandoned Christianity and tried to reconcile their vanishing faith with a science they did not understand."

If one does not critically examine the assumptions in this statement and expose how the power of certain words (e.g., faith) and the phraseology cloak over serious problems, the statement can be convincing. This is the danger when reading those who can manipulate language skilfully. For example, saying "... Marx was not a sociologist ..." implies, without stating it explicitly, that there are some pure sociological methods and theories that serve as an unchanging standard for our knowledge of society. We saw with Mannheim and will see in greater detail later with Thomas Kuhn how no such absolute criteria for knowledge of any form can exist. Also, the statement that Marxism didn't contribute "... much beyond ideology to the content of sociology ..." shows a total misunderstanding of the problem of ideology. "Ideology" is not added to content. Ideology underlies the selection of problems, the approach to study, and the consequences of such studying. It is an orientation to study. MacRae's statement also implies, again without being explicit, that there is some proper content for sociology.
The word "ideology" is clearly being used without any adequate meaning.

No distinction is made between Marx and Engels' theory of ideology and the abstracting of these ideas into a marxian ideology. (We saw with Mannheim how this can lead to pseudo-problems.) Hence, there is no possibility of beginning to explain how this process occurred. Related to this failure is MacRae's own uncritical acceptance of a political ideology, rooted in industrial capitalism, which is what underlies the rampant sociologism in these societies. This political ideology is revealed by his statements about marxism. The statement "As the 20th century loses faith in Marxism..." is more a projection of the cynicism of those in industrial capitalist nations who once accepted a messianic view of marxian ideas than of an accurate statement about the influence of marxian ideas throughout the world. I do not want to debate whether this influence is growing or not, but I reject as nonsense that the 20th century has "lost faith" in marxian ideas. Many variations of marxian ideas have developed in industrial and non-industrial, capitalist and socialist countries, and the marxian orientation is strong on a world-wide scale. Marxian ideas have increasingly been developed within North America since the middle 1960's.

MacRae's statement reflects the cynicism of those who have found that human problems are not solved by the belief in ideas which are treated as absolutes. Marx and Engels never implied this in their work, so MacRae has clearly failed to understand their theory of ideology or to even begin to come to grips with the problems involved.

This is an important point. The way in which academically trained social scientists have viewed marxian ideas reflects their own political ideology.
Their view of marxian ideas is like Mannheim's "particular" and what I would call a "sectarian" application of ideological analysis. Their own ideas are assumed to be absolutes, yet are not made explicit, and ideas that deviate from them are stereotyped as "ideology". This subtle and sophisticated form of sectarianism is one reason why the problem of ideology is not presently debated within academic sociology or the other social sciences.

Since the problem of ideology is not seriously considered, let alone raised, it is not surprising that MacRae draws an analogy between religion and marxism. Those who deviate from MacRae's political ideology base their ideas on "faith". According to MacRae, they are desperately trying to identify marxism with true sociology. What is not considered is the analogy between contemporary sociology and religion; or, how academics always identify their sociologism with science. When "science" itself is reified, institutionalized into an orthodoxy, and loses basic self-criticism, i.e., insight into the problem of ideology, it is being treated religiously. I am not disputing the fact that marxian ideas are often treated in this manner (though MacRae's orientation could never explain how or why this has happened). I am disputing MacRae's implication that this tendency is exclusive to marxian ideas.

It is more accurate to say that conflicting ideas about society exist and that a particular orientation, with its own ideological foundation, is presently associated with academic sociology, while the other is associated with marxism. Because he had a sectarian set of beliefs, MacRae was unable to see this and to discuss the problem of ideology and the philosophy of social science intelligently.

One statement in MacRae's paper might have been the start of such a discussion: "... by a science we mean a loose social institution of people who share a
common interest in knowledge about and understanding of observable phenomena in a given area, who communicate their observations and thoughts, judge these by shared criterias, and obtain their results by a diversity of common methods ..."15 But what does this statement mean? Without clarifying several questions arising from this statement, it has no significance. I ask MacRae: What form does the scientific "social institution" take?; how did it evolve historically and what are its trends and contradictions?; what is the nature (e.g., ideology?) of the "common interest" of the scientists within it?; what do they mean by "understand"?; what are their assumptions about "phenomena"?; what "criteria", including values, do they "share"? And, most important, what are the relations between the history and form of scientific institutions and the way the scientists view knowledge, and the uses to which their results are put?

These questions are not even raised, so MacRae's discussion of "the crisis of sociology" lacks any substance about the problems of creating knowledge about society. His reference to philosophical and ideological issues in the social sciences was not indicative of a commitment to follow them through. This would have demanded a reconsideration of his sectarian view of sociology, but it appears that the function of raising issues in a superficial manner, as MacRae did, was to cloak over this lack of self-criticism with academic language.

On Horowitz's Contradictions

All these four errors or ways of neglecting the problem of ideology are combined with great fluency in Horowitz's discussion of ideology.16 It is of value to look in depth at this discussion since it reveals the contradictions that run through all attempts to split "social science" and "ideology".
In a manner characteristic of academic sociologists, Horowitz started his discussion by making this split. He wrote that the real value of ideology "... to the sociology of knowledge begins when ideology is differentiated from other forms of knowledge, i.e. scientific, poetic, religious." Rather than accepting this statement uncritically, we must ask if there is any basis for this differentiation.

Horowitz's definition of ideology itself suggests there is not. He continued "In short, ideology expresses that point in social knowledge at which interests connect up to a picture of reality." Can anyone deny that science, whether natural or social, has definite interests? The way in which science is institutionalized establishes its "teleology". There can be differing aims for science, depending on its institutionalized form, and this further shows that science itself "connects" with interests. That is why there is a problem of ideology that cannot be handled when we split up the words "science" and "ideology".

Later in his discussion, Horowitz implied that science does have interests. He made it quite explicit that he saw the role of "... logic as satisfying the functional needs of a social system." If logic is oriented to the "needs" or interests of a society then, according to Horowitz's own logic, "science" itself becomes ideological. Since his definition of "ideology" excludes this possibility his argument is shown to be absurd.

The above statement is, however, a deviation from Horowitz's main orientation. He continually separated "science" and "ideology" by arguing that science, like religion, is interested in the universal validation of its knowledge; and, furthermore, that its findings, unlike those of an ideology, can be separated from the person. In his words:
"In contradistinction to ideology, science and religion strive for a universal validation of their claims... And universal validation, for science derived through experience and for religion derived through revelation, must be capable of being made separate from the personality of the knower. It is precisely this which marks ideology as distinct, since it can never be divorced from the personality, i.e. the interests of the knower, or from the collective class authority which supports an ideology."20

The trouble with this distinction is that it does not account for the issue already raised, i.e., the interests of science and the problem of ideology that this implies. Furthermore, the analogy between "science" and "religion" implies that scientific ideas are true or false in abstract from the institutions and technology in which they are rooted. Talking of ideas being independent of "the personality of the knower" is useful as long as we don't forget that a social arrangement, including the recruitment and training of scientists, is fundamental to their shareable criteria. This social arrangement must exist for them to "agree" independent of the personality. Different social arrangements of scientists, with different social functions, would have contrasting criteria determining the relevance of certain problems. The very class of problems21 will differ. This again raises the problem of ideology since the relations between a class of problems and the function of science helps establish the ideological orientation of a group of academics.

Horowitz's recourse to "universals" distorts the reason why it is said that knowledge must be independent of any single person. That is why he gets caught in pseudo-problems similar to those of Mannheim, though we shall see that he did not understand what Mannheim was saying.

On the basis of his (false) distinction between science and ideology, Horowitz wrote:

"There are no grounds for viewing an ideology as a vast continuum infusing
all forms and styles of knowledge. It is furthermore unwarranted to declare investigation of the objective functioning of an ideological system invalid on the grounds that the investigator too has an ideology. Since an ideology has defined limits, the real question of analysis shifts from how one can "escape" his ideology, to a comparative analysis of ideological systems in the first instance, and a comparison of ideologies with other forms of knowledge in the second instance."

In the above statement, the word ideology or a variation of it is used seven times. Yet the term lacks any useful meaning. We agree that ideology is not some distorting influence on all forms of knowledge. Such a use of the term is too much like the conspiracy theory; and, like the conspiracy theory, this view assumes that there exists some "pure", untainted reality. If ideology is given this distorting connotation, then we will never grasp the relations between the social arrangement of science, the class of problems considered relevant, and the social function or consequences of knowledge that follows from these relations.

If one's handling of the problem of ideology takes these relations into account, a person can avoid the vicious circle about whether the "ideology" of the investigator distorts his study of ideologies. And to say that what is needed is a "comparative analysis of ideological systems" followed by "a comparison of ideologies with other forms of knowledge" is not the way to get out of this dilemma. At all levels of his thought, Horowitz persists in falsely splitting "science" and "ideology" and a view of both that is meaningless once the social arrangement of science is understood.

Horowitz's errors are rooted in his notion of "ideas" in the social sciences. When he wrote that "Durkheim correctly insisted upon treating social facts as things, as social events in themselves distinct from the consciously formed representation of them in the mind" he, like Durkheim, reified ideas. Ideas are given an existence over and above the role and consequence of thought
in human affairs. In one place, Horowitz showed this tendency clearly.

"... it should be mentioned that neither scientific laws nor religious systems vanish with each change in the structure of polity or economy. This is not to say that they are unaffected by such changes, but they are affected in terms of acceleration and retardation. Ideology, on the other hand, which also claims universal truth, is directly subject to obsolescence through historical change."24

The matter of the nature of scientific laws will have to await a detailed discussion below.25 For now, we can reject any static or mechanistic view of such laws. When Horowitz said that such laws don't vanish with social change, but are "accelerated and retarded" he seemed to hold such a view. When he used the phrase "universal truth" he definitely had such a view.

Horowitz had not even considered the possibility that views of science themselves change with changes in society and history. He ignored the implications of his own statement about "logic satisfying the functional needs of a social system". His dichotomy between "science" and "ideology" is maintained absolutely. In Mannheim's terms, Horowitz's work reflects a particular, uncritical form of ideology.

Horowitz discussed Mannheim briefly and his discussion shows that he failed to grasp the problem of ideology that Mannheim outlined. Horowitz claimed that Mannheim equated ideology with distortion, and he rightly concluded that such a view was of no value. Assuming that Mannheim's total conception of ideology meant false consciousness or total distortion, Horowitz wrote "Once a more modest approach to the limits of ideology is taken, we need not make the equation of 'total ideology' to 'total distortions' - an equation whose use in social science is dubious on empirical as well as logical grounds."26

But Mannheim clarified that he was not making this equation. To Mannheim the "total" conception of ideology referred to the bringing into question of not just the details but of the point of view being expressed. When this "total"
concept was generalized and all points of view (not only that of an adversary) were critically scrutinized, Mannheim argued that the sociology of knowledge was being practiced. The matter of ideological distortion has to be separated from the matter of ideological analysis in Mannheim's thought. In one place, Mannheim equated ideological distortion with trying "... to resolve conflicts and anxieties by having recourse to absolutes, according to which it is no longer possible to live."²⁷ Though it is unclear just how Mannheim would have evaluated this idea of ideological distortion, it is abundantly clear that such distortion is not identified with the application of a total ideological analysis.

To Mannheim, ideology oriented a particular social grouping to the larger social reality in a particular way. The ideas held may or may not be distorting. It depends on whether they are understood in relation (his "relational" epistemology) to the practical conditions within a certain socio-historical setting. Though I have already concluded that Mannheim did not handle this problem adequately, due to his academic view of epistemology, Horowitz's interpretation of him is clearly mistaken.

Horowitz interpreted Mannheim's work in terms of the relativistic categories that Mannheim himself rejected. To equate a total ideological analysis with total distortion is to validate or invalidate ideas in abstract from practical affairs. Those who do this easily slip into relativistic thinking. If you do not evaluate ideas in terms of their consequences, you begin to think of ideas as true or false per se. If you become aware of the problem of ideology, even in a minor way, but still hold this abstract view of knowledge, relativism appears to be the problem. As I've already stated, for relativism to be a problem there has to be some belief in absolutes. Horowitz's talk of "universal
validation" for both science and religion is the other side of the coin of
his false interpretation of Mannheim.

Horowitz's false handling of the problem of ideology also led him to
a misinterpretation of Marx and Engels' view of ideology. Showing this, he
wrote that "... Marx seems to identify the counter-ideology of the proletariat
with general scientific truth. Which is to say that Marx identifies what is
socially exploited with what is scientifically correct."28 This conclusion
showed Horowitz's total inability to critically evaluate, let alone understand,
Marx and Engels' pragmatic view of ideas. Instead of starting with their theory
of ideology and its relation to a social theory and related epistemology, and
then critically evaluating this, Horowitz imposed his own view of "scientific
truth" on their ideas. From this he concluded something that does not follow
from Marx's thought at all. Marx did not accept an abstract notion of scientific
truth, in fact, would have called that "ideological", so nothing Horowitz wrote
accurately described his thinking.

Horowitz created other pseudo-problems on the basis of his false split-
ting of "science" and "ideology". He created the notion of "scientific ideology"
which he equated with marxian and socialist ideas and then rejected it. First he
wrote that "To speak of a 'scientific ideology' is a contradiction in fact as well
as logic." Later he continued that "The dogma of the unity of theory and practice,
upon which such a 'scientific ideology' rests, assumes as true what has to be
proved in every situation, i.e. that useful social activities require a correspond-
ing theoretical system."29

The attempt to relate theory and practice, which is typical of all forms
of science, can definitely be made a "dogma". But if this happens, the development
of theory which deals with all the relevant forces affecting a practical situation
will be abandoned. Practice can be crudely "explained" by a reductionism to the categories of an abstract theory or practice can be made intelligible by a dialectic awareness of the effects of historical and social forces. The former is a unity of theory and practice only in style whereas the latter is one in both form and content.\textsuperscript{30} It is because of this that no real integration of theory and practice is possible if a dogmatic approach dominates.

Horowitz did not specify what he meant by proving true "in every situation" or having "a corresponding theoretical system" for useful social activities. Nor was he clear what he meant when he wrote that the criteria of scientific ideologies "... are not criteria necessarily shared by a mature sociology."\textsuperscript{31} His contrast between "scientific ideologies" and a "mature sociology" was, therefore, without any foundation.

When Horowitz wrote that "... the promotion of action requires appeals to non-verifiable moral postulates"\textsuperscript{32} we have a clue about his differentiation of "scientific ideology" and "mature sociology". The latter does not relate thought and action whereas the former does. There are two problems with this. First it is highly academic to treat human actions as "non-verifiable moral postulates". Turning human actions into academic jargon attributes greater reality to academia than to the activities of the mass of people. It is crude reductionism to impose concepts like "verification" and "postulate" onto human actions. Rather than using language to clarify the meaning of human behavior, it typifies the sectarian attitude of those isolated in the ivory towers of the world.

Secondly without a thorough discussion of "verification", which would include consideration of the relations of theory and practice, means and ends, and facts and values, Horowitz's statement has no meaning. It is noteworthy that
C.W. Mills, whom Horowitz seems to admire, discussed the historical nature of models of verification in a book edited by Horowitz himself. Once a person recognizes that verification methods change over history, an abstract scientism is no longer possible. Since Horowitz's dichotomy between "science" and "ideology", on which all of his other distinctions rest, failed to take this fact into account, I can only conclude that he was more interested in publishing Mills than in studying him.

One possible consequence of the failure to consider the problem of ideology is a sectarian attitude that is cloaked by scientific rhetoric. This is what happened to Horowitz. Having no insights into how the social arrangements of science establish the relevance of a class of problems, with particular social functions, he saw the scientist as an impartial, detached man. Thus he wrote that "Those who place a supreme value on science will judge that ideology best which advocates high decision-making roles for scientists." We have seen how ideas and methods of verification were abstracted out of their social and historical context by Horowitz. The "scientist" himself is also given a trans-social nature by him. I ask Horowitz: What kind of decisions will they make?; what social arrangement will enable them to have this role in decision-making?; and what are the consequences for the mass of people in and outside of the country? Or, in sum, what ideological orientation underlies the decision-making role of scientists that he is advocating? Scientists are certainly not self-financing, self-determining humans who establish the problem-areas they work on and the uses put to their findings. They are social animals and their role as decision-makers would need to be analyzed as such.

Horowitz treats "science" as many treat religion. His constant comparison between the two is revealing. As the archetype "god" was thought to "know"
a more fundamental reality, now the archetype "scientist" is attributed this quality. Thus Horowitz asks: "In this struggle between a State ideology and utopian counter-ideologies what is the place of the 'rational' man?" And his conclusion: "The role of the scientist ... is to distinguish empirical from ideological claims, not to adopt a messianic attitude toward the former and a missionary attitude toward saving us from the latter."  

Nothing is solved by this appeal to "reason" and "science". Horowitz has not even started to consider the problem of ideology in its many ramifications. Rather he assumed that "science" and "scientists" are above the ideological struggles of the world. It is indisputable that the social relationships within which scientists operate have definite connections with the uses of power in society. The way scientists see themselves usually does not take these relationships into account, and therefore their own consciousness can be considered narrowly ideological. Their specialization and relative isolation from the lives of the mass of people, however, does not alter the fact that they are in a relationship with the social structure and serve a particular function within it. Until this function is analyzed, the problem of ideology in the sciences has not been tackled.

If Horowitz has critically evaluated the meaning of "science", he would have had to conclude that scientific knowledge and ideology are not at all mutually exclusive. And, though he did not build his discussion upon this awareness, Horowitz seemed to know of the failure of his approach. In one place, he showed that his own dichotomy was false. He thus wrote that

"This approach carries no implication that science per se makes men incapable of decisive action. It is to say that the aims of science can and are embodied by certain ideologies in which the ultimate value is social abundance."
Though saying this, his approach failed to analyze "the aims of science". Horowitz's approach did not show, in terms of the social arrangement of science, why science is or isn't used for "social abundance". To have done this would have forced him out of his narrow scientism.

Horowitz began his discussion with a dichotomy between "science" and "ideology". As he proceeded, he combined the terms into "scientific ideologies" and rejected his own creation. He then concluded his discussion by stating that the aims of science "are embodied by certain ideologies". His false beginning forced him to a self-contradictory position. There is clearly no value in a discussion of ideology which is itself based on a narrow scientism. The logical contradictions in Horowitz's argument constitute a form of evidence for my own.

Horowitz did write that ideologies are "... a response to the division of men in economy, and no less, a consequence of political concentration of power in elites." This is amazingly close to Marx and Engels' theory of ideology, though Horowitz seemed unaware of this. His failure was to not see that the aims of science, which are not static, are also a response to "division of men" and the existence of "political elites". But the mystification of science, itself a result of the way science functions in this society, was too strong for Horowitz.

From this analysis we can only conclude that Horowitz used the criticisms of scientism developed by C.W. Mills solely in a rhetorical manner. Horowitz became well versed in the critical sociological language developed by Mills, but lacked the critical awareness that went with it. One thing that those skilled in rhetoric risk is self-contradiction. We saw how Horowitz's own logic invalidated his own arguments.

In the book under consideration, Horowitz argued for the distinction
between science and ideology. This is the distinction that underlies the value-
free doctrine with its simplistic and confusing rhetoric. In another place, Horowitz attacked the value-free doctrine. He wrote that "... the tenacious clinging to the 'value-free' doctrine and to the 'functional' method is a con-
sequence of the sales values of a nihilistic posture in actual research under-
takings."39 In this article, he also wrote of empiricism being "... not simply a sociological methodology, but a social ideology."40

Is this the same "empiricism" that characterizes "the rational man of mature sociology"? Horowitz either enjoyed exposing his contradictions or had gone beyond them and developed a more stunning perspective. Either of these possibilities supports my own thesis. One might say that Horowitz's statement that "... empiricism as a sociological ideology leads to gamesmanship and pseudo-
intellectual one-upmanship"41 has been proven not only by our criticism but in his own practice.

Footnotes

1The term "scientism" will be used throughout this study. Hayek has used the term to depict the dogmatic methodological naturalism or reliance on oversimplified natural science ideas in all fields of science (these terms are explained in Chapter Fifteen) that is widespread today (F.A. von Hayek: The Counter Revolution of Science. New York, Free Press (1952)). Rather than giving the term such a specific philosophical meaning, in this thesis, "scientism" refers to the widespread "ideology of science", i.e., the scientific metaphysics (myths) that are being disseminated throughout the culture, including the universities.

2Raymond E. Ries: Social Science and Ideology, in Social Research, Vol. 32, No. 2 (1964), pp. 234-43. I read this article in 1964 when I first became concerned about the way ideological problems were being neglected by academics. Reading this article unknowingly constituted the beginning of this thesis. It led me to write two papers on ideology and science (J. Harding: Action Research, Social Change and Ideology in the Social Sciences. Saskatchewan Psychologist, May (1966); J. Harding: Prerequisites of an Integrated Social Science. Canadian Alternatives, Regina, Vol. 1, No. 2 (1966)).
"It does no good to say that this problem of value lies 'outside' of science and is 'properly' the task of the policy-maker, because, unless we understand how our policy-makers actually make their decisions, we are simply children at the mercy of unconscious and irresponsible drives. The subtle problem of understanding the basis of policy-making may be the most important problem the 'behavioral sciences' face in the coming decades." Churchman, quoted by Fred Brown: *Behavioral Science: A Reappraisal*. Burnaby, Simon Fraser University, mimeographed (1969), p. 26.

See Bronowski's criticism of this separation in Chapter Thirteen.

One good study of this integration is Loren Baritz: *The Servants of Power*. New York, John Wiley and Sons (1960).

The monopoly that some people have on a social scientific vocabulary reflects the centralization of power throughout our society. Without concepts (words and ideas) to express relationships between personal problems and larger social structures, people cannot begin to break through their powerlessness.

The relationship between ideology and scientific classes of problems is discussed in Chapter Eight.
22Horowitz, loc. cit.

23Ibid., p. 81. My criticism of Durkheim's theory of social facts is in Chapter Fourteen.

24Ibid., p. 86.

25See Chapter Sixteen in particular but also Chapter Six.

26Horowitz, op. cit., p. 82.


28Horowitz, op. cit., p. 87.

29Ibid., pp. 88-9.

30This difference is critical in this study. Marcuse emphasized the difference when he stressed critical or negative reason. For another approach to the same question see C. Levi-Strauss: The Savage Mind. University of Chicago (1966), Chapter 9.

31Horowitz, op. cit., p. 89.

32Ibid.


35Ibid., p. 90.

36Ibid., p. 91.

37Ibid., p. 90.

38Ibid., p. 91.


40Ibid., p. 131.

41Ibid., p. 138.
Chapter Four

Ideology as Pre-Analysis: Schumpeter

An understanding of the relationship between the problem of ideology and the social arrangement of science is rare in a time of academic specialization. Concentrating on their so-called "fields" and disinterested in general intellectual problems, most academics don't ever realize that the class of problems with which they deal have something to do with the social organization (e.g., function) of the type of knowledge developed. A few begin to consider the problem of ideology, but, as we saw in Chapter Three, they never break from a narrow scientism. In different ways, Ries, MacRae and Horowitz all failed to handle the problem as an intellectual problem. Instead they used the word "ideology" to debunk the position with which they disagreed. Even so, these authors are not typical of social scientists on this continent. Most social scientists are so integrated into the ideology of scientism and its institutional arrangements that they don't even begin to use the words that reflect the problem of ideology.

It is common for academic economists to have this narrowness. When we find an exception to this, it warrants special attention. Unlike most economists of his time, Joseph Schumpeter acknowledged that there was a problem of ideology and undertook an evaluation of it in his field of study. His evaluation, though limited by his reliance on a version of the value-free doctrine, introduces us to problems arising from the relationships of logic and ideology. We touched on this matter when discussing Horowitz. A critical examination of Schumpeter can
Further our consideration of this question.

Schumpeter’s Critique of Marx

Schumpeter accredited Marx with developing the modern theory of ideology and generally he treated the term in a similar manner. Of Marx he said "Marx realized that men's ideas or system of ideas are not, as historiography is still prone to assume uncritically, the prime movers of the historical process, but form a 'superstructure' on more fundamental factors ..."\(^2\)

Schumpeter, however, disagreed with Marx's theory of ideology in three specific ways. First, he argued that Marx "... was completely blind to the ideological elements present in his own ..." thought.\(^3\) Second, he disagreed with the position he attributed to Marx that all ideology is "reducible ... to those interests of the dominant class."\(^4\) According to what Schumpeter called the "principle of ideological interpretation", only two points need to be stressed about ideology. He wrote "... that ideologies are superstructures erected on, and produced by, the realities of the objective social structure below them; and that they tend to reflect these realities in characteristically biased manner."\(^5\) Ideology, according to Schumpeter, was not necessarily reducible to "purely economic terms", which was how he characterized Marx's use of the term.

His first point is actually unclear. Saying that there is an "ideological element" in Marx's thought does not deal with some basic considerations. For example, is social criticism as biased an orientation to the study of society as a reliance on ideas and categories that are apologetic for a social system? Or, to put this another way: what orientations (e.g., methodologies), if any, would differentiate between biased and non-biased or less biased ideas about society?
In not dealing with these kinds of questions, the kind Mannheim tackled, Schumpeter increased the confusion about the problem of ideology. Academics are accustomed to debunking what they stereotype as "Marx's ideology" without dealing with the problem of ideology in an intellectual, non-pejorative manner. This uncritical approach has clearly affected Schumpeter.

His second point depicts a view of ideology that is similar to that developed by Mannheim. Mannheim, as we saw, also used the term ideology in a general and a total way. Schumpeter, however, did not show the depth of awareness that was developed by Mannheim's historic analysis of the growth in awareness about ideological affects on knowledge. For example, his use of language was mechanistic, and this suggests a lack of an adequate theory of the interdependence of ideas and social structure. When Schumpeter wrote about ideas being "... erected on ... produced by ... (the) social structure below them" he showed this mechanism. We have already seen that Marx held a dynamic, not a reductionistic, theory of these relationships; a theory that showed how ideology mediates between praxis and consciousness. Schumpeter's belief that Marx was an economic reductionist is based more on projection than on understanding.

Schumpeter's third point is more useful for our inquiry. He refused, on logical grounds, to equate ideology with distortion and thus argued that

"... ideologies are not lies. It must be added that statements of fact that enter into them are not necessarily erroneous. The temptation is great to avail oneself of the opportunity to dispose of a whole body of propositions one does not like, by the simple device of calling it an ideology. This device is no doubt very effective as are attacks upon an opponent's personal motives. But logically it is inadmissible. As pointed out already, explanation, however correct, of the reasons why a man says what he says tells us nothing about whether it is true or false."

Though I do not accept the view of logic which is implied in this statement I do accept the point that intellectual criticism is needed to show the worth of
falsity of any set of ideas. Stereotyping a set of ideas as "ideology", using the term pejoratively, proves nothing. As an example, neither the end-of-ideology proponents nor the so-called "vulgar marxists", both of whom do this with sets of ideas with which they disagree, provide us with the needed clarification of the problem of ideology.

Schumpeter's view of logic is shown by his treatment of "facts" and "values". When he said that "tampering with facts or with rules of procedure" and "passing" value judgments were, besides "ideology", two "other dangers" to economic analysis, he showed a basic confusion about the problem of ideology. What values are implicit or explicit in different forms of knowledge? What values are implicit or explicit in different rules of procedure? These questions cannot be clarified independent of a consideration of the problem of ideology. By separating "ideology" from "facts and values" and these from "values", rather than analyzing the interrelations, Schumpeter was, in effect, refusing to consider the problem of ideology.

Schumpeter did say "... value judgments often reveal ... ideology" but he maintained a clear separation of fact from value. This was shown by his statement that "... it is possible to pass value judgments upon irrefutably established facts and the relations between them, and it is possible to refrain from passing any value judgments upon facts that are seen in an ideologically different light." There are no "irrefutably established facts" independent of a class of problems. And a class of problems obtains its shareable meaning from the social arrangement and function of science. Nor are "value judgments" something you pass on facts. This view of values assumes that an individual scientist discovers facts and then decides how to apply them. Rather
than this, the social relations within which a scientist acts give an orientation to his or her work. The "values" are already implied in the class of problems, not added to the results obtained. Clearly, Schumpeter failed to understand the implications of Marx's theory of ideology, which he generally accepted for his own view of science. If ideas form a "superstructure", then it is useless to separate "facts" from a consideration of how ideas function within a particular social system.

Schumpeter accepted a formalistic, not a pragmatic concept of logic. This formalism was shown when, discussing Adam Smith, he wrote "... we are not so much interested in what he ... argued for us as we are in how he argued and what tools of analysis he used in doing so." This statement reflects Schumpeter's reified view of the scientific process. The "rules of procedure" of science were treated abstractly and not related to the pervasive effect of ideologies in a social and historical setting. Schumpeter's discussion implied that science is equivalent to technique, and that technique is in the possession of scientists. This is the circular kind of argument that he was making. Economic analysts, for example, have the task of picking out "... as best (they) can such analytical performance from the common run of verbalizations of the humors of the time, that are unconnected with any effort to improve our conceptual apparatus, and hence without interest to us." The implication of this is that some know what "conceptual apparatus" is correct and others do not.

I ask: correct for what? Schumpeter did not take this question seriously. He never put his ideas about "truth" or "objectivity" into any well defined context. He therefore implied there is an objective knowledge per se; that ideas can be correct in themselves. He did not place ideas, including ideas about truth, into a social context even though the theory of ideology he accepted...
suggested that ideas always function within and gain their meaning from such a context.

Schumpeter did not analyze the "conceptual apparatus" of science from a sociological stance. It was described, briefly, but a description of so-called "rules of procedure" without a sociological basis too easily leads to a reified view of methodology. In only one place did Schumpeter show this awareness. Speaking of the "advances" in the techniques of economic analysis, he wrote that "... our ability to speak of progress ... is obviously due to the fact that there is a widely accepted standard, confined, of course, to a group of professionals, that enables us to array different theories ..." I agree, as far as he goes, but understanding the conditions that allow professionals to learn these standards remains a more fundamental problem than a description of the standards. And Schumpeter, like Horowitz, failed to take up this matter. His discussion ended just where it should have begun.

Schumpeter’s Obscurity

Having argued that ideology, value judgments and "tampering with facts" all distort economic theory, Schumpeter went on to discuss the scientific process in the more specialized field of economic analysis. He began by making a distinction between "analysis" and "preanalysis". In his words "... analytic effort is of necessity preceded by a preanalytical cognitive act that supplies the raw material for the analytic effect." This preanalytical process he called "vision". This is a revealing word since it tends to mystify a process that should be scrutinized closely if the problem of ideology is to be clarified. "Vision" becomes an all-embracing term for all hypothetical innovations as a field of study changes.
According to Schumpeter, analytic effort begins with the verbalizing of "vision". From this comes conceptualization which Schumpeter saw as "... elements taking their places with names attached to them that facilitate recognition and manipulation." Again we see a mechanistic language that suggests a lack of understanding of the process of analysis. According to this line of thought, "names" are put on "elements" to become "concepts". Such a simplistic view of scientific analysis results from the equation of a specialized class of problems, and the knowledge obtained, with insight into Reality or Truth. When academic narrowness is typical, it is rare that relationships between problems, methods and theories are understood. Such ignorance is often transformed into metaphysical and mechanical theories of knowledge.

Schumpeter's scheme is highly rational. After "naming of elements", new facts are assembled; new relations and concepts are added; and, ultimately, a "scientific model" is produced. I have no doubt that this simple scheme had some personal meaning for Schumpeter, and arose to help rationalize his own theoretical work. Though neat, it failed to draw out the real issues involved in understanding how particular problems, methods and theories develop, or why they become synthesized into different forms (so-called models) for different theorists. Most important, his approach failed to consider why some problems (e.g., the problem of ideology) aren't conceptualized by certain groups of scientists, nor any language developed to allow this to even begin to happen. Schumpeter certainly recognized a problem when he brought the term "vision" into his vocabulary. But adding a term to a discussion does not constitute clarification or understanding. Schumpeter shows us that rationalism can be used to cloak over basic confusion.

After outlining this rational scheme, Schumpeter returned to a discussion of ideology. In sum, he argued that ideology enters mainly through the "vision", 
but does not greatly affect the rules of procedure. One statement allows me to point out Schumpeter's basic fallacy, so I will quote him at length.

Summarizing his position, Schumpeter stated that

"This is indeed a primitive but not, I think, misleading statement of the process by which we grind out what we call scientific propositions. Now it should be perfectly clear that there is a wide gate for ideology to enter into this process. In fact, it enters on the very ground floor, into the preanalytic cognitive act of which we have been speaking. Analytic work begins with material provided by our vision of things, and this vision is ideological almost by definition. It embodies the picture of things as we see them, and wherever there is any possible motive for wishing to see them in a given rather than another light, the way in which we see things can hardly be distinguished from the way in which we wish to see them. The more honest and naive our vision is, the more dangerous is it to the eventual emergence of anything for which general validity can be claimed. The inference for the social sciences is obvious, and it is not even true that he who hates a social system will form an objectively more correct vision of it than he who loves it. For love distorts indeed, but hate distorts still more. Our only comfort is in the fact that there is a large number of phenomena that fail to affect our emotions one way or the other, and that therefore look to one man very much as they do another. But we also observe that the rules of procedure that we apply in our analytic work are almost as much exempt from ideological influence as vision is subject to it. Passionate allegiance and passionate hatred may indeed tamper with these rules. In themselves these rules, many of which, moreover, are imposed upon us by the scientific practice in fields that are little or not at all affected by ideology, are pretty effective in showing up misuse. And what is equally important, they tend to crush out ideologically conditioned error from the visions from which we start. It is their particular virtue, and they do so automatically and irrespective of the desires of the research worker. The new facts he is bound to accumulate impose themselves upon his schema. The new concepts and relations, which somebody else will formulate if he does not, must verify his ideologies or else destroy them. And if this process is allowed to work itself out completely, it will indeed not protect us from the emergence of new ideologies, but it will clear in the end the existing ones from error."18

This position is "indeed primitive", but it is also misleading. Giving "rules" the task of weeding out ideological influences in knowledge is tautological. Since a set of rules may be useful for one class of problems, but not another, relying on them as your absolute criteria increases the probability that some problems will be ignored. And this is actually how ideology affects the social sciences.

While, metaphorically, Schumpeter is correct that "ideology enters on the ground
floor" of science, he is mistaken to treat "rules" as pure techniques. The very methods used by a group of scientists relate to the class of problems to which they give priority. The "rules" themselves are operating at a "preanalytic" level of consciousness. When I discuss Kuhn's analysis of natural science in Chapter Five, the importance of this point for the problem of ideology will be clarified.

Schumpeter's Scientism

Failing to analyze the sociological characteristics and function of these rules, Schumpeter perpetuated the dogma that some ideas, in themselves, are objective and that others are not. Even as sophisticated a theorist as he was not unaffected by scientism. This "scientism" is often difficult to locate, as the following statement shows.

"As soon as we have realized the possibility of ideological bias, it is not difficult to locate it. All we have to do ... is to scrutinize scientific procedure. It starts from the perception of a set of related phenomena which we wish to analyze and ends up - for the time being - with a scientific model in which these phenomena are conceptualized and the relations between them explicitly formulated, either as assumptions or as propositions (theorems). This primitive way of putting it may not satisfy the logician, but it is all we need for our hunt for ideological bias."19

This formalistic approach to science reflects an ignorance of the relations between methods, ways to theorize and the class of problems which has relevance because of the social arrangement of science. Rather than hunting down ideological bias, Schumpeter's approach ensures that an orthodoxy - a closed system of problems, methods and theories - will be protected from fundamental criticism. Schumpeter simply failed to raise the problem of ideology. He skirted around the important issues by using the words "ideology", "fact", "value" and "rules" without giving them meaning, even in terms of his own theory of knowledge. Actually, his "theory of knowledge"
amounted to a splitting up of these terms so it appeared that they were unrelated. Yet his own analysis forced him to draw these words closer and closer together to the point of undercutting his original position.

Ultimately one's theory of knowledge must be articulated in relation to one's time and place in society and history if the problem of ideology is to be dealt with in any basic way. Schumpeter failed to do this. His main error was to not see that his treatment of science as technique, and his view of ideology as all else, related to the nature and uses of knowledge in advanced industrial societies. Only in this context can we begin to make sense of his statement that "Science is technique and the more it develops the more completely does it pass out of the range of comprehension not only of the public but, minus his own chosen specialty, of the research worker himself."20

Schumpeter judged the fragmentation of research and the specialized nature of academic knowledge to be progressive. But he assumed it to be good rather than evaluating the consequences of this social arrangement of science. He admitted that one consequence was an inability of specialized researchers to understand each other. It follows from this that they would have trouble understanding how their specialized findings add up, i.e., what the overall social effects would be. We can imagine other ways to socially arrange science to allow the social consequences to be evaluated as part of the subject matter. Schumpeter was too committed to scientistic assumptions to see this possibility.

Schumpeter was not dogmatic in his scientism since he did not begin his discussion with mutually exclusive realities, one of "fact" and another of "value". This tendency was, however, shown when he stated that he was "... speaking of science which is technique that turns out the results which, together with (my emphasis) value judgments or preferences, produce recommendations, either
individual ones or systems of them - such as ... mercantilism, liberalism and so on." Seeing the development of political and economic ideologies as preferential applications of value-free facts is the height of academic absurdity. It results from a formal and a historical view of knowledge. Later, when I discuss Max Weber's role in creating the value-free doctrine, I shall show how the tendency to separate value from fact is not only intellectually naive, but socially destructive.

Though this tendency is present in Schumpeter's work, he did recognize an interdependence between ideology and scientific analysis. His overlapping definitions of "vision", which was basic to his view of the scientific process, and "ideology" forced this recognition. He did not, however, recognize this interdependence in terms of the sociology of knowledge. His formal orientation made this impossible and led him to consider ideology to be a necessary evil. Thus he wrote "... though we proceed slowly because of our ideologies, we might not proceed at all without them."22

Schumpeter's formal approach led him to separate "investigation" from "evaluation". Hence he wrote

"... in itself scientific performance does not require us to divert ourselves of our value judgments or to renounce the calling of an advocate of some particular interest. To investigate facts or to develop tools for doing so is one thing; to evaluate them from some moral or cultural standpoint is, in logic, another thing, and the two need not conflict."23

This separation of investigating and evaluating facts is the fallacy of all theories that do not begin with a clear understanding of the problem of ideology. "Facts" are treated as things to be discovered, rather than as human creations arising from a particular function of science. The latter is not the same as saying that the human "mind" creates "facts" at will.24 What I am saying is that we are a species that lives within certain dimensions; that has a particular interrelationship, i.e., the social arrangement of human labour, technology and science, with the material
environment, and that we create facts accordingly.

Once "facts" are seen in terms of human and social realities, the suggestion that investigating facts is purely a technical matter, while evaluating them is a moral matter, becomes absurd. Our academic languages, which are still built upon this kind of duality (e.g., technical versus moral) keep us from understanding the vital relationships between the social organization of science and the way a class of problems, certain related methods and theories interrelate. As science becomes more and more consequential for humanity our very survival depends on thinking and acting in terms of these relationships.

Furthermore, Schumpeter made "logic" a final arbiter for questions of fact ("technique") and value ("morals"). But of what kind of logic was he speaking? Logics are also creations of human beings. Unfortunately, it has become an academic "fad" to have a logic to rationalize the dominant approaches in the social sciences. This just enhances our inability to understand the problem of ideology at its roots. Until we recognize that there is no absolute "Logic" on which we can rely, that there is no "Logic" that will make our intellectual decisions for us, we will not learn to maximize judgment in our scientific work. This judgment, if maximized, would involve choosing problems and methods that relate to the social ends, i.e., consequences, we desire.

Schumpeter's discussion was far removed from this goal. His discussion did not attempt to relate ideology to analysis, but the problem of ideology was not drawn out because of his dualistic thinking. Were he to have tackled problems of logic seriously, and taken his recognition of Marx's theory of ideology a step further to a sociology of knowledge study of the logics that lead us to dichotomize value and fact, he would have had to encounter the problem of ideology.
It would be unfair to not accredit Schumpeter with some "vision" regarding this problem. Though his analysis of fact and value is unsound, within his analysis there are statements that could be considered "preanalytic", that is, which could have led to a more thorough discussion. One good example is his statement that

"There is more comfort in the observation that no economic analysis lasts forever and that, with a likelihood that approximates certainty, we eventually grow out of each. This follows not only from the fact (my emphasis) that social patterns change and hence every economic analysis is bound to wither, but also from the relation that ideology bears to the pre-scientific cognition which we have called vision."25

Only in this one place did Schumpeter recognize that "social patterns" and the form of analysis relate. If Schumpeter had seriously questioned why economic analyses change, and had seen that changes in scientific "rules" are a part of larger ideological changes, he might have abandoned his adherence to a version of the value-free doctrine. If Schumpeter had applied his above statement to his own handling of the problem of ideology he would have recognized his contradictory position. Like Horowitz, or anyone that treats ideas academically, Schumpeter admitted changes in systems of thought at one point, while absolutizing the "rules" of one system of thought at another point in his discussion.

Schumpeter's self-contradictory position was shown when he wrote that

"Since the source of ideology is our pre and extra-scientific vision of the economic process and of what is - causally or teleologically - important in it and since normally this vision is then subjected to scientific treatment, it is being either verified or destroyed by analysis and in either case should vanish qua ideology."26

On the one hand, he admitted that economic analyses change. On the other hand, he admitted that "ideology" is the beginning of any particular economic analysis. If this is so then the problem of ideology can never be solved by relying on any par-
ticular method of economic analysis. Schumpeter cannot have it both ways, though he tried. One main reason why it is so difficult for the problem of ideology to be understood is that specialized academics are often more competent creating new words to avoid evaluating their assumptions than using language to move clarification to a new level.

Footnotes


2Ibid., p. 110.

3Ibid.

4Schumpeter, op. cit., p. 111.

5Ibid.

6Ibid.

7C.W. Mills used the term "vulgar marxism" to describe the "empty and irrelevant rhetoric" that remains when political ideas become "simply myth or folklore". C.W. Mills: The Marxists, op. cit., p. 17.

8These words are themselves inadequate for analyzing the problem of ideology. The fact that I have written of the "interrelations" of fact and value, though I reject the dichotomy, shows the inadequacy of our language.

9Schumpeter, op. cit., p. 112.

10Ibid.

11Ibid., p. 113.

12Ibid., p. 114.

13Ibid.

14"Tempering with facts" might be quite necessary for developing a new class of problems. This will become clear in Chapter Six when we criticize the abstract notion of facts.
Such scholars as Joseph Schumpeter, Weber's greatest successor in the role of economic sociologist, have delineated the concept (Weber's ideal type) more precisely under the new term 'model'. And on this basis new 'models' have become an enormous stock-in-trade among social scientists. (H. Stuart Hughes: Consciousness and Society, New York, Random (1958), p. 314.) When I discuss Weber's work in Chapter Twelve, I will show how this more precise formulation of the "ideal type" reflects a vulgarization of Weber's insight.


A pragmatic orientation and an idealist one are often confused by those who understand "facts" from a vulgar materialist or abstract empiricist perspective. To help clarify this a critique of idealism from a pragmatic stance is included in Chapters Seventeen and Eighteen.

Schumpeter, op. cit., p. 281.
Chapter Five

Ideology as Disguised Values: Bergmann

Our discussion of Joseph Schumpeter may not have made it clear how a critical examination of theories of logic relates to the problem of ideology. It is necessary to establish this relationship of logic and ideology for our critique of scientism to be thorough. I will do this by evaluating a paper by Bergmann which discussed "ideology and logic" in a way fundamentally different than my approach. The comparison will hopefully serve to clarify this matter more than would a direct articulation of my own position.

The Logical Analysis of Ideology

Bergmann accepted the value-free doctrine without qualification and developed his definitions of "facts", "value", "logic" and "ideology" within this framework. His claim was to have done "... a logical analysis of the notion of ideology." We shall see, however, that he made the same errors that all who begin their analysis with a value-fact split make.

Here is how Bergmann defined "fact" and "value":

"A statement of fact says something about the object or objects it mentions; and, depending only on the properties of these objects, it is either true or false. A value judgment is misunderstood if it is taken to ascribe a property to the object, act or situation it mentions in the same sense in which a statement of fact is such an ascription; it is, therefore, literally neither true or false."  

What one means by "... says something about ... the properties of these objects ..." is, of course, the crux of the problem of logic. And, as I shall argue in Chapter Nineteen, the clarification of this requires a sociological understanding of language.

On the basis of these definitions, Bergmann developed the following definition
of "ideology".

"The motive power of a value judgment is often greatly increased when it appears within the rationale of those who hold it not under its proper logical flag as a value judgment but in the disguise of a statement of fact. A statement of this kind, that is, a value judgment disguised as, or mistaken for, a statement of fact, I shall call an 'ideological statement'. A rationale or an important part of a rationale that contains in logically crucial places ideological statements I shall call an "ideology"."¹

From this set of deductions, Bergmann concluded that man is an "ideological animal". In his words: "... up to this point in his history, his rationales were more often than not ideologies and because, whether we like it or not, the motive power of his standards is, at least sometimes, greatly increased if they take the form of an ideology."⁵ There is nothing to be gained from saying that "man" is an ideological animal. While mental and physical labour is rigidly divided, and knowledge is mystified, "ideology" will affect all humans - academics included. For example, Bergmann's own concepts are ideological. Seeing truth as the description of "facts", and all else as disguising values with statements of facts, ignores the fact that a particular social arrangement of science pre-determines that a certain class of problems and facts with certain human consequences takes priority. Bergmann's formalism not only kept him from studying these relationships; it also reflects the ideology within mainstream academia that treats facts in such a way that the social function of knowledge will not be understood.

Though Bergmann did not conclude that man was a "logical animal", he treated logic as though it were more fundamental than ideology. Much as Schumpeter tended to reify the "scientific process", Bergmann tended to reify "logic". He did not even obtain the insight of Horowitz that logic itself serves the ideological needs of a social system.
Here is how Bergmann viewed logic. First of all, "logic", i.e., his logic, transcends both the sociological and epistemological approaches to knowledge. Arguing his position, Bergmann wrote:

"Like the problem of epistemological subjectivity, though for different reasons, the problem of sociological subjectivity is, I submit, a pseudo-problem. There appears to be a problem only as long as one fails to distinguish between value judgments and statements of fact, treating some of the former like statements of perceptual error or, more significantly, like systematic delusions due to one's social circumstances."\(^6\)

The sociological and epistemological approaches to knowledge are "subjective" because they fail to make a logical distinction between "fact" and "value". In Bergmann's words:

"... the distinction between fact and value, which explains this notorious subjectivity, is as clear and unproblematic as those between a physical object, a percept, and an illusion. Moreover - and this is the crucial point - all these distinctions are matters of logical, not of sociological, analysis, just as they are systematically prior to and independent of all sociological considerations."\(^7\)

Here we see the argument that logical considerations are primary to sociological ones in understanding the problem of ideology. Since this argument is of the more sophisticated ones used to justify the value-free doctrine and scientism it requires a detailed criticism.

Ideological orientations arise out of the social relations, the types of language and consciousness and the related forms of knowledge of a time and place in history. Reducing the problem of ideology to the formal relations of "fact" and "value" tends to ignore the implications of this. This reduction can make the problem of ideology appear to be a logical matter since no historical content is utilized in this formal kind of analysis. Because he tried to make an undefined "logic" the absolute anchor for his argument and failed to situate his idea of "logic" in history, we can say that Bergmann's own values were disguised as state-
ments of fact. Ironically, this was Bergmann's own definition of "ideology".

There is a circularity in Bergmann's argument. The formal manipulation of definitions is a weak beginning for any argument. According to Bergmann, his position "... is not an ideology ... (and it) beholds the truth without ideological distortion." But saying this does not prove it, nor does the manipulation of definitions ensure that his "logic" deserved the transcendental status it was given. Once Bergmann's idea of logic and of "ideology" is examined from the stance of the problem of ideology, this so-called logical analysis of ideology is shown to be both meaningless and ideological in the more profound sense of that term.

Bergmann's "logic" reflected the positivistic-analytical tradition in philosophy. The dichotomizing of "objective" and "subjective" is basic to this tradition. In his words

"Objectivism takes its inspiration from the natural sciences and the empiricist philosophies of the last century. Subjectivism stands in the tradition of Hegelian idealism, which is history-centered, could not accept the "positivistic" distinction between fact and value, and even denies that there is any such thing as objective self-contained truth in the sense in which all nonidealistic philosophers, realist and positivist alike, insist that there is such truth. Mannheim as an individual certainly stems from Hegel; so, by the way, does Dewey, who in many respects holds structurally very similar views."

I will not take up the detailed debate over logic until later. My purpose in this section of the thesis is to establish that the problem of ideology is fundamental for the social sciences. In doing this, I am showing both the superficiality of the scientistic view of ideology and the ideology that complements scientism. It is noteworthy, however, that Bergmann classified Mannheim and Dewey in the same intellectual tradition. This thesis is based on a similar assumption, though I hold a positive, not negative view of these authors' contributions.
Bergmann did not base his argument on a critical discussion of philosophical issues in the social sciences, nor on an analysis of the history of philosophies of knowledge. And his formal, contentless discussion was the basis of his downfall. This was shown, unquestionably, by his definition of ideology as that with which he, as one in the positivist-analytical tradition, disagreed. As he wrote "If I am to be consistent, I must call ideology every rationale, no matter how explicit and articulate on the fact-value issues and other fundamental questions, that assimilates facts and values to each other in a way in which the tradition in which I stand insists that this cannot be done." If there was any doubt about the circularity of Bergmann's position, this statement should dispel it. Characteristic of all theorists who fail to understand the mediational effect of ideology, even on the most specialized areas of knowledge, Bergmann's argument proves to be no argument at all.

Bergmann's idea of "ideology" only applied to other traditions than the one with which he agreed. In admitting this, we see how Bergmann's abstract commitment to "logic" helped undermine his own argument. In his paper, he made his formal manipulation of definitions explicit in an attempt to be internally consistent. To the formal logician, internal consistency in language forms is paramount. Such does not constitute a clarification of the problem of ideology, however. It is more accurate to call what Bergmann did "word games" than analysis.

Bergmann's notion of "truth" relied on the formal manipulation of definitions or word games. Discussing Mannheim he wrote:

If Mannheim's "... proposition that every rationale is an ideology is itself objectively true, how can we know of it? If it is not, why should we pay any attention to it? And what, in particular, is the value of a social science thus construed?"
It is a distortion of Mannheim's case to reduce it to the maxim that "every rationale is an ideology". We already saw that Mannheim's main concern was with understanding ideas in their socio-historic context with the aid of a relational epistemology. Bergmann's misreading of Mannheim related to his academic, rather than pragmatic, view of truth. We have now seen in several cases how this misreading complements a failure to confront the problem of ideology as a problem.

Bergmann imposed his own concept of "objectivity" onto Mannheim's thesis. This was done much like Horowitz imposed his view of science onto Marx's work. Mannheim's point was that the traditional, platonically notion of truth needed to be replaced because epistemology itself had a socio-historic basis. Mannheim did not succeed in this task but Bergmann ignored the problem. He utilized the traditional view of objectivity to criticize Mannheim's argument without ever considering the critique of this notion of objectivity that was implied by Mannheim's argument.

This projection by Bergmann exemplified how ideology presently operates in the social sciences. Bergmann's criticism of Mannheim did not mean that two contrasting perspectives were being evaluated. Instead of this, one (Mannheim's) was being reduced to another (Bergmann's). Bergmann's orientation was too narrow and formal for him to be aware that Mannheim had dealt with this very problem, i.e., the problem of perspectives.

Bergmann admitted the validity of a sociological treatment of knowledge only at one point in his discussion. And again his abstract commitment to "logical analysis" helped to expose the contradictions and weaknesses in his method. First he wrote that "... I believe that there are causes that make some of us see the truth ..." Referring to these causes he then continued "... if
sociological factors enter, as they probably do, ... they are likely not the whole story ..."¹⁴ Though he wrote this, in contradiction to his earlier statement that logic "... is prior to and independent of ..." sociology in analyzing fact and value, he did not undertake any serious study of the sociology of knowledge.

Instead of trying to clarify the questions implied in his own statements, Bergmann concluded that "objectivists" are "neutral experts and critics", while "subjectivists" have a "desire for social leadership".¹⁵ He did not discuss what were the sociological "causes" of truth. Instead, he implied, without argumentation, that the social status of so-called objectivists allows them to see the truth. Without a thorough analysis of the socialization of intellectuals within the so-called "objectivist" and "subjectivist" traditions, and a consideration of the usefulness and function of these classifications themselves, no such conclusion is justified. Though Bergmann did finally admit that the sociology of knowledge is relevant to questions of logic, his adherence to a formal theory of logic made it impossible for him to do the necessary follow-up analysis.

Bergmann's commitment to the value-free doctrine was total. After barely touching on the problem of ideology, at its roots, he shifted to a more abstract discussion to build new classifications and definitions to shore up his case. Thus the terms "philosophical ideologies" and "scientific ideologies" were added to his already faltering discussion.

Combining the terms "science" and "ideology" contradicted all that Bergmann had argued to this point. We already saw how Schumpeter's contradictions led him to do a similar thing. Originally, as a result of the assumed split between "fact" and "value", logic was seen as fundamental to ideology. All of Bergmann's later
points depended on the validity of this assumption. Yet, after admitting the relevance of the sociology of knowledge, he moved to a level of abstraction which allowed him to deal with some of the implications of the problem of ideology without having to reconsider his earlier points and related beliefs.

Bergmann ended his discussion where it should have begun. Discussing "scientific ideologies", he admitted that

"... the laws proposed and even the variables entering them may well be determined, at least in part and either consciously or unconsciously, by the values of the author. Practically this is, I believe, one of the most important mechanisms by which scientific ideologies establish themselves as social science, sometimes dangerously and with disastrous consequences, as in the case of Marxism, which - let us be just - brought home to us the relevance of the economic variables as it had never been brought home to us before."16

Finally, Bergmann admitted that values do enter into statements of fact. Finally, Bergmann reached the consciousness with which Schumpeter's inadequate analysis began. Though, like Schumpeter, he argued that "value judgments as such are not ideological"17 and thus tried to maintain a rigid dichotomy between values and facts, his own notion of "scientific ideologies" showed that this dichotomy was untenable. His creation of this classification, as with Horowitz's use of the same terms, reflected his recognition of the problem of ideology and his refusal to consider the implications of it for his own formal logic.

Logic as Ideology

How are we to understand Bergmann's contradictory handling of the relation of logic and ideology? For one thing, it shows how the academic use of language can cloak over a self-contradictory position. It also shows how language has to deal with an intellectual problem in an inclusive manner, at all relevant levels, if it is to clarify the problem for us. Over-specialization in academia operates
against such uses of language and actually helps maintain an ignorance about the problem of ideology.

A philosopher with so-called objectivist assumptions has much to reconsider when he or she comes face to face with the problem of ideology. Bergmann's paper shows the dire consequences of the over-specialized "knowledge" and languages that function within the ivory towers of this society. With a fragmentation of knowledge, which itself has roots in a society that fragments people, comes the fragmentation of thought. Problems that are often shown to be pseudo-problems when a more inclusive and integrated perspective is used get "conceptualized" in a narrow way when specialization dominates. What passes as conceptualization often proves to be a play on abstract definitions.

Bergmann's ideas about logic, ideology and the history of philosophy were interrelated in a particular manner. When his own discussion tended to undermine his own assumptions, new, abstract categories were invented. The contradictions were thus cloaked over. Bergmann's own commitments were related to this inflexibility. Early in his paper he wrote:

"Wherever (a philosopher) starts, he will ... soon arrive at those rather few fundamental questions which, once firmly grasped, help us to understand, though not necessarily to answer, all others. In this respect nothing has changed and nothing, I hope, ever will (my emphasis)."18

Then, near the end of the paper, he wrote "I would say then, that by the standards of classical nineteenth-century liberalism, which, freed from some historical dross, happen to be my own, the idea of an ideology-free society is a consummation devoutly to be desired, if for no other reason than that humanity, the intelligence, and the courage it takes to bear life without the support of ideological illusion."19

Together these statements show the interrelations between Bergmann's view of logic and his own ideological orientation. He implied that philosophers deal
with unchanging questions and that liberalism seeks an end-of-ideology. He also believed that his logic was unchanging (e.g., trans-historical) and that his liberal values were factual. When he ended his paper by saying that "... we may increase our chances (of an ideology-free society) if we can learn to stand by our values without clutching to an ideology." this orientation was carried to its logical absurdity. "Fact" and "value" were still split; and to suggest that his own liberal values were not related to any ideology, he also kept "values" and "ideology" separated. This arbitrary manipulation of words has nothing whatsoever in common with analysis.

The way Bergmann's formal logic and liberal values interrelate is the core of the ideology that dominates science in this society. This intricate system of ideas is what I have called scientism. The fact that an end-of-ideology rhetoric and formal, contradictory manipulations of definitions are used to cloak the ideology of scientism does not confirm the value-free doctrine. Rather than this, it makes scientism an example of a very crude and inarticulated ideology.

When Bergmann spoke of freeing liberal values from "some historical dross" he showed the crudity of this academic manipulation of language. There are no "liberal values" in abstract from the function of them within a particular social system at any particular time. Treating ideas in this manner is itself a result of the way in which "mental production" is socially organized. Bergmann's approach is exceptionally close to the model that Marx and Engels developed to characterize the creation of ideology. He wanted to give "liberal values" a purity, untainted by historical realities. He wanted to treat his values as absolutes and to analyze those of others as ideologies. His logical analysis of ideology turned out to be an expression of logic as ideology.
My criticism of Bergmann leads me to make two added points that are basic to this study. One is about the relationship between specialized types and forms of knowledge and an inadequate handling of the problem of ideology. Could it be that our methods of recruiting and training professional academics and scientists no longer serve, but in fact retard, the growth of relevant knowledge? This leads me to ask how we should determine what forms and types of knowledge are relevant. The latter point, which I will discuss when I analyze Sartre's approach to ideology, is about the centrality of choice or of intellectual judgment to all science. I have already touched on this in my discussion of Mannheim. We choose assumptions according to their value in dealing with certain intellectual problems. The class of problems with which we are dealing will affect what these assumptions will be. If we are unable to see the role of choice and judgment in science, if we are tied to an orthodoxy, inquiry will be retarded. Since what I have called "word games" are widespread where there is verbal intelligence without a self-critical perspective, real inquiry is often non-existent in academia. The value-free doctrine, in all its variations, undercuts the ability to make intellectual judgments because it distorts our understanding of the dialectics of human knowledge. I will now expand on this point by discussing the problem of ideology in relation to the natural sciences.

Footnotes


2Ibid., p. 124.

3Ibid., p. 125.

4Ibid., p. 129.
The tendency to reduce "logic" to the question of internal consistency is criticized in Chapter Sixteen.

Bergmann, op. cit., p. 132.

Toulmin has argued that contemporary examples of platonic or "platonist" views of truth are those which attempt to "... employ mathematic models in all speculations ..." and which attribute an independent existence to such "mathematical entities", much as Plato did to his "forms". Stephen Toulmin: The Uses of Argument. Cambridge University Press (1964), p. 182.

Bergmann, op. cit., p. 133.

One approach to this question is suggested by the following statement: "... human cravings are not only inescapable parts of the datum with which social science works, but ... they dictate the direction of emphasis of social science as man's working tool for continually rebuilding his culture." Robert S. Lynd: Knowledge For What? Princeton University Press (1939), p. 200.
To this point in my analysis, I have argued two things. First, I have tried to establish that ideology constitutes a fundamental problem for the social sciences. Second, I have criticized all approaches to the question of ideology that fail to treat it as such. I have argued that regardless of the sophistication with which these latter approaches are presented any approach that tends to or does abstract "methods", "rules", "logic" - however "science" is characterized - fails to recognize important relationships between the function of science, the class of problems with which it deals, and the social and human consequences that result.

Much of this inadequate thinking or what I have called "scientism" results from a stereotyped extrapolation of natural science rationales. To deal with the false handling of the problem of ideology it is therefore necessary to discuss issues in the natural sciences at some length. A recent and widely discussed book by Kuhn\(^1\) provides us with a useful perspective for this task. We shall see, as we proceed, that once natural science is de-mystified, it is easier to grasp the implications of the problem of ideology for our understanding of social science.

Thomas Kuhn only used the term "ideology" twice in his study. Referring to the widespread belief that social sciences have failed to progress as much as natural sciences, he asked "What changes in technique or method or ideology would enable it (a social science discipline) to do so?"\(^2\) It is significant that this question occurred in the concluding chapter of this historical study of natural
science. Because of this, no real evaluation of the problem of ideology in the natural sciences was possible for Kuhn. It is clear, however, that Kuhn saw a function for ideology in science. Early in his study, he wrote that "The depreciation of historical fact is deeply, and probably functionally, ingrained in the ideology of the scientific profession ..." To evaluate this proposition, we need to trace through Kuhn's analysis of "paradigms", his discussion of epistemology, and his ideas about education in the natural sciences. On the basis of this, I will indicate why and how the sociology of knowledge is relevant to the natural sciences. Furthermore, by discussing Kuhn's failure to see this relevance, I will show how the problem of ideology is central to all fields of knowledge.

The Mystification of Scientific Rules

Kuhn's main point was that "paradigms" are more fundamental to natural science than specific scientific rules or methods. A paradigm is a "... strong network of commitments - conceptual, theoretical, instrumental and methodological ..." In many places, Kuhn used the term interchangeably with "world view". This network of commitments is more important to the workings of science than any abstractions of the kind Schumpeter made about "scientific method". "A paradigm is a criteria for choosing problems ..." and, according to Kuhn, "... the reception of a new problem often necessitates a redefinition of the corresponding science" including its methods.

Scientific "rules" are often non-existent in the sense that philosophers of science often refer to them. When research in a class of problems is progressing "normally", rather than paradigms themselves being debated, "rules" are often not even articulated. As Kuhn wrote
"One is at liberty to suppose that somewhere along the way the scientist has intuitively abstracted rules of the game for himself, but there is little reason to believe it. Though many scientists talk easily and well about the particular individual hypotheses that underlie a concrete piece of current research, they are little better than laymen at characterizing the established bases of their field, its legitimate problems and methods. If they have learned such abstractions at all, they show it mainly through their ability to do successful research."  

These "rules" are often mystified as though a researcher deduced or induced all his insights according to them. Rather than this occurring, Kuhn argued that  

"Normal science is a highly determined activity, but it need not be entirely determined by rules. That is why, at the start of this essay, I introduced shared paradigms rather than shared rules, assumptions and points of view as the source of coherence for normal research traditions. Rules, I suggest, derive from paradigms, but paradigms can guide research even in the absence of rules."  

Kuhn went further than this and argued that methodological debates are not about the adequacy of "rules" per se but reflect an underlying debate about the relevance of paradigms.  

"Normal science can proceed without rules only so long as the relevant scientific community accepts without question the particular problem-solutions already achieved. Rules should therefore become important and the characteristic unconcern about them should vanish whenever paradigms or models are felt to be insecure."  

At present, when debates about methods in the social sciences are increasing, we should be deciding what underlying paradigms, or pre-paradigm hypotheses, are in conflict. A historical study of the social sciences, not the typical technique-oriented debate, is what will provide us with this understanding.  

Rather than speaking of "the scientific method", Kuhn talked of "... the rules of the game."  

His view of methods in science stressed the commitments of the scientists who work within a paradigm of problems. According to Kuhn, these are usually practical commitments "... to preferred types of instrumentality" and, according to him, "... the endurance of instrumental commitments ... as much
as laws and theory, provide scientists with the rules of the game.\textsuperscript{12}

If rules are not seen in this pragmatic way, then "the scientific method" comes to be treated metaphysically. The rules, if abstracted from their use, come to be seen as intrinsically true or false. Much false debate results from this error. Much "philosophy of science" is rooted in this error. Also, when rules are treated in this abstracted way, it is easy to ignore the rule of what Kuhn called "quasi-metaphysical commitments", or what I might call ideological commitments, among natural scientists.

Ignorance about these practical and ideological commitments of scientists complements the metaphysical treatment of scientific "rules". They are then thought of as Rules, unrelated to a scientific paradigm and the instruments that are relevant to problems that have grown out of it. This error occurs because philosophers of science and those who extrapolate "rules" from other fields of study often try to rationalize our understanding of research methods when no such rationalization is possible. As Kuhn wrote: A group of scientists "... can ... agree in their identification of a paradigm without agreeing on, or even attempting to produce, a full interpretation or rationalization of it." He continued that the "... lack of a standard interpretation or of an agreed reduction to rules will not prevent a paradigm from guiding research."\textsuperscript{13}

Rules, therefore, cannot be understood in abstract from a specific paradigm. If and when they are articulated, they serve a function within the network of commitments and problems that constitute a paradigm. And it is not necessarily a progressive function. For example, Kuhn stated that "There must also be rules that limit both the nature of acceptable solutions and the steps by which they are to be obtained."\textsuperscript{14} In view of this, it is possible for "rules" to keep a field of study from expanding into new problem areas. If and when new problems are raised,
and if the paradigm of commitments cannot be made relevant to them, what Kuhn called a "crisis" occurs. Such a crisis demands "... the blurring of a paradigm and the consequent loosening of the rules for normal research." What has come to be treated as normal research within a paradigm therefore "... often suppresses fundamental novelties because they are necessarily subversive of its basic commitments."  

Rules can, therefore, function to justify an orthodoxy that is resisting a needed redefinition of problems in a field of study. The "subversive" role of "fundamental novelties" exists in natural science as in all areas of knowledge. An emphasis on "rules" is a major way that an ensuing crisis in a scientific paradigm is ignored.

Kuhn argued that the "... proliferation of versions of a theory is a very symptom of crisis." Rather than allowing schisms to develop among different theoretical orientations in the social sciences, it is more vital to understand why and how the variation of ideas reflects a more basic crisis in a paradigm. If Kuhn's analysis of paradigms and rules applies to the social sciences, then "methodological hobby-horsing" will not get to the root of the matter.

Kuhn's main point was about "... the insufficiency of methodological directives, by themselves, to dictate a unique substantive conclusion to many sorts of scientific questions." This analysis shows the necessity to see how a network of commitments to a class of problems and related methods undergoes change as new problems become relevant. And it is necessary to understand why new problems become relevant. Shifts and conflicts within institutions would be one thing to study. The important point for our discussion of ideology is that as problems change, commitments change. Or, it is possible that as commitments (e.g.,
values) change, problems change. The ordering of the change is not the relevant issue here. What is important is the conclusion that no "scientific model" exists in any static way.

The Need for Epistemological Reform

Though the implications of Kuhn's perspective on rules are revolutionary, he failed to fundamentally question the traditional epistemology which complements the reified view of "scientific method". A fundamental revision of epistemology would bring the idea of truth into the realm of experience, acknowledging that humans can choose the values - with values seen both as commitments to, and as the consequences of, doing things in certain ways - for which they want their knowledge created.

Though his concept of epistemology remained narrow, Kuhn did recognize the need for a change. He wrote that "None of these crisis-promoting subjects has yet produced a viable alternative to the traditional epistemological paradigm, but they do begin to suggest what some of the paradigm's characteristics will be."20 Furthermore, he asked:

"Are theories simply man-made interpretations of given data? The epistemological viewpoint that has most often guided Western philosophy for three centuries dictates an immediate and unequivocal, Yes! In the absence of a developed alternative, I find it impossible to relinquish entirely that viewpoint. Yet it no longer functions effectively, and the attempts to make it do so through the introduction of a neutral language of observations now seem to me hopeless."21

Kuhn clearly rejected the possibility of a "neutral language" or value-free logic. Our discussion of Bergmann already showed the superficiality of this view of logic. Even with this insight, Kuhn did not develop a real alternative; although some of his ideas did pave the way for this. For example, Kuhn showed that
paradigms serve a pragmatic function for research, rather than being true or false per se. In his words

"Without commitment to a paradigm there could be no normal science. Furthermore, that commitment must extend to areas and to degrees of precision for which there is no full precedent."22

And Kuhn correctly called this a tautological function. Once the commitments to a paradigm are made, then certain problems, methods and theories have meaning to a scientist. The language of a paradigm gives a focus to research, and, as such, has a self-fulfilling function.

In themselves, tautologies do not present a problem for science. It is when a paradigm comes into question and the interrelations of problems, methods and theories can be seen, that this problem arises. As Kuhn said "From within a new theory of scientific knowledge, they (anomalies) may instead seem very much like tautologies, statements of situations that could not conceivably have been otherwise."23 Only when there is a search for absolute knowledge do tautologies become a problem per se. Only if the fundamental role of paradigms to science is ignored and some abstract idea of truth is accepted, do tautologies appear problematic.

These interrelations of problem, method and theory form the "logic" of a paradigm. Speaking of those ",... committed to Newton's theory...", Kuhn remarked that the "... second law of motion ... behaves ... very much like a purely logical statement that no amount of observations could refute."24 This is an example of how a paradigm - including specific results and general hypotheses - forms a worldview with its own logic. And, more important, this shows why scientists cannot rely on formal logic as the final arbiter of truth.

Only those who are looking for "the logic" fail to recognize how the
particular interrelations of a class of problems, methods and theories constitute "a logic". They use a logic that is interrelated with a set of facts and theory to validate that very set of facts and theory. This is understandable since the person is thinking within the paradigm, but that does not mean that the logic of the paradigm can be used to prove that the facts or theory are true in some metaphysical way. This false conclusion is rooted in an academic approach to epistemology. Looking for truth in general and in theory, rather than seeing that the so-called "rules" function as a part of "the game", many academics try to anchor their knowledge on a system that is itself a representation of that knowledge. This is how formal logic functions tautologically and, as we saw in Chapter Five, ideologically. Failing to see that facts and theory are a part of a paradigm and of an ideology, these academics get caught in endless dilemmas.

Kuhn's thesis implied a criticism of notions of traditional epistemology. For example, he wrote that the "... distinction between discovery and invention or between fact and theory will, however, immediately prove to be exceedingly artificial." Kuhn questioned the common split between facts as discovered and theory as invented because it assumes that there can be neutral (i.e., non-paradigm) observations of "nature" or "reality". This was the main assumption that Kuhn's study rejected.

Rejection of this dichotomy demands a new concept of "interpretation" that is not rooted in traditional epistemology. Once the primacy of paradigms is acknowledged, it is not possible to talk of a subjective person observing an objective reality, with "interpretation" as the link. Referring to the way that new paradigms, with new commitments, are developed, Kuhn wrote "No ordinary sense
of the term 'interpretation' fits these flashes of intuition through which a new paradigm is born.26 Scientific interpretations are clearly not rational, logical deductions made according to some trans-social criteria, though many think of science in this way.

A change is also required in our notion of "verification". About this Kuhn wrote "Verification is like natural selection; it picks out the most viable among the actual alternatives in a particular historical situation (my emphasis)."27 Viable in terms of what? Viable in terms of the commitments of a scientist to a paradigm? It is important to note that the "particular historical situation", e.g., the way science functions within a society, will affect the method of verification and interpretation. Here we see where Kuhn's thought begins to overlap with the sociology of knowledge.

Verification and interpretation are not made on the basis of abstract principles. They stem from the operations used by a scientist within a particular historical situation. Kuhn suggested that "Perhaps immediate experience should be set aside as fluid, and we should discuss instead the concrete operations and measurements that the scientist performs in the laboratory."28 This would require an analysis of the research techniques in use, which means much more than a description of them. The social function of science at a particular time will enhance the development of some techniques over others. Another way of stating this is that the "aims of science", rooted in the organization of science, affect the methods or tools of verification.

This means that technology and its uses need to be included in any comprehensive study of epistemology. And the interrelations of science and technology were mentioned by Kuhn. He wrote that "Because the crafts are one readable
accessible source of facts that could not have been casually discovered.
technology has often played a vital role in the emergence of new sciences.\textsuperscript{29}

Later in his book he made this point:

"As in manufacture so in science - retooling is an extravagance to
be reserved for the occasion that demands it. The significance of
crises is the indication they provide that an occasion for retool-
ing has arrived."\textsuperscript{30}

This is more than an analogy. Technology and its uses shape the
function of science and the class of problems with which it deals. And since
the uses of technology relate to the system of political and economic power,
the system of power in society can affect the very core of the scientific
method. If there is no abstract method of verification, if verification comes
from a set of operations, and if these operations relate to the dominant uses
of technology, then all abstracted notions of scientific method must be reject-
ed. In Kuhn's study the de-mystification of scientism was total.

Kuhn exposed concretely and historically the rhetoric that often passes
in academia as "philosophy of science". The implications of his insights are
threelfold. First, we can conclude that the scientism of today not only lacks
understanding of the process by which science develops, but impedes this.
Scientism impedes the development of knowledge about how problems, methods and
theories interrelate within a paradigm. It retards the development of a histor-
ical and self-critical consciousness about science. Kuhn saw that the superfi-
cial, positivistic orientation to science limits the consciousness of scientists.
He wrote "If positivistic restrictions on the range of a theory's legitimate
applicability are taken literally, the mechanisms that tell the scientific com-
munity what problems may lead to fundamental change must cease to function."\textsuperscript{31}

It follows from this that scientists have to be conscious of the interrelations
and the logic of the paradigm within which they work; fully aware that going beyond tidy theoretical positions sometimes becomes basic to scientific progress.

Secondly, we can conclude that all notions of "objectivity" that result from scientism need to be rejected. Kuhn saw this when he stated that we need... an inversion of our normal view of the relations between scientific activity and the community that practices it. We must learn to recognize as causes what have ordinarily been taken to be effects. If we can do that, the phrases 'scientific progress' and even 'scientific objectivity' may come to seem in part redundant."

This inversion follows from Kuhn's historical paradigm analysis of natural science. Once the logic of a paradigm is recognized as being primary to any specific method or rule, the meaning of "objective" can only be seen in terms of the effects produced by certain operations. Once science is understood as paradigm development and paradigm change, there is no place for the notion of "objective causes" per se. Objective results are always dependent upon certain operations and the interpretation that is related to them with a particular paradigm. And, as we argued above, these operations and paradigms develop within a particular social and historical context. It is worth noting the similarity between Mannheim's relational epistemology and Kuhn's paradigm view of science. Both emphasize the need to see facts and theories in terms of or in relation to the larger world-view of the person.

The Character of Scientistic Education

A third point follows from Kuhn's analysis. We clearly need to ask questions about the education approaches that reinforce the fallacies of scientism, and to consider approaches that could provide a more accurate and
and self-critical perspective of science. Kuhn had a clue when he wrote that

"... the view of science-as-accumulation is entangled with a dominant epistemology that takes knowledge to be a construction placed directly upon raw sense data by the mind. (There is) ... strong support provided for the same historiographic schema by the techniques of effective science pedagogy."  

A false epistemology is taught in science courses and this underlies and shores up the scientism of today. This point deserves special attention. Once scientism is exposed and the way is cleared to deal directly with the problem of ideology, the need for a critical study of educational approaches becomes more apparent. It is in the dominant "education" that the rhetoric of scientism is taught.

Kuhn saw both the form and the content of science textbooks as being responsible for this scientism. On the first page of his study, he referred to "... the unhistorical stereotype (of science) drawn from science texts."

He explained this further by writing that

"Those texts have, for example often seemed to imply that the content of science is uniquely exemplified by the observations, laws, and theories described in their pages. Almost as regularly, the same books have been read as saying that scientific methods are simply the ones illustrated by the manipulative techniques used in gathering textbook data, together with the logical operations employed when relating those data to the textbook's theoretical generalizations. The result has been a concept of science with profound implications about its nature and development."  

Later in his study he reaffirmed this: "More than any other single aspect of science, that pedagogic form (the textbook) has determined our image of the nature of science and of the role of discovery and invention in its advance."  

The unhistorical character of science textbooks gives the student a false view of science. The role of paradigms and paradigm change is not understood
when it is believed that "... science has reached its present state by a series of individual discoveries and inventions that, when gathered together, constitute the modern body of technical knowledge." Therefore, Kuhn concluded that "Textbooks thus begin by truncating the scientist's sense of his discipline's history and then proceed to supply a substitute for what they have eliminated." Scientism results not only from an ignorance of the problem of ideology but from an ignorance of the history of science itself.

Scientists are trained to think in a restricted manner by this un-historical education. Kuhn went as far as to say "Of course, it is a narrow and rigid education, probably more so than any other except perhaps in orthodoxy theology." But, according to him, this "narrow and rigid" training of professional scientists had a paradoxical function. On the one hand, "That element of arbitrariness does not ... indicate that any scientific group could practice its trade without some set of received beliefs." On the other hand, "That professionalization leads ... to an immense restriction of the scientist's vision and to a considerable resistance to paradigm change."

Kuhn is ambiguous about the effects of this narrow and rigid education. I am not. It is a rationalization for ignorance to argue that scientists must have narrow beliefs to do research work. And this argument fails to consider the effects of such research-through-ignorance. Kuhn stated "Because he there joins men who learned the bases of their field from the same concrete models, his subsequent practice will seldom evoke overt disagreement about fundamentals." Not aware of the fundamental issues, the scientists cannot be aware of the way the class of problems with which they deal relate to the function
and consequences of science for the people of a society or beyond. A scientistic education thus trains irresponsibility.\textsuperscript{42}

If education functions to consolidate beliefs for a group of scientists it will not make them aware of the paradigm within which they think and in terms of what they do research. This is a main reason why specialized scientists remain ignorant of the problem of ideology. Their "education" to a paradigm gives them a tautological, not a critical, mentality. They do not scrutinize the assumptions and beliefs that are interrelated with their scientific work. Most of all they do not consider the effects of their research.

Though Kuhn recognized this detrimental function of a rigid science education, he did not consider the possible alternatives to present education nor what the consequences of such alternatives might be. Even though his paradigm analysis is a vital contribution to the clarification of the problem of ideology he did not consider the implications of this for education in the sciences.

The Rationalization of Scientism

Some of Kuhn's statements show a tendency to mystify science, though his general analysis is in opposition to this tendency. Referring to the specialization of the sciences, Kuhn wrote "Although it has become customary, and is surely proper, to deplore the widening gulf that separates the professional scientist from his colleagues in other fields, too little attention is paid to the essential relationship between that gulf and the mechanisms intrinsic to scientific advance."\textsuperscript{43} We should be wary of the phrase "mechanisms intrinsic to scientific advance". Kuhn was probably referring to the way anomalies in a paradigm lead to a crisis and a change in paradigms, but abstracting this concrete
historical process into "intrinsic mechanisms" too easily leads back to a scientistic ideology. It can lead to academic studies into the nature of these "intrinsic mechanisms". There aren't any such mechanisms nor are there "essential relationships". A historical analysis of science of the kind Kuhn undertook has its value because it forces us to think of science without these metaphysically-toned terms.

Kuhn's view of knowledge tended to stay academic. This was shown by his statement that "By ensuring that the paradigm will not be too easily surrendered, resistance guarantees that scientists will not be lightly distracted and that the anomalies that lead to paradigm change will penetrate existing knowledge to the core." Here Kuhn was stressing how the narrow and rigid education, which underlies scientism, can aid the development of knowledge. He believed that ignorance can function to conserve knowledge, although he would not have put it in these terms. Surely there is a way to resist changing a paradigm when its scientific value still exists without having a scientistic ideology. Kuhn actually ignored this question by referring to "the core" of knowledge. Although he stressed the relativity of knowledge, i.e., how scientific facts relate to a particular paradigm, he continued treating knowledge as something in itself. There was a tendency in Kuhn's analysis to abstract the notion of "paradigm" out of its historical and human context and by doing this to revert to pseudo-problems about science. Once the primacy of paradigms (worldviews) is recognized, the vital problem is not in any sense epistemological. It is rather to determine what the consequences of a particular social organization and type of research are for human beings.

So as not to do an injustice to Kuhn, it should be mentioned that he also had an anti-epistemological strain in his thought. His skepticism about the
development of a "pure" scientific language is one example. He commented that

"No current attempt to achieve that end has yet come close to a generally applicable language of pure percepts. And those attempts that come closest share one characteristic that strongly reinforces several of this essay's main theses. From the start they presuppose a paradigm, taken either from a current scientific theory or from some fraction of everyday discourse, and they then try to eliminate from it all non-logical and non-perceptual terms."\(^4^5\)

Kuhn recognized that in a period of normal science a scientific paradigm has a tautological character. It uses its own logic to define what is not logical. And it is because of this that the search for an "objective" language of science is fruitless.

When Kuhn wrote that "Scientists do not see something as something else; instead they simply see it"\(^4^6\) he could have meant two things. This ambiguity allows us to again show why Kuhn could not carry his own analysis through to understand the problem of ideology. Either he meant that the scientist, in contrast with the non-scientist, sees the truth; or he meant that the scientist sees the results of the operations he or she is carrying out. As operations and paradigms change, so do perceptions. The latter view is the one that complements Kuhn's own analysis. The scientist is never interpreting something as something else. This idea comes from a false epistemology. He or she is evaluating what he or she is doing and interpreting it in terms of the paradigm to which he or she is trained and committed. Any suggestion of a "pure percept" is pure fiction.

Some statements made by Kuhn, however, suggest that he tended towards the opposite meaning. It is Kuhn's mystification of "nature" that leads me to conclude this. In one place he said "... it is hard to make nature fit a paradigm ..." and a little further on he talked of how scientists had "... to beat nature into line ..."\(^4^7\) In another place he wrote of how "Nature itself must first
undermine professional security by making prior achievements seem problematic. This last statement is an irresponsible use of metaphor since it gives "nature" a metaphysical character which, by definition, can never be known by science. If it can't be known, then there is no point; in fact, there is no way of speaking of "nature" as Kuhn did. The pragmatic character of science and a mystification of "nature" are thoroughly incompatible.

Kuhn held to this concept of knowledge because he failed to consider the interrelations between the social function of science in a particular society and the rise and fall of paradigms. He put "science" on a pedestal even though his study showed that such a view was historically unfounded. Thus we get Kuhn saying that "... part of our difficulty in seeing the profound differences between science and technology relates to the fact that progress is an obvious attribute of both fields." Kuhn's failure to carry through his own thought led him to gloss over vital sociological and political questions by using the terms "progress", "nature", and sometimes "science" in a rhetorical fashion.

The separation of science and technology need not reflect an underlying scientism. It does if "science" is given a trans-social meaning as "pure" knowledge. The distinction between so-called "pure" and "applied" knowledge, which is presently widespread, tends to do this. And Kuhn gave natural science a role, a "pure" role, not directly of "social importance". In his words

"Unlike the engineer, and many doctors, and most theologians, the scientist need not choose problems because they urgently need solution and without regard for the tools available to solve them. In this respect, also, the contrast between natural scientists and many social scientists proves instructive. The latter often tend, as the former almost never do, to defend their choice of a research problem - e.g., the effects of racial discrimination or the causes of the business cycle - chiefly in terms of the social importance of achieving a solution."50

The distinction between pure and applied science becomes a red herring in
terms of Kuhn's own study. Any paradigm within which a scientist works will
provide practical applications in some cases and not in others. But this is
not the fundamental issue. The important question is how one paradigm of
problems, methods and theories relates to a certain form of practical appli-
cation, with specific consequences. And, following from this, how might a
different paradigm of problems, methods and theories lead to a different set
of effects for the people in a society. Once the problem of ideology is ac-
knowledged, these sorts of questions become problematic.

Paradigms and the Problem of Ideology

So we return to the problem of ideology. To deal with it, I do not have
to reject Kuhn's orientation, but only to carry it through in its ramifications.
When Kuhn wrote about "scientific revolutions", he was beginning to do this.
There are several things to emphasize about his discussion. First, Kuhn saw
that the historical context affected the nature of science.51 Second, he saw
scientific theory as having a function, not as being true or false.52 And, third,
he did not accept science as an accumulation of facts. He thus said "... the
case for cumulative development of science's problems and standards is even harder
to make than the case for cumulation of theories."53

On the basis of his historical and pragmatic study of natural science,
Kuhn became aware of issues that are relevant to our own study. He realized that
a change in paradigms also implied a change in the models of verification. He
stated this clearly when he wrote that

"But paradigms differ in more than substance, for they are directed not
only to nature but also back upon the science that produced them. They
are the source of the methods, problem-field, and standards of solution
accepted by any mature scientific community at any given time. As a
result, the reception of a new paradigm often necessitates a redefinition of the corresponding science. Some old problems may be relegated to another science or declared entirely "un-scientific". Others that were previously non-existent or trivial may, with a new paradigm, become the very archetypes of significant scientific achievement. And as the problems change, so, often, does the standard that distinguishes a real scientific solution from a mere metaphysical speculation, word game, or mathematical play.54

He also realized that there can be no "objective" or "neutral" scientific language. He made this explicit when he wrote "If, as I have already urged, there can be no scientifically or empirically neutral system of language or concepts, then the proposed construction of alternative tests and theories must proceed from within one or another paradigm-based tradition."55 A further realization was that paradigm change or scientific revolutions do not occur by some trans-paradigm logic. Kuhn thus wrote "Just because it is a transition between incommensurables, the transition between competing paradigms cannot be made a step at a time, forced by logic and neutral experience ... it must occur all at once (though not necessarily in an instant) or not at all."56

The conclusion that followed from these points was that "The competition between paradigms is not the sort of battle that can be resolved by proofs."57 This is the case because

"When paradigms enter, as they must, into a debate about paradigm choice, their choice is necessarily circular. Each group uses its own paradigm to argue in that paradigm's defense."58

Now, consider the following statement about ideology. "(Ideologies) ... are impervious to evidence not because their proponents do not adduce any in support of their position, but because the conclusions argued from the evidence rest upon an interpretation which, if consistently maintained, can be guaranteed in advance to cover any fact which the observer might bring back from the sociological study of the contingent world."59 The similarity between Hunciman's statement and Kuhn's
is remarkable. Both an analysis of paradigms and ideologies shows the inability of resolving conflicts between perspectives by reference to academic criteria.

There is also a similarity between Kuhn's conclusion and that of Mannheim after he discussed the problem of ideology in the social sciences. Let us retrace Kuhn's argument so that this similarity is explicit. According to him, each group of scientists "receives beliefs" about a paradigm which motivate them to undertake common research on common problems. When a paradigm is in crisis, the so-called "rules" of the paradigm do not function to determine the validity of theoretical disputes. Instead, a new class of problems and commitments is developed to replace the old. And, according to Kuhn, this change in paradigms does not occur through logical or rational processes. On this point, Kuhn quoted Max Planck who stated that "... a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

With the dying of the older scientists, a pedagogic-based set of beliefs also dies. We can conclude from this that paradigm change requires a new socialization or education, so we still have to ask why the change occurred. It is not because of abstract evidence, since there is no such thing. We are again forced to an analysis of the changing social function of science for a clue. This conclusion is vital for our view of both natural and social science. Proofs are themselves relative to paradigms, therefore, proofs cannot resolve paradigm conflicts. What then does? Saying that scientists with older commitments to a paradigm die and are replaced with young scientists with new commitments does not answer this question. The question leads us right back to the problem of ideology.
Kuhn led us back to Mannheim and then to Marx and Engels.

At the beginning of his discussion of paradigm change, Kuhn asked the question:

"Why should a change of paradigms be called a revolution? In the face of the vast and essential differences between political and scientific development, what parallelism can justify the metaphor that finds revolution in both?"61

He answered his question with the statement:

"Political revolutions are inaugurated by a growing sense, often restricted to a segment of the political community, that existing institutions have ceased adequately to meet the problems posed by an environment that they have in part created. In much the same way, scientific revolutions are inaugurated by a growing sense, again often restricted to a narrow subdivision of the scientific community, that an existing paradigm has ceased to function adequately in the exploration of an aspect of nature to which that paradigm itself had previously led the way."62

The analogy is useful, but, in it, we again see Kuhn's tendency to mystify "nature". The "scientific community" does not "explore nature" detached from the historical and political realities as Kuhn implied. Science and its changing paradigms are inextricably rooted in these very realities. What Kuhn called "political" or "scientific" revolutions are separable only when we reflect on history. The actual events that lead to new ideologies, paradigms and institutions are not separable along these lines when you are living through them. And anyone who tries to treat them as two distinct realities will end up accepting the scientistic ideology. To avoid this, it is crucial for us to ask how the political and scientific institutions interrelate in our society. For example, how do the political orientations in our society affect the development of scientific paradigms?

Not asking these kinds of questions implies that "nature" is studied by scientists who are detached from and unaffected by the institutional arrangements
within which they work. It accredits the "scientific community" with an autonomy that contradicts what we know about their training in and commitments to a particular paradigm. A more accurate understanding of the interrelations of science and politics develops once the political nature of education is analyzed. Kuhn himself stressed the function of education in developing shared beliefs within a dominant paradigm. He simply failed to analyze the political aspect of those beliefs and the political consequences of a dominant paradigm. His mystification of "nature" is a symptom of a study finished too soon.

When the interrelations of science and politics are recognized, we also recognize the role of choice in science. Once all abstract notions of science have been rejected, then we see the need to consciously decide to work within a class of problems that relate to certain human ends which are valued more than those associated with another class of problems. Though failing to recognize the interrelations of science and politics, Kuhn did stress the role of choice in science. In one place, he wrote "The very existence of science depends upon vesting the power to choose between paradigms in the members of a special kind of community." In another place, he wrote

"... since no paradigm ever solves all the problems it defines and since no two paradigms leave all the same problems unsolved, paradigm debates always involve the question: Which problems is it more significant to have solved? Like the issue of competing standards, that question of values can be answered only in terms of criteria that lie outside of normal science altogether, and it is that recourse to external criteria that most obviously makes paradigm debates revolutionary." And, in a third place, he wrote

"Does it really help to imagine that there is some one full, objective, true account of nature and that the proper measure of scientific achievement is the extent to which it brings us closer to that ultimate goal? If we can learn to substitute evolution-from-what-we-do-know for evolution-toward-what-we-wish-to-know, a number of vexing problems may vanish in the process."
All these statements show the relationship between the problem of paradigms and the problem of ideology. Why does a particular scientific community choose one paradigm over another? A study of the structure and function of education - including both research and teaching - would certainly help answer this. Why are some scientific problems considered more significant than others? A study of the ideological orientation of education would help answer this. How are science's priorities established. A study of research institutions and their links with the political economy would help answer this. These questions lie at the heart of the problem of ideology. And Kuhn's historical approach, though not including a political analysis of scientific paradigms and education, was moving in their direction. Though there was not a clarification of his use of the term "ideology", he clearly recognized some relationship between scientific paradigms and ideology.

At the beginning of his study, Kuhn asked "... what changes in technique or method or ideology would enable ..." the social sciences to progress. Although he did not try to answer this question, his own study provides important clues. Fundamental reforms in the educational system seem necessary to undercut the ideology of scientism. A mystified view of scientific rules and facts needs to be replaced by an approach to science which considers questions of ends and consequences. But these changes cannot occur within social science without the social arrangement of science also changing. If we are to avoid the dogmas and conservatism of all forms of scientism, we must then look at the political aspects of the problem of ideology.
Footnotes


2. Ibid., p. 159.
3. Ibid., p. 137.
4. Ibid., p. 42.
5. Ibid., p. 37.
6. Ibid., p. 102.
7. Ibid., p. 47.
8. Ibid., p. 42.
9. Ibid., p. 47.
10. Ibid., p. 40.
11. Ibid.
12. Ibid., p. 41.
13. Ibid., p. 44.
15. Ibid., p. 84.
16. Ibid., p. 5.
17. Ibid., p. 71.
18. C.W. Mills used this term.
19. Ibid., p. 3.
20. Ibid., p. 120.
21. Ibid., p. 125.
22. Ibid., p. 99.
23. Ibid., p. 78.
Kuhn did not consider why "retooling" occurs at certain times and not at others. When one looks at the function of the market place in tooling contemporary science and at the values of that market place (e.g., profit), we see how the social arrangement of science makes ideology a perennial problem.

C.W. Mills waged a continuous critique of the "bureaucratic social science" that he witnessed developing in the U.S. One of his major concerns was with the irresponsibility of social scientists trained in such an orientation. Kuhn's analysis confirms Mills' own that irresponsibility is presently structured into the social arrangement of science.
In Chapter Thirteen, I will argue that certain values are implied by the makeup of scientific communities.
Chapter Seven

Ideology as Articulated Political Conflict: Berlin

It was necessary to demystify "the natural sciences" early in this study, since much of the confusion about ideology and epistemology in the social sciences results from an erroneous extrapolation of natural science rationales. On the basis of Kuhn's study, I concluded that ideology is problematic in the natural as well as the social sciences. His historical analysis of natural science showed the interrelations of scientific problems, methods and theories and suggested that these "paradigms" could be related to the historical and social circumstances within which the synthesis occurred. This does not mean that the consequences of knowledge developed from a particular paradigm can be reduced to an analysis of the historical and social conditions. Such a mechanistic approach to the problem of ideology would be as fruitless as ignoring the problem itself.

These same conclusions apply to the range of disciplines that make up the social sciences. It is understandable that the more historical and philosophical a discipline the more inclusive its range of study and therefore the more likely that there will be an awareness of these questions. For example, one would not expect a behavioralistic-oriented "political scientist" to be as aware of the relationships underlying the problem of ideology as a political philosopher. In addition, one would expect there to be more consciousness about the relationships underlying the problem of ideology at a time when political philosophy had a major influence on society.
It is important to recognize that there are conditions which influence the relative presence or absence of the modes of study that lead to an awareness of the problem of ideology. To specify these conditions, we need to discuss the relationship between "science" and "politics" in some depth. We have only begun to suggest how the political makeup of a society, the social arrangement of science and the character of social science are interrelated. A discussion of the relations of ideology and science by the political theorist Isaiah Berlin provides a basis for this understanding.

Ideological Models

Berlin was forthright in his rejection of scientism. He wrote that "The basic categories ... (of our thought) are not matters of induction and hypothesis" and, furthermore, that questions about these basic categories "... are not answered by either empirical observation or formal deduction." Instead of an abstract, a-historical and a-social approach to science, Berlin recognized that there are "ideological foundations" to all forms of knowledge. His way of raising the problem of ideology was unique. He argued that "... if political theory is to be converted into an applied science, what is needed is a single dominant model - like the doctor's model of a healthy body - accepted by the whole, or greater part, of the society in question. The model will be its ideological foundation."

Though overly metaphoric, Berlin's approach to the interrelations of science and ideology pinpointed crucial questions. For instance, he was suggesting that "basic categories" of thought are rooted in ideological models and that these models give directives to empirical study and imply the values by which any facts organized through such a study obtain their meaning. According to Berlin, value
and fact are synthesized in the basic categories of the ideological model.

Perhaps more important is the dialectic relation between fact and value suggested by Berlin's scheme. The ideological model provides standards which affect the interpretation of any observations made, any, of political events. Conditions can be judged by their congruency with the ideological model. The emphasis of "applied science" is on the constant evaluation of actual events, but the ideological model is never transcended by this inquiry.

This understanding of science and ideology fundamentally challenges the scientistic views of "truth" and "reality". Berlin's analysis, like Kuhn's, was based upon the idea of "paradigms" in science. This approach provided him with an awareness of the relations of "value" and "fact" that all versions of the value-free doctrine fail to develop. Referring to traditional scientists, Berlin wrote that

"... what they conceive to be the structure of thought or reality ... can be shown to be dominated by one or more models or paradigms: mechanistic, organic, aesthetic, logical, mystical, shaped by the strongest influence of the day (my emphasis) - religious, scientific, metaphysical or artistic. This model or paradigm determines the content as well as the form of beliefs and behavior." 7

If ideological models are "... shaped by the strongest influence of the day ..." then there is no point treating them as academic historic models. But the problem remains: how do we understand the historical development of ideological models? About this Berlin wrote "The model itself may be regarded as the product of historical factors: the social (and psychological) consequences of the development of productive forces, as Marx taught, or the effects in the minds of individuals of purely psychological process which Freud and his disciples have investigated." 8

Berlin's argument accounted for more levels of problems than that of Horowitz, Schumpeter or Bergmann. Unlike the latter theorists, Berlin noted that
the form and the content of knowledge is always related to a model which is itself a "product of historical factors". He pinpointed Marx and Freud as theorists who provided us with profound hypotheses about the relationships between history and these "basic categories".  

A person accustomed (i.e., socialized) to an abstract and academic view of ideas may not be convinced by Berlin's logic. Such a person might say that Marx's or Freud's ideas about the relationship of ideology and science are themselves ideological. And, using the term "ideology", as we have been using it, that is, of course, correct. But this does not lead to the conclusion that the theories of Freud and Marx regarding the interrelations of experience, ideologies and social structure are no better nor no worse than the value-free doctrine which denies its own ideology. Because they have studied the problem of ideology directly, the hypotheses and approaches developed have more validity. The problem of ideology simply cannot be handled by those who accept the value-free doctrine. It is no more than a "word game", therefore, to respond to Berlin's argument with relativistic thought.  

A serious question is raised by Berlin's statements. What relationship between theory and practice will help establish the validity of one "ideological model" or paradigm over another? Berlin had a dialectic orientation to this question. He wrote that "The history of thought and culture is, as Hegel showed with great brilliance, a changing pattern of great liberating ideas which inevitably turn into suffocating straitjackets, and so stimulate their own destruction by new emancipating, and at the same time enslaving conceptions." This perspective is important since it forces us to make a vital distinction when we evaluate ideologies. Ideas have roots in historical conditions, but also have particular effects depend-
ing on the contemporary conditions within which they are being reproduced and disseminated. The effects or consequences of ideologies, therefore, need to be specifically analyzed within particular settings, i.e., they cannot be rejected or accepted solely in terms of their historical roots.

Berlin's historical treatment of paradigms is thoroughly incompatible with the value-free doctrine. He discredited that doctrine when he wrote "... there is no human activity without some kind of general outlook: skepticism, cynicism, refusal to dabble in abstract issues or to question values, hard boiled opportunism, contempt for theorizing, all the varieties of nihilism, are of course, themselves metaphysical and ethical positions, committal attitudes. Whatever else the existentialists have taught us, they have made this fact plain. The idea of a completely Wertfrei theory (or model) of human action (as contrasted, say, with animal behavior) rests on a naive misconception of what objectivity or neutrality in the social studies must be."12

This awareness of the role of "committal attitudes" in all forms of knowledge has several implications. Firstly, it demands a rejection of the traditional view of objectivity. We have already seen why we cannot treat ideas as objective, per se. There are no ideas per se. Rather, ideas are tools of analysis; a means to understand how different forms of consciousness or behavior function within a human situation. The use of a language system and of the methods used to validate arguments within it does not, in itself, prove an "idea" to be valid. The language system within which ideas are created and evaluated and this includes both the general linguistics rooted in culture and specialized linguistics like those of scientific disciplines has to be critically evaluated itself. Such would begin to provide an understanding of how logics, sciences, and ideologies relate. It would provide a perspective on knowledge that scientism cannot give us.

We cannot show the validity of an idea per se. Nor can we show the validity of an idea only by "its" application. Because a totalitarian ideology is perpetu-
ated and pervasive in a society, and is being "applied" thoroughly within the institutions, the ideas of totalitarianism are not validated. Rather, we need to evaluate and judge the consequences, in practice, of the dissemination of the ideology. To do this we would need to understand the conditions that give rise to the ideology and its impact, but the present existence of the ideology could not be explained away by such an analysis. The process of judging the present consequences of an ideology remains central to any thorough evaluation of ideas. We are, therefore, committed to have ends; what some might want to call "value criteria", which are used to help us evaluate the practical state of affairs. Without these so-called "value criteria", our ideas may go on adapting to changing practical affairs and no critical analysis of the role of ideology will be possible. Without judgment, there is no understanding.

Berlin suggested this when he compared the need for a model of physical health with the need for a "model of ends" (my term) for evaluating social and historical systems. He made this point explicit when he wrote "Their (Marx of Bentham, Tolstoy of Marx) criticisms relate to the adequacy of the categories in terms of which we discuss men's ends, duties or interests, the permanent framework in terms of which, not about which, ordinary empirical disagreements can arise." Whether or not they are explicit in a scientific theory, ends are always being implied. And they are not necessarily "empirical", i.e., reflected within the present situation. Ends are not observables. An evaluation of the past and of the future will help establish the ends implied in any argument. Disagreements over the nature and meaning of a present set of circumstances shows us this.

Furthermore, to the extent that the theory is associated with a practical reality (e.g., a technological reality) the ends can be evaluated more directly.
If the consequences or ends are not articulated, and the association between a theory and, say, the uses of technology, are not understood, the ideological foundation of the theory will go unnoticed. Our ignorance of such ideological foundations of all theory, however, does not show value-freedom or value relativity. It simply shows ignorance.

Political Conflict and Ideological Models

This debate over ends is lacking within the institutions that are creating the ideology of the value-free doctrine. Basic intellectual criticism is lacking in the institutions of higher education in our society and there are reasons for this. A debate over ends develops when conflict in institutions develops to a point where the dominant ideology (e.g., value-free scientism) is being demystified. This occurs when the meaning of people's life styles no longer complement the ideology and the habits associated with it, and a need arises for a new articulation of ideas. There is thus a relationship between an intellectual treatment of the problem of ideology and social, institutional and personal conflict. As one author has said "When conflict does not exist, or when contending interests are not directly laid bare, then there is no existential basis for ideology." 14

Berlin argued a similar point when he stated that political theory arises in a society "where ends collide." 15 If dissent, opposition or resistance to a dominant ideology and institutions is not tolerated, and if dissenters are repressed effectively, this debate of ends will not occur. Political theory cannot evolve unless there is a real pluralism or fundamental political conflicts in a society. As Berlin said "Rigid monism is compatible with philosophical analysis only in theory (my emphasis). The plight of philosophy under despotism in our
times provides conclusive concrete evidence for this thesis."16

As we shall see in Chapter Nine, Berlin's statement is similar to Herbert Marcuse's thesis about ideology in industrial societies. The important point is how political philosophy, as one way to articulate the interrelations of ideologies and science, arises out of the condition of political conflict. Where such conflict does not exist, has not yet been articulated, or has been effectively repressed, what passes as philosophy is often really crude (i.e., unarticulated) ideology. For there to be an intellectual treatment of the problem of ideology, the dominant ideology and institutions must themselves be in question. Since "... to think is to generalize (and) to generalize is to compare"17 there must be an ideological conflict within a society for there to be awareness of the problem of ideology itself.

It is necessary to distinguish thinking from a rhetorical use of language if we are to understand what Berlin meant. The "arguments" of scientism are rhetorical because ideological conflicts in theory are not related to ideological conflicts in practice. Ideological conflicts aren't even acknowledged by scientism, so this level of inquiry is impossible for it. Unless conflicts in theory and conflicts in practice are related, the full ramifications of the problem of ideology cannot be understood.

Berlin's thought allows us to articulate the problem of ideology even though he did not develop it in this depth. Berlin did admit that our categories by which we organize experience - which included the effects of imagination and language - are themselves a result of our experience. A dialectic approach to the problem of ideology is, therefore, required. As well, Berlin helps us to organize, relate and order the various problems and levels of thought that are relevant to a thorough inquiry of the problem of ideology. For example, his
thought allowed us to see the interrelation of science and ideology in terms of the articulation of social conflicts within political theory. He also helped us recognize that no form or amount of academic analysis will, of itself, ever clarify the problem of ideology.

Berlin's main conclusion was "If we examine the models, paradigms, conceptual structures that govern various outlooks whether consciously or not, and compare the various concepts and categories involved with respect, for example, to their internal consistency or their explanatory force, then what we are engaged upon is not psychology or sociology or logic or epistemology, but moral or social or political theory, or all of these at once." Scientism has attempted to split "science" from social and political theory, but this has proven to be impossible. Rather than science and ideology being separated as scientism suggests, scientism itself reflects a totalitarian-like control of science and the consequent lack of awareness of the problem of ideology. Marx and Engels' term "false consciousness" applies to scientism because it remains ignorant of the social and political foundations of the problems, methods and theories with which it deals. Those who think within the premises of the value-free doctrine also live and act within a narrow social existence. They remain ignorant of how their social position relates to the social function of science, and how the problems, methods and theories they deal with relate to the ideological foundations of the dominant institutions that underlie their social position. If by intellectual inquiry, we mean using language to create models that reflect the interrelationships of our immediate experience, which can include intellectual work, and the larger social and historical reality, we see that much that passes for intellectual work in academia is actually a rhetorical justification for the ideological foundations of the dominant society.
Footnotes

1 For a discussion and criticism of this orientation, see James C. Charlesworth (ed.): The Limits of Behavioralism in Political Science. Philadelphia, AAPSS (1962).


4 Ibid., p. 27.

5 Ibid., p. 11.

6 The metaphor from medical science is useful, but if the questions it implies (e.g., sociology of knowledge questions) are obscured by an abstracted discussion of "models" (e.g., their verification, etc.) the value of it will be lost. Since Berlin's discussion tended to be more metaphoric than substantive, it is possible for the implications of his approach to be ignored.


8 Ibid., p. 15.

9 A specific study of hypotheses about ideology and science rooted in freudian and marxian social theories would help clarify the problem of ideology and logic in the social sciences. Rather than doing this in this thesis, I have relied on a critical examination of the ideology of scientism which ignores these very problems.

10 There may be some confusion of terms here. I am using "ideological model" and "paradigm" almost as synonyms. There is an "ideological foundation" to all science hence applied science can be considered to rely on an "ideological model". A "paradigm" refers to the class of problems, methods and theories that develop out of the ideological model.


12 Ibid., p. 17.

13 Ibid., p. 24.


16Ibid., p. 9.

17Ibid., p. 18.

18Ibid., p. 28.
We are now ready to tackle the relation of political conflict to the problem of ideology more directly. Berlin's discussion of the role of paradigms and what he called committal attitudes in all thought generalized Kuhn's points to the social sciences and clarified how ideology operates within all science.

I have therefore developed the basic question in this section and am now ready to develop relevant themes in more depth.

I will begin my discussion by asking how the ideological foundations of science express themselves. Or, to undercut any tendency to treat this question metaphysically, I will reword it: What is the relation between theory and practice that enables us to study the ideological foundations of science? For example, are scientific problems, methods and theories simply cloaking over certain vested interests in society? If this is too crude, as it is, do political and economic elites determine what are the "legitimate" and useful areas of research which scientists then develop? Though this may not be done in any conspiratorial way, there is a strong argument for relating ideology and science in this manner.

Military and marketing research are the most obvious examples.¹

Igor Shoshin

Ideological Struggle and the Problem of Ideology

These questions, however, do not raise the vital relationship. To outline the way ideology is expressed in science, I turn to a paper by Anatol Rapoport.²

In that paper, Rapoport wrote that
"An ideology is essentially a perspective in which 'realities' are defined. As long as the perspective remains intact, so do the realities, and the problems arising in the context of the realities remain relevant. An ideological struggle is essentially an attempt to change a perspective and the resistance to such an attempt. Thus an ideological struggle is not an attempt to 'solve a problem', but an attempt to bring one or another class of problems into focus. Thus an ideological struggle is not an attempt to 'solve a problem', but an attempt to bring one or another class of problems into focus."3

When the relevance and consequences of studying a certain class of problems is itself not being studied, you do not have an ideological struggle. But you do have an ideology, i.e., "a perspective in which 'realities' are defined", even if it is articulated as a scientific orthodoxy. And this is the case regardless of the sophistication with which it is presented. It is when you have critical, fundamental thought which strives to establish a new class of problems, with new consequences for humans, that the ideological struggle begins.

In Kuhn's or Berlin's terms, an ideological struggle would be an attempt to overthrow a paradigm. This does not happen in a social or political vacuum, though an academic treatment of ideas will always lead to this misunderstanding. Institutional and social conflicts shape the nature of any ideological struggle. It is when people begin to criticize the social system within which a traditional class of problems functioned that the attempt to redefine subject matters accelerates to the point of ideological struggle.

When an ideological struggle is occurring, the nature of "evidence" itself becomes problematic. Both Kuhn and Berlin touched on this question, but Rapoport made it central to his discussion. Writing of Marxist-Leninist ideology, he said

"Adherence to a thesis with a self-predictive component is not merely a cognitive act; it is a political act. That is to say, evidence for or against such a thesis is not the only basis for accepting or rejecting it. Another important basis is one's preference for the consequences (my emphasis) of the truth or the falsehood of the thesis in question."4

Here Rapoport was pointing out that for those with a pragmatic orientation to
knowledge the consequences of an intellectual position are considered to be
evidence for or against that position. His own statement, however, showed that
he believed in an academic view of evidence. When he wrote that "evidence for
or against such a thesis is not the only basis for accepting or rejecting it" or
referred to "the consequences of the truth or falsehood of the thesis", he was
separating truth and evidence off from the social and political context of a
thesis. But the notion of "evidence" or "truth" as being autonomous from these
contexts is itself ideological. It is the academic orientation to knowledge,
rooted in a particular social arrangement of science, that leads people to think
that the truth or evidence of a thesis can be shown independent of its conse-
quences.

The pragmatic approach to knowledge abandons academic criteria of validity
because, once knowledge is placed in a human context, the question of revolutio-
ary change, and a class of problems associated with this, itself becomes a matter
for inquiry. And this problem has implications for our view of knowledge. Ev-
dence is no longer taken in an abstract way, but is related to the ability to
change social conditions in terms of strategies that arise from certain intellec-
tual analyses. The evaluation of this translation of theory back into practice
is never a clear-cut process. As for any class of problems, there remains the
task of describing what has happened and is happening and explaining why, though
this evaluation will take a particular form. It is not a mechanistic or formalistic
matter. And the task of evaluation can never be allowed to come into the control
of an elite - neither a political or economic elite nor a scientific elite which
has taken over political and economic functions in a society. Evidence must con-
tinually come from the practical affairs of people - hence the social relations in
and around science will have to be democratic.

To understand the vital relationships between ideology and science, it is necessary to see how academic criteria are interrelated with the elitist makeup of the institutions within which teaching and research is undertaken. These academic criteria will function until these institutions are replaced by democratic ones. It is also necessary to reject the widespread assumptions about which social relationships are real and which are not. The social relationships that are perceived and studied by an academic with liberal values, for example, will be quite different from those perceived and studied by a revolutionary with socialist values. Yet both sets of social relationships have a reality. It is a mistake to debate which are real and which are not. Once we reject traditional epistemology, we must consistently utilize a dialectic understanding of reality and study the relations between problems, methods and theories in terms of the social arrangement of science.

This does not mean that both sets of social relationships are equally "true". Seen from the assumptions of one perspective, problems from another will seem unreal, untrue, even strange and unintelligible. The question is which set of assumptions, if we treat the perceived and studied social relationships as assumptions, is most inclusive. For instance, which is able to account for the other's position intellectually, rather than rhetorically, and to be self-correcting.

Rapoport touched on this question when he wrote that an "... appreciation of reality depends not only on relating ideas to observable events but also on the events which one selects to observe."5 Neither the reasons for, nor the significance of social events is at all obvious. Establishing relationships between and
among social events, with the aid of a social and historical analysis, is what
does this. Some forms of social and historical analysis are more inclusive and
self-critical than others. In addition, there is also a passive and active mode
of evaluation. Academics often evaluate in a passive manner, attempting to be
"descriptive" and nothing more. We have seen how impossible this is. Descrip-
tion, no matter how sophisticated, always relies on particular categories which
have an ideological foundation. Some more activist intellectuals affect events
as part of evaluating them. They relate to the events rather than attempting to
interpret them in a detached manner.

An activist approach is not necessarily more inclusive and self-critical,
though there is this tendency. And, it should be clear that this activist or
strategic approach to evaluation is not exclusively the way of socialists. Many
socialist academics treat ideas in a reified manner. Conversely, liberal theo-
rists are often engaged in active theorizing, using research techniques that are
vital to the market place. It is how and why (i.e., to what end) this active
theorizing occurs, not the fact of activeness per se, that will fundamentally
distinguish the different ideological foundations to science.

The evaluation of the consequences of these ideology-science systems, in
terms of chosen ends, is what will test their validity. Since the ends are chosen
there can be no ultimate validity. These choices of ends cannot be made in an
abstract, academic manner. Our ideas about "choice", "freedom" and "reason" all
will need revamping once the problem of ideology is recognized and clarified. For
example, an individualistic understanding of choice, freedom and reason is inade-
quate once the language systems we use are analyzed in relationship to our social
experiences. An analysis of language will help us understand how and why we choose
certain ends and values for our intellectual work. I will return to this question in Chapter Nineteen.

Intellectuals and Ideology

Rapoport wrote of how commitment to certain ends is central to an intellectual's work. His understanding of this, however, was limited by individualistic assumptions. He wrote, for example, that "... the intellectual thirsts for ideational experience..." He continued that

"His need is transformed into an ethos, a criteria in judging the quality of the life around him. In short, the individual need of the intellectual becomes an ideological commitment." These "criteria in judging the quality of life" are the ends that affect the intellectual's work. But to think they arise from the individual intellectual's need for "ideational experience" is to forget that the class of problems to which an intellectual is trained and with which he or she works already implies ends. It also ignores the fact that a class of problems is the result of a broad social, not strictly psychological, set of ideological forces.

Rapoport's handling of the problem of ideology as a struggle between different classes of problems related political processes in a society to the creation of scientific theory. This broadens our inquiry beyond the recognition that there are ideological foundations to all forms of science for it shows the relevance of the study of social change to the study of science and ideology. Rapoport's understanding of the source of ideological struggle was, however, narrowed by his individualistic assumptions. When he wrote that "ideological revolutions are instigated by intellectuals" he showed his failure to analyze the intelligensia sociologically. The changing roles of intellectuals within changing structures, with changing functions, needs to be analyzed specifically before any sound ideas about the roots of
ideological struggles can be developed.

Rapoport jumped too quickly from his analogy between paradigm changes in the natural sciences to his notion of ideological struggles over classes of problems in the social sciences. In not analyzing why ideologies come into conflict during certain periods, he actually failed to develop an adequate definition of the intellectual. Yet, when he said that "My definition would identify only a fraction of academics (or professionals) as intellectuals" he was implying that such an analysis was needed.

In the past few years there has been a growing ideological struggle in North America. But it is not exclusive to intellectuals, no matter how they are defined. It may be more accurate to speak of an ideological struggle, rooted in wide political conflict, creating a new intelligentsia that reflects and refines the ideas of a social movement, than to speak of "intellectuals" statically. I say this because academics and other professionals within the established structure tend to react to a challenge to those structures rather than undertake an intellectual analysis of the underlying conflicts. This form of analysis might give us clues about the roots of ideology and the creation of intellectual groupings of various orientations. This is not, however, how Rapoport proceeded. "Instead of undertaking an analysis of the creation of intellectual groupings and ideologies he jumped from his individualistic approach to a view of intellectuals as a "class" in themselves. According to this superficial concept of "class" (as a lot of intellectuals) when the intelligentsia develops a new commitment to truth, i.e., a commitment to deal with a new class of problems that have been ignored by the established academia, it comes into conflict with authority. In Rapoport's words "Only if the intellectual's commitment to truth is total and, moreover, coupled with values other than (factually) demonstrable truth, does
the dialectic opposition between the intellectual's ideological commitment and the dynamics of power manifest itself in full, awesome force. In this context, the class interest of the intellectuals reveals itself and, with it, the threats against which intellectuals ought to mobilize."¹¹

If the ideological struggle of intellectuals is seen in the context of political conflict, as Berlin's analysis suggested, and "the intellectual" is not abstracted from this process, then I have no disagreements. But Rapoport did not mean this. In maintaining his academic view of truth by referring to a "total commitment to truth", he was unable to situate the intelligensia and understand their criteria for truth, in the social and political process. Furthermore, it is difficult to see whether Kuhn's analysis, which Rapoport footnoted,¹² had any conceptual effect on him. Speaking of a "total commitment to truth" is symptomatic of an abstract epistemology and showed an ignorance of the problem of paradigm change and of ideology.

Where does the intelligensia come from? What makes them a homogeneous grouping? What ends, values and commitments underlie their orientation? What political conflicts relate to the creation and/or articulation of their ideas? Why do ideological struggles sometimes separate some intellectuals from others? If these questions are left unanswered, the "conclusion" that intellectuals are a class is without any basis. I have already referred to the distorting effects of knowledge which is over-specialized and fragmented. Rapoport's errors are a result of this very process. He combined the concept of "class", used abstractly, with his more developed concept of "ideology", and ended up with an empty synthesis.

Rapoport organized relationships - for example that of the intelligensia with political movements - that were implied by the problem of ideology in an erroneous manner. For example, he wrote

"We do not know the extent of the impact which the political awakening of
the American intellectual will make, nor the political alliances which will result from it, nor their extent on the world scale. It appears, however, that a class struggle of an entirely new kind is shaping up.13

Here Rapoport assumed that the "awakening of the intellectual" is fundamental to the political conflicts in North America. He saw political alliances resulting from this awakening. On the basis of the kinds of questions asked above, I would tend to reverse this order. Intellectuals are not a static social grouping that "awakens". They are groupings of people located in and around educational institutions who have learned to use language to articulate social realities. Their use of language and the social realities they focus on will be affected by their position within social relations. When political conflict develops, different orientations will develop within the intelligensia. They do not remain a homogeneous grouping when ideological struggle develops throughout the society.

Rapoport's suggestion that a "class struggle" develops between the intelligensia and authority does not describe the separation of the intelligensia along broad class, racial or generational lines. And it conflicts with his own admission that by "intellectual" he does not include all professional academics. Rapoport simply failed to analyze the system of authority and how it intertwines with academia and reinforces certain ideological orientations while conflicting with others. Rapoport presented a false image of the intellectual as a rebel against authority. Since he failed to describe the authority system, in its ramifications, his conclusions are more mystifications of the intellectual than intellectual positions.

A comprehensive analysis for understanding the political role of established intellectuals would include the changing structure and function of education; the growth of the radical social movement on this continent; its relationship to broad political conflicts with international roots and consequences; and the relationship
of these to each other. One central question would be an analysis of the creation of ideology within the dominant system of education. Because of Rapoport's mystification of "the intellectual", he did not undertake, let alone recognize, this analysis of education and ideology. His important insight that ideological struggles are over classes of problems, with different relevancies, would be useful in such an analysis since today's struggle over orientations to education, subject matters, and social theories in universities is the concrete expression of an ideological struggle. Rapoport, however, seemed to see this ideological struggle arising from individuals, separate from the social and political relations of the institutions within which they work.

Combining the insights of Berlin and Rapoport, we have the necessary perspective on the problem of ideology to attempt to summarize it. Berlin pointed out that paradigm change within political theory resulted from political conflict. Rapoport pointed out that ideological struggles are attempts to change paradigms, or classes of problems. The implication is that science and ideology interrelate through political conflict and the expression of that in the rise and fall of classes of problems.

Footnotes

1 See Baritz, op. cit.
3 Ibid., p. 39.
4 Ibid., p. 34.
5 Ibid., p. 37.
So-called "academic marxism" has been growing in the universities since the decline of cold war anti-communism. Once the socialist rhetoric of this "marxism" is shed it proves to be based in the scientistic ideology as much as are liberal academics.

7Rapoport, op. cit., p. 41.
8Ibid., p. 42.
9Ibid., p. 39.
10Ibid., p. 43.
11Ibid., p. 44.
12Ibid., p. 49.
13Ibid.
We now have the problem and some of the implications of the problem of ideology clarified. To do this, we have had to expose positions that totally ignore the problem, those that handle it superficially, and those that come to grips with the vital relationships between practical affairs, politics, ideology, language and science, which underlie the problem of ideology.

Three theorists, Herbert Marcuse, C. Wright Mills and Jean Paul Sartre, all begin their analysis from an understanding of the problem of ideology. Though distinct in their languages and in their particular conclusions, they are all bound by one concern: how are we to develop forms of knowledge that take the problem of ideology into account? Since all forms of knowledge are interrelated with certain social functions and social and human consequences, taking these interrelations into account explicitly would allow a qualitatively different kind of knowledge to develop. What forces operate to hinder or enhance such a goal? Since the function and consequence of knowledge affects the form it takes, a new function needs to be developed. What are the social implications of knowledge that lacks this awareness of the problem of ideology, and what might they be if a form of knowledge accounting for it existed?

These kinds of questions were implied in the work of Marcuse, Mills and Sartre. Each was concerned with exposing the ideological basis of today's dominant forms of knowledge and with creating a new form of science that explicitly accounted for the matter of ideology. It is in this sense that all were or are waging an ideological
struggle against the dominant forms of knowledge in western industrial societies.

Ideology and Advanced Industrialism

How did Marcuse handle the problem of ideology? His major thesis in the realm of social theory was that a totalitarianism of "repressive tolerance" is increasing in advanced industrial societies. According to this argument, the human alienation which is rooted in earlier industrialization is no longer subjectively experienced, but "... has become entirely objective." According to Marcuse, in advanced industrialism "... the subject is swallowed up by its alienated existence." Since "ideological indictment" of this advanced alienation is difficult due to the totalitarian nature of the society, some confuse the new state of affairs with an "end of ideology". Marcuse's reply to this is

"This absorption of ideology into reality does not, however, signify the 'end of ideology'. On the contrary, in a specific sense, advanced industrial culture is more ideological than its predecessor, inasmuch as today the ideology is in the process of production itself."³

Marcuse was arguing that ideology is no longer arising haphazardly, but is now being reproduced deliberately to attempt to rationalize social contradictions rationally. The effects of this ideology are more pervasive and the means whereby it is developed are more sophisticated than for past rationalizations for vested interests. Being more pervasive, the ideology is less discernable. Ideology - a combination of half-truths and distortions, of unconsciously held and deliberately perpetuated beliefs - functions to cloak fallacies and prevent criticisms of the social system. Marcuse clearly believed that this is the case more than when Karl Marx lived and first used the term in this way.

Marcuse's argument clearly went beyond that of Marx. Marcuse argued that awareness of the ideological nature of industrial society has itself been integrated into
the ideology of our society. The pseudo-theories of the end-of-ideology theorists reflect this thorough integration of much of the intelligentsia into the dominant society. Not only are many intellectuals serving the dominant social groups through research, they are also serving them by debunking all critical ideas with their end-of-ideology pretenses.

Marcuse wrote that

"... the debunking of an old ideology becomes part of a new ideology. Not only the illusions are debunked but also the truth in those illusions."

Labelling social theories that were and/or are critical of early industrial societies as being totally ideological, i.e., distorting, fails to discriminate between criticisms that are still relevant and those that have lost their validity. Such debunking of the kind those that make a rhetorical separation between science and ideology do of marxism does not help clarify the intellectual problems involved in making such discriminations. Here Marcuse has helped show how ignorance of the problem of ideology and the crude perpetuation of ideology re-

late.

Treating historical ideas that imply criticisms of the present social system as though they were total ideological distortions of social reality makes it easier to treat the new historical situation, and the ideas that dominate it, as objective. Treating critical ideas as being totally erroneous makes it easier to convince people that the predominate set of ideas are accurate. Furthermore, severing the historical connections between critical ideas from the past and those in the present makes it more difficult to know how ideas are ideological. Instead of linking ideas to a class of problems and related social consequences and evaluating the distorting effect of them in this context, the rupturing of the present from the past leads people to treat ideas as being true or false per se. When this is done, it is
difficult to know how ideas are ideological and what the ideology is.

Like Mannheim, Marcuse gave the term "ideology" a general and total meaning. There is no end-of-ideology; there is rather a change in ideology. And the new ideology gains credibility by stereotyping past sets of critical ideas in total. Marcuse sometimes saw the creation of ideology as the strategy for justifying the dominant set of beliefs, not by focussing on those beliefs per se or in their historical context, but by making them credible without providing any direct evidence. Present ideologies gain their credibility by debunking past ideologies, not by argument or uses of reason. Our study has shown that this is the method by which the scientistic ideology has gained credibility.

The Ideology of Descriptiveness

The sophisticated methods for creating ideology today have changed the character, though not the function of ideology. According to Marcuse, this new character of ideology relates to the positivistic nature of the dominant social science. In his words

"... the descriptive analysis of the facts blocks the apprehension of facts and becomes an element of the ideology that sustains the facts. Proclaiming the existing social reality as its own norm, this sociology fortifies in the individuals the 'faithless faith' in the reality whose victims they are: 'Nothing remains of ideology but the recognition of that which is - model of a behavior which submits to the overwhelming power of the established state of affairs'."6

To understand this, we have to understand how Marcuse viewed facts. To him "facts" were never obvious nor rooted in the common sense appearance of things. Rather, it takes so-called "negative thought", critical and comparative reason, to discover the relationships, both historical and physical, that give observations meaning. Marcuse accepted Marx's statement that "All science would be superfluous,
if the appearance, the form, and the nature of things were wholly identical." The cult of description and factuality fails to understand the meaning of facts or the creative role of the human in developing them. We have already discussed how human choice, for example, the determination of significance, underlies the creation of facts. Marcuse's notion of dialectical reason or the negating of the appearance of things to understand the essence - e.g., the contingencies - of things is in sharp contrast to analytic or positivist notions of reason. To understand Marcuse's view of facts, it is necessary to understand the ideological role that Marcuse attributed to positivistic social science. Positivism, as a set of methods and rationales, provides the dominant society with tools for describing itself. It emphasizes the description of social forms and appearances, not the explanation of social structures and therefore tends to establish a body of knowledge that reinforces the ideology that justifies the dominant forms of the society. As such it helps re-create the ideology of the society.

To understand Marcuse's use of the term ideology we have to approach words in a paradoxical manner and not in terms of reliable and consistent definitions. Internal consistency, as we shall see in Chapter Sixteen, is often a formal cover for an ideological controversy. The term "fact" is a case in point. In claiming that what passes as a "fact" within positivistic social science is not a fact at all, Marcuse gave the word "fact" different meanings. He was really arguing that in failing to understand meanings in relation to underlying ideological orientations we are understanding nothing. Failing to do this leads our thought to be reified to those objects and the dominant view of them that advanced industrial societies emphasize. Like Berlin, Marcuse is saying that only by contrasting facts within ideologies can we come to understand the meanings of facts. If we lack comparative thought, we lack real thought.
He approached the term "ideology" in a similar paradoxical way. Arguing that the true task of philosophy is to negate, and that present philosophy does not do this, Marcuse wrote

"... philosophy contradicts and projects in thought only. It is ideology, and this ideological character is the very fate of philosophy which no scientism and positivism can overcome."9

From this we can see that for Marcuse a philosophy which challenges what he called the "ideological empiricism"10 of the dominant social science would itself be an ideology. Ideology was clearly not given a derogatory meaning by Marcuse. The character and function of ideology, not the existence or non-existence of ideology, is what was vital for him. The "one-dimensional" ideology of advanced industrial societies functions to level out thought and behavior. It is a totalitarian ideology. Critical philosophy, as a counter ideology, can serve to expose this tendency.

For Marcuse, ideology is both the debunker of past ideology and the exposure of the function of this present debunking. The problem of ideology therefore must be approached dialectically and in a historical context. Treated in a logical, formal way, Marcuse's use of the term "ideology" seems nonsensical. However, when the use is related to his critical social theory, it takes on a meaningful definition. Perhaps the simple distinction Mannheim made between "utopia" and "ideology" would have avoided confusion over Marcuse's use of the term. For example, when Marcuse wrote that philosophy's "... ideological effort may be truly therapeutic - to show reality as that which it really is, and to show that which this reality prevents from being (my emphasis)."11 Mannheim's notion of "utopia" seems to apply. Mannheim spoke of utopia as a futuristic perspective, whereas to him ideology was a justification of the present state of affairs. That which cannot be because of the present
social system, but which is striven for, could be called utopia, and philosophy's task to reveal this potential in the present.

Marcuse's phrase "to show reality as that which it truly is" makes it clear that he was not a relativist. Though his use of "ideology" (calling both apologies for, and past and present criticisms of the social system ideologies) tended towards relativism, Marcuse clearly did believe that some ideas are more valid than others. It is by analyzing the character and function of an ideology that the better ideas will be determined. Marcuse's study amounted to a rejection of liberal, positivistic ideas as having a totalitarian function in an advanced industrial setting.

Structural Analysis and Ideology

It follows from Marcuse's discussion that new ideologies develop with new forms of knowledge, in new social contexts. New functions and structures of knowledge demand new ideological bases. In clarifying the problem of ideology, our task is to draw out these relationships and, in the process, to try to bring more of the relevant relationships between science and ideology into the realm of self-criticism. To do this, and this follows from Kuhn's thesis as well as Marcuse's, a new, more inclusive "paradigm" or ideology is required.

This is not a vicious circle, as I have said already. It is only seen as such if a person goes on thinking within a specific ideology-science scheme which ignores the problem of ideology. Of course, it will be incomprehensible to those who think they are value-free or objective, since they are unable to be self-critical and come to recognize the relationships between their own academic work and the social consequences of the particular structure and function of knowledge within which they do that work.

Marcuse's handling of the problem of ideology advances our discussion, since
he showed how ignorance about the problem results from the character of the new ideologies of advanced industrial societies. Awareness of present ideology is retarded by concentrating on the debunking of a stereotyped version of past ideologies. Positivism aids in this task by equating the description of the present state of affairs with being objective. This descriptive mentality obliterates the critical theory which is required if the relationships between events, structures, power and ideas are ever to be understood. These relationships are what underlie the intellectual problem of ideology and they are what Marcuse attempted to expose.

Marcuse's method of exposing these relationships, however, remained superficial. Though he implied that ideology functioned within social structures, he did not do a structural analysis of ideology. His thesis on the one-dimensional society was based more on an ideological analysis of ideology, that is, the counterposing of one set of ideas (e.g., dialectic ideas) against another set (e.g., analytic ideas), than on an analysis that situated ideas within a structural setting. Marcuse can rightly be criticized for being academic, rather than historical, in his criticism.

Because Marcuse's criticisms tended to be academic, his own study had a one-dimensionality. In only describing the totalitarian character and function of ideology, Marcuse can be accused of having his own form of positivism. Political conflicts since the publishing of One-Dimensional Man in 1964 have established an ideological struggle on this continent and Marcuse's somewhat fatalistic handling of the end-of-ideology ideology appears superficial in retrospect. His failure to do a structural analysis of ideology led him to formalize the dominant myths of this society and to falsely attribute an historical autonomy to them.

A recent review of Marcuse's philosophy makes these same criticisms.
"The unifying idea in Marcuse's late work is precisely the notion of One-Dimensionality, which collects his statements reporting the disappearance of conflict in the monochrome culture of the machine. The amities mentioned earlier are amalgamated in Hegelian fashion: they are equal manifestations of the lack of conflict which justifies the book's title. The proletariat fraternizes with the bourgeoisie, philosophy has no quarrel with the world, the works of Shakespeare are sold in the drugstore. But the mergers of these once opposed universes are not structurally connected in the book. Their differentiated institutional settings become irrelevant: each is just an expression of the merging common to them all."12

When the institutional settings within which ideologies function become irrelevant to social criticism there is a tendency to reduce social relations to the "basic categories" of the dominant ideology. No historical perspective nor scientific understanding of the social relationships is possible if they are not studied in a dialectic way. Dialectic reason without dialectic research becomes as academic and formal as analytic reason with or without positivistic research.

Marcuse failed to distinguish "... between productive activity and the ideological activities surrounding it."13 His analysis of the ideology of advanced industrialism was more a criticism of the dominant ideas than of the workings of the society. Since the problem of ideology is not rooted solely in the criticism of ideas but in relating the social arrangement of science to the character and consequences of science, Marcuse's approach to ideology demands basic criticism.

Marcuse's philosophy stood in opposition to the dominant ideology of this society. As such, it had the seeds of the ideological struggle that has since developed. In a sense, his academic criticisms of dominant ideas preceded the more pragmatic and activist criticism of social relations that are now occurring within North America. Cohen was correct when he said that student radicals, who were initially influenced by Marcuse, now "... act in order to negate the reality he described, even if that entails negating his theory at the same time."14
Footnotes


2. It remains debatable whether Marcuse's approach constitutes a rejection of marxian class analysis and class struggle. Arguing that alienation is no longer subjectively experienced implies such a rejection since it denies the possibility of revolutionary consciousness developing as people relate their alienation to the contradictions in social and economic structures. Whether or not one accepts the marxian view of class struggle, Marcuse's argument itself seems one-dimensional. For an approach to alienation based on radical psychiatry, and not ignoring the dialectics of subjectivity, see R.D. Laing: *The Divided Self*. Penguin (1960).


4. Ibid.

5. Ibid., pp. 187-88.

6. Ibid., pp. 119-20.


8. Marcuse's notion of dialectic reason accounts for the problem of ideology and emphasizes a form of knowledge not based on the false distinctions of scientism. As Marcuse wrote "Dialectical thought invalidates the a priori opposition of value and fact by understanding all facts as stages of a single process - a process in which subject and object are so joined that truth can be determined only within the subject-object totality." *Reason and Revolution*. Boston, Beacon (1960), p. viii.


10. Ibid., p. 120.

11. Ibid., p. 199.


13. Ibid.

In C. Wright Mills' work, we find a further clarification of the problem of ideology. Mills was directly concerned with the functioning of ideas as ideologies within a social structure. He, unlike Marcuse, was aware of the need to do a structural analysis of ideologies. In his words:

"Just as the basic outline of the political and economic structure is teased out from the legal and doctrinal verbiage, so are the ideologies of the regime explained in terms of the composition and developmental trends of the social structure and its various strata. Ideologies and social structure are seen conjointly, which is the only way to see either in accurate and telling focus. For in some situations nothing that is said can be taken at its face value, and it is more important to know meanings than to test for truth. Indeed, the way to political reality is through ideological analysis."

For Mills, ideological analysis was essential for the social sciences. The meaning of ideas to those who believe them is more vital than an abstract search for the truth of ideas. Undertaking this form of analysis is what makes social sciences aware of the implications of the problem of ideology for itself. And, as I have argued before, it is the lack of such analysis that allows scientism to develop. Ideological analysis is needed to make us aware of the way the class of problems with which science deals interrelate with the social structure and the scientists' place in it.

The Rise and Fall of Ideology

Mills suggested some specific relationships between ideology and social structure. He claimed that "... ideologies usually arise as a response to an effective debunking of power." This claim related to Mills' general definition of ideology as
"political rhetoric" which justifies "... certain institutions and practices, demanding and expecting others." There has clearly been an increase in the political rhetoric about the need for law and order and the need for revolution, since the militant student and black movements have developed, and the war and opposition to the war in Vietnam has escalated. Are we to conclude that these movements are "effectively debunking power" and there is therefore the need for more and more ideology to try to justify the policies and effects of that power system? This is what Mills' argument would imply.

Mills' analysis of the "end-of-ideology" proponents gives us further insight into his handling of the problem of ideology. About the end-of-ideology Mills wrote

"Practitioners of the no-more-ideology school do of course smuggle in general ideas under the guise of reportage, by intellectual gossip, and by their selection of the notions they handle. Ultimately, the end-of-ideology is based upon a disillusionment with any real commitment to socialism in any recognizable form. That is the only "ideology" that has really ended for these writers. But with its ending, all ideology, they think, has ended. That ideology they talk about; their own ideological assumptions, they do not." Here he was claiming that an ideology exists behind the facade of objectivity presented by these theorists. Our discussion has already shown the superficiality of any such end-of-ideology rationale. But Mills had an interpretation, perhaps even an explanation, for this pretense of an end-of-ideology.

On this matter, Mills wrote that "If the phrase 'end-of-ideology' has any meaning at all, it pertains to self-selected circles of intellectuals in the richer countries. It is in fact only their self image." He then continued that

"... the end-of-ideology is of course itself an ideology - a fragmentary one, to be sure, and perhaps more a mood. (It) is in reality the ideology of an ending: the ending of political reflection itself as public fact." We see here a common theme between Mills and Marcuse. Marcuse's overriding concern was with the destruction of critical philosophy in advanced industrial societies.
His work was an attempt to make up for this deficiency. Mills spoke of the end-of-ideology proponents as apologists for this state of affairs, for the end to "political reflection", in advanced industrial and richer societies. Marcuse also spoke of "the debunking of an old ideology becoming part of a new one". Mills made this same general point by saying that "... the end-of-ideology is very largely a mechanical - not a creative response - to the ideology of Stalinism." The difference between Marcuse and Mills lies in Mills treating the end-of-ideologists as a historical fad, while Marcuse tended to over-react with a total theory of social control and social integration. Mills saw the end of the fad, while Marcuse was unprepared.

Mills' argument that ideology develops as power is debunked can be related to his calling the end-of-ideology position a "mood". When the position was being developed, most notably by Daniel Bell, there was far more ideological homogeneity in the United States than exists at present. A simple rhetoric, rather than an inclusive ideology, was then sufficient to legitimatize the dominant society and its uses of power. As political and social conflict intensified, the end-of-ideology rhetoric was quickly replaced by more explicit justifications and criticisms of dominant institutions. Among intellectual circles, this is also beginning to occur. Radical (e.g., socialist), liberal and conservative positions, each combining criticisms and/or justifications of dominant institutions in particular ways, have all become more explicit as political conflict has increased.

Mills foresaw this fast decline of the end-of-ideology rhetoric. In 1960, he wrote that "The end-of-ideology is on the way out because it stands for the refusal to work out an explicit political philosophy." As an "ideology of political complacency" it could not serve the interests of power groups in a society increasingly rife with conflict.
We can see from this how Mills used the concept of "ideology". He saw all social thought, including social science, as having an ideological foundation. Though the end-of-ideology proponents probably took their self-image quite seriously, and may have believed they were above partisan politics, Mills pointed out that "It is a kindergarten fact that any political reflection that is of possible public significance is ideological: in its terms, policies, institutions, men of power are criticized or approved."\textsuperscript{10} Certainly, the claim by many academics that the United States is beyond ideology has served to legitimize the "men of power" and the policies that they have others carry out.

The way Mills related "ideology" and "political philosophy" needs some clarification. Often he used the term ideology to debunk ideas, as when he wrote of The Professional Ideology of Social Pathologists.\textsuperscript{11} In that paper, he used the term to depict the failure of much of American sociology to link their "criticism of milieux" with a criticism of the social structure itself. A professional myopia kept many social scientists from seeing these relationships, and, according to Mills, this made their conclusions ideological. Not dealing with structural-milieux relationships, the "social problems" of the society were seen as isolated phenomenon and the society as a whole remained unchallenged, let alone unintelligible.

In other places, Mills linked the term "ideology" to the actual study of these structural questions. He equated "structural questions and basic ideology"\textsuperscript{12} with both being seen as fundamental to an explanatory, i.e., historical sociology. What Mills called "basic ideology" thus took on a positive connotation: the term ideology was not associated with distorting the nature of social relationships. Here, as with Marcuse, we see two different uses of the term. One use is attached to a position that is considered to be fallacious. The other use is attached to the
criticism of that position.

This ambiguity in both Marcuse's and Mills' use of the term ideology is indicative of their failure to deal explicitly, i.e., conceptually, with the problem of ideology. Their work implies the problem of ideology, but they never established the problem, as a problem, around which other questions could fall into place. Neither made the error of looking for abstract truth, and hence for the abolition of ideology. Both made distinctions between valid and distorting ideas about society. And both saw political or critical philosophy as central to this distinction. But both failed to put these insights together. Otherwise, their use of "ideology" would have drawn out the interrelationships between political conflict, intellectual classes of problems, and the social consequences of dealing with one class over another.

Mills' Typology of Ideology

Mills did not accomplish this task, but he did create a typology that can point us in the needed direction. He used this typology of "political philosophy" to expose the superficiality of the end-of-ideology theorists. Since the position of these theorists runs through all the superficial approaches to the problem of ideology, it is worth discussing Mills' criticisms in depth.

In his last book, The Marxists, Mills defined a political philosophy as having four aspects. He wrote

"First of all, a political philosophy is itself a social reality; it is an ideology in terms of which certain institutions and practices are justified and others attacked; it provides the phrases in which demands are raised, criticisms made, exhortations delivered, proclamations formulated and, at times, policies determined.

Second, it is an ethic, an articulation of ideals which on various levels
of generality and sophistication is used in judging men, events and movements, and as goals and guidelines for aspirations and policies.

Third, a political philosophy designates agencies of action, of the means of reform, revolution, or conservation. It contains strategies and programs that embody both ends and means. It designates, in short, the historical levers by which ideas are to be won or maintained after they have been won.

Fourth, it contains theories of man, society and history, or at least assumptions about how society is made up and how it works; about what is held to be its most important elements and how these elements are typically related; its major points of conflict and how these conflicts are resolved. It suggests the methods of study appropriate to its theories. From these theories and with these methods, expectations are derived. 

Then, applying this typology to the end-of-ideology theorists, Mills concluded four things. First, their ideology was used to legitimize the status quo. Second, its theory of society is shallow because of a "fetishism of empiricism" which narrows its study to that of specific milieux. Third, the problem of an agency of social change is not even posed as an intellectual problem. And fourth, the end-of-ideology proponents deny the very relevance of ideals; calling all indications of idealism (not used as in "philosophical idealism") "utopian", the term being used in a pejorative way.

On all four counts the end-of-ideology proponents lack sophistication. Mills' critical application of the typology doomed the end-of-ideology position to be forgotten within intellectual history. In ignoring the very problem of ideology, the end-of-ideology position has no intellectual defense against the intellectual and political criticisms that are being levelled against it on this continent. When under attack, the end-of-ideology pretense becomes reduced to pure rhetoric.

One has to ask why there is no political philosophy to help justify the power groups in our society. What, if anything, does this have to do with the very nature of the power? Mills gave us a clue to this question when he wrote that "Ideology, as the public face of a political philosophy, very often becomes simply myth or folk-
very often too, even a minimum of ideology withers away: all that is left is an empty and irrelevant rhetoric."\(^{15}\) The end-of-ideology rhetoric is all that is left of liberal political philosophy at a time when capitalism has become state capitalism and has lost all pretense of being liberal. The role of the United States in the world, especially in Vietnam, has peeled away the liberal rhetoric, and, as this has occurred, the academic apologists for the dominant society have also been exposed. They have been shown to have no "basic ideology" or political philosophy. Their justifications for the dominant institutions are without historical substance. But more important, their "... doctrine itself has become banalized and, in the process, emptied of much of its moral force and intellectual cogency."\(^{16}\)

One author has written that "Liberalism in this country is dead and the end-of-ideology is its legacy."\(^{17}\) This is consistent with Mills' argument. With the shift in social structures that have led to the imperialist character of the United States any past credibility for liberal rationales in the society has been lost. This is why liberal academics constantly treat liberal values in abstract from social realities. Having no social reality under state capitalism become imperialism, liberalism must be made into an abstract, unexamined rhetoric. This abstract analysis shows how the ideology of scientism functions to cloak over the social contradictions of state capitalism and, as such, plays an ideological role for the power groups of the society.

What is it that gives certain ideas a "moral force" and "intellectual cogency"? This question will not occur to those who treat ideas academically; who abstract academic languages from the task of critically evaluating social and historical events. It will not occur to those whose function is to perpetuate myths that justify the dominant society. It will not occur to those who have more commit-
ment to corporate institutions than to the task of inclusive, critical, intellectual work. Or, to take us full circle, those who deny the existence of the problem of ideology will be left with naked ideology once the institutional foundations on which their rhetoric rests begin to crumble.

The end-of-ideology proponents pre-determine their own intellectual suicide. They rely on stability in the dominant institutions to maintain their self-image and rhetoric. When that stability is gone, as it increasingly is in North American universities, the end-of-ideology liberals are unable to treat the conflict in an intellectual manner. Not having done their homework, they tend to irrationality when peeled of their self-image. As Mills stated

"With distaste, they retreat from all "ideology"; they are uninterested in larger "theory", and they neither possess nor even try to designate agencies of action. They become interested in the "pragmatic" and the "piece-meal". Facts may be acknowledged, but only in a scattered way; they are not connected with each other or with larger theories and certainly not with definite programs." 18

Mills' typology raised another relevant point. After arguing that a fetishism with empiricism makes it impossible to develop adequate theories of society, and that such a lack focusses on the symptoms rather than the roots of social problems, Mills concluded "Thus political bias masquerades as epistemological excellence." 19 Here a relationship between political philosophy and theories of knowledge was being suggested. From this, we can infer that theories of knowledge are themselves ideological. Marcuse already suggested such a relationship when he related one-dimensional ideology and positivistic social science. In our earlier discussions we saw how academic epistemologies function to cloak the problem of ideology, and, as such, have a crude ideological nature.

The search for these relationships is central to the problem of ideology in the social sciences. In the second section, I will undertake a detailed ide-
ological analysis of epistemological theories. Mills succeeded in bringing the relationship out by showing how the end-of-ideology position related to a narrow and abstract epistemology and to a superficial political philosophy that served to justify the power structure in the United States.

Mills' own study of Karl Mannheim's work made him fully aware of this question. About Mannheim he wrote

"Mannheim's "total, absolute, and universal" type of "ideology" in which social position bears upon "the structure of consciousness in its totality", including form as well as content, may be interpreted to mean this social-historical relativization of a model of truth, or the influence of a "social position" upon "choice" of one model as over against another. Mannheim's remarks do not contradict this more explicit and analytic statement."\(^{20}\)

Mills suggested a relationship between "models of truth" or "verificatory models", as Mills called them elsewhere, and one's social experience and position. Though not recognized by those with narrow academic commitments, this relationship has a general validity because it is through it that we can tackle the many problems that the problem of ideology exposes. Therefore, dealing with the problem of ideology has a pragmatic function in social science research. It opens up new problems, otherwise ignored. It allows new intellectual content, with a critical political function, to be developed. It is, at one level, an attempt to change the class of problems with which social science deals. It is, therefore, an ideological matter to raise the problem of ideology.

Because of his awareness of the relevance of the problem of ideology, Mills recognized the value of Marx's work. About Marx he wrote "No one who does not come to grips with the ideas of marxism can be an adequate social scientist; no one who believes that marxism contains the last word can be one either."\(^{21}\) You will recall MacRae's stereotyped handling of Marx in Chapter Three.\(^{22}\) His error was in believing
his own sociological jargon and failing to critically analyze what he meant by "science" and "ideology". Once evaluated, his meanings proved to be contradictory and superficial. MacRae failed to come to grips with the ideas of marxism.

But those who treat marxism religiously are also unable to come to grips with the problem of ideology, or to see how Marx and Engels helped to clarify it themselves. It is equally fallacious to stereotype Marx's thought from the left or the right. And some interesting similarities exist in the way both forms of stereotyping are done. The politics may be different, but the academic approach to ideas is not. Therefore, raising the problem of ideology implies an ideological struggle against both the end-of-ideology liberal academics and the vulgar marxists. To show why this is the case I will turn to a discussion of Sartre.

Footnotes


5Ibid., p. 249.

6Ibid., p. 251.

7Daniel Bell: The End of Ideology. New York, Collier Books (1961). Bell based his argument upon a superficial, and, in some cases, distorted interpretation of the ideas of Marx and Mannheim. He showed this in his Epilogue to The End of Ideology. There he consistently equated Marx's theory with the vulgar marxism developed since Stalinism. For example, he falsely stated that Marx believed that there only existed "class truth" and saw no autonomy for science. This false attribution of reductionistic thought to Marx was related to Bell's misrepresentation of Marx's theory of class. Though Marx consistently analyzed "class" in terms of the control of means of production, Bell talked of Marx's theory as if it was based on an analysis of the distribution of property. He misrepresented Mannheim's ideas to further rationalize his false equation of Marx and vulgar marxism. We saw in Chapter Two how Mannheim's concepts of
ideology (e.g., total, particular; specific, general) were meaningful only if used comparatively. Yet Bell abstracted the idea of "total" ideology and equated it to a "secular religion". Then, talking like a neo-freudian, he stated that "... ideology fuses these (religious) energies and channels them into politics." (Ibid., p. 400.) His equation of secular religion and total ideology not only falsified Mannheim's analysis, it amounted to a rationalization for ignoring the problem of ideology and hence ignoring the ideological foundation of his own ideas. When he wrote that "... the ideological age has ended" (Ibid., p. 403) and that "... few issues can be formulated any more, intellectually, in ideological forms" (Ibid., p. 404), he showed his ignorance of the problem of ideology. There is no "ideological age", though, as Mills showed, a particular ideological rhetoric (e.g., liberalism, Stalinism) can lose its credibility under new conditions. And ideology is not a terminological question. The problem of ideology focuses on social relations, which include intellectual languages, not on linguistics per se. Furthermore, Bell misused Mannheim's distinction between "utopia" and "ideology" to further shore up his ignorance. When he wrote that "The end-of-ideology is not - should not be - the end of utopia as well" (Ibid., p. 405), he was giving utopia an abstract academic meaning removed from the present political realities of ideological struggle. This utopianism constitutes an ideological position because such a separation of the future from the past and present, as Marcuse showed, functions to mystify the present social conditions. When Bell wrote that "If the end-of-ideology has any meaning, it is to ask for the end of rhetoric ..." (Ibid., p. 406), he showed that an academic orientation (e.g., the ideology of scientism) had pervaded his whole thought. The problem of ideology to Marx or Mannheim was not the problem of rhetoric. Rhetoric is the abstract use of language which, upon examination, proves to cover over crucial intellectual and practical problems. Mills, not Bell, prophesied the end of rhetoric when he foresaw the end of the end-of-ideology.


9 A new version of the end-of-ideology ideology has developed with the assistance of the academic languages of "general systems theory" and "behavioral science". The new version has a more direct function within the corporate society evolving on this continent. The absurdity of the reformed version is shown by the following meaningless rhetoric: "If there is any ideological peculiarity appropriate to the achievement of the transition it is neither capitalism nor socialism but the scientific ideology itself applied to society. An ideology for the great transition must then be a strategy rather than an ideology." (K. Boulding, quoted in R. Kostelanetz: Beyond Left and Right. New York, William Morrow (1968).) We have already criticized the notion of "scientific ideology" in Chapters Four and Five. Boulding's word games which both equated and differentiated "ideology" and "strategy" in the same sentence reflect the continued failure of academics to create a value-free or apolitical science. The attempt to transcend politics ensures the continued ignorance of the problem of ideology and its implications for social science.

10 C.W. Mills, op. cit., p. 251.


16 Ibid., p. 21.


22 See p. 56 above.
Jean Paul Sartre's handling of the problem of ideology takes us full circle back to the work of Marx and Engels. Though Sartre used the term "ideology" in a different way than did Marx and Engels, a similar pragmatic epistemology underlay his concept of knowledge. But more vital Sartre provided us with both a critique and explanation of the marxism which has vulgarized Marx and Engels' insights into the problem of ideology, and a perspective, rooted in his existentialism, that can humanize social science. The relation between an explicit handling of the problem of ideology and humanizing social science will become clear as we proceed.

Existentialism as Ideology

Sartre considered his existentialist theory to be an ideology. By discussing this, we can draw out his handling of the problem of ideology. Early in his study, Sartre stated that

"... since I am to speak of existentialism, let it be understood that I take it to be an 'ideology'. It is a parasitical system living on the margin of Knowledge, which at first is opposed but into which today it seeks to be integrated." 1

The two phrases "living on the margin of" yet "seeks to be integrated" into Knowledge are the key to Sartre's view of ideology. Much like Berlin, he saw ideas becoming ossified into systems that function to maintain (not cause) human alienation and oppression. He saw the need for resistance to such ideas until a new, liberating synthesis of ideas re-enters human experience.

Existentialism is on the edge of knowledge because it is an "idealist protest
against idealism, both in marxian and positivist social science. It does not, in itself, constitute human knowledge; but, by attacking the idealism in these two forms of social science, it can help push knowledge to a new stage. Thus, existentialism is an "ideological project". What Sartre meant by "project" will be discussed below. About his existentialism acting as an ideological project, Sartre wrote:

"It must be understood that whatever an ideological project may be in appearance, its ultimate goal is to change the basic situation by becoming aware of its contradictions. Sprung from a particular conflict which expresses the universality of class and condition, it aims at surpassing it in order to reveal it (my emphasis), to reveal it in order to make it manifest to all, to manifest it in order to resolve it."

Until we show what Sartre meant by existentialism acting as an ideological project to change marxism, the full meaning of this statement will not be clear.

The basic point was made by Sartre in another context. He wrote that "The true role of the 'ideologies of existence' is not to describe an abstract 'human reality' which has never existed, but constantly to remind anthropology of the existential dimension of the processes studied." Sartre thus saw an "ideology" as a challenge to knowledge to change itself. We can draw a parallel between this and Rapoport's concept of "ideological struggle" which is an attempt to open up a new class of problems. But Sartre's view was more profound for it was rooted in a pragmatic theory of knowledge which saw the resolution of intellectual problems in practical affairs. He thus did not err as Rapoport did by creating an abstract notion of intellectuals as a class. His statement that an ideology "surpasses to reveal; reveals to make manifest; and makes manifest to resolve" did not refer to an academic exercise but to "going beyond" a lived situation in order to resolve contradictions in practice.

It will take a discussion of Sartre's idea of "project" to clarify the difference between him and, say, Rapoport. What is important to recognize is Sartre's
rejection of all "ideology" that is reductionistic; that attempts to explain human
actions and events with static categories. This is how he viewed much of the ap-
plication of "class ideology". Criticizing the mechanistic application of class
ideology to literature, Sartre said "... the majority of the works of mind are
complex objects, difficult to classify, that one can rarely 'situate' them in re-
lation to a single class ideology, but rather that they reproduce in their profound
structure the contradictions and struggles of contemporary ideologies."5

Here Sartre was stressing how knowledge has to be seen in terms of lived
ideological struggles, not in terms of static theories. He was rejecting the aca-
demic approach to truth. An ideology is not true or false in abstract. It gains
its validity by its effects on human life as part of a larger ideological struggle.
Thus he wrote that "... an ideological system is an irreducible."6 By this he meant
that what is important is not the labelling of people with certain static ideological
categories, but understanding how an ideological system, which includes contradictory
ideologies7 and is a real struggle, affects human beings. Does the ideological system,
for example, help a person go beyond his own alienation?

Sartre wrote that an ideological "... system is an alienated man who wants to
go beyond his alienation and who gets entangled in alienated words; it is an achieve-
ment of awareness which finds itself deviated by its own instruments and which the
culture transforms into its own particular Weltanschauung."8 Sartre always emphasized
the specific human person. "Ideology", as an idea, only has meaning if it is under-
stood in terms of concrete lives. We need to learn to develop knowledge from an
understanding of the historical nature of specific human acts. We need to understand
how the ideological struggle becomes a system of thought, of a particular form, with
a particular effect, for a particular human. We need to know how and why an ideologi-
cal system has a reifying or a liberating effect for a human being.
It is because marxism has failed to do this that there is a need for an injection of existential ideology into the ideological struggle. Positivistic social science also fails here, but Sartre saw revitalized marxism as a superior social science. In fact, in Marx's own work, Sartre saw the recognition of the need for an existential awareness. This is the basis of Sartre's existential marxism. He believed that "... Marx's own Marxism, while indicating the dialectical opposition between knowing and being (which Sartre rejects, J.H.), contained implicitly the demand for an existential foundation for his theory."

Sartre, therefore, saw an ideology as an attempt to push the knowledge within the ideological struggle of a historical period to a new stage. This will make more sense if the reader thinks of what Kuhn said about "paradigm change" or what Rapoport said about "ideological struggle". We can say that knowledge comes from ideological struggle because certain "paradigms", or interrelations of problems, methods and theories, come to dominate research under particular conditions. New forms of knowledge, however, will develop as new needs develop, even if they are not initially integrated within the dominant form. The conflict between these forms of knowledge, as expressed in different ideas, is a part of a larger ideological struggle. Sartre's study was a search for a method that will raise new problems (e.g., existential ones) within the ideological struggle of our time.

For Sartre, like Marcuse, the role of philosophy is explicitly ideological. Philosophy has the task of injecting new problems, methods and theories into the ideological struggle as existing ideologies cease to assist to free humans from their alienation. This is done by directing them beyond their lived contradictions. For Sartre, this is the only way a human can gain real understanding of his existence. Sartre thus made the statement that "If philosophy is to be simultaneously a totaliza-
tion of knowledge, a method, a regulative idea, an offensive weapon, and a community of language, if this "vision of the world" is also an instrument which ferments rotten societies, if this particular conception of a man or of a group of men becomes the culture and sometimes the nature of a whole class - then it is very clear that the periods of philosophical creation are rare."11

Sartre believed that philosophy is "... born from the movement of society; (that) every philosophy is practical, even the one which at first appears to be the most contemplative. Its method is a social and political weapon."12

Existentialism is a "revolution in the revolution";13 an attempt to challenge marxian philosophy, as part of a revolutionary change in this century, to go beyond the vulgar form that has developed since the Soviet revolution and counter-revolution.

Vulgar Marxism and Positivism

Sartre's handling of ideology combined a critique of vulgar or "Stalinist Marxism", an articulation of existential ideology, and a pragmatic concept of knowledge. Let us look at each of these in turn to see how Sartre accomplished his breakthrough on the problem of ideology. Then we will be in a position to summarize the findings of this section of the thesis.

Sartre's criticism of vulgar marxism was rooted in his unwillingness to reduce human action to an analysis of historical conditions. Of vulgar marxism he wrote

"... Stalinist Marxists are blind to events. When they have reduced the meaning of them to the universal, they are quite willing to recognize that a residue remains, but they make of this residue the simple effect of chance."14

Earlier in his study, Sartre clarified what he meant by "the universal" when he
reproached

"... contemporary Marxism for throwing over to the side of chance all the concrete determinations of human life and for not preserving anything of historical totalization except its abstract skeleton of universality. The result is that it has entirely lost the meaning of what it is to be a man..."15

Sartre argued that if man makes history, then this reductionism must be rejected. But we must first be clear what we mean by "man makes history". Sartre argued that

"... this means that he objectifies himself in it and is alienated in it. In this sense History, which is the proper work of all activity and of all men, appears to men as a foreign force exactly insofar as they do not recognize the meaning of their enterprise (even when locally successful) in the total, objective result."16

The similarity with Marx and Engels' view of how ideology helps maintain alienation is striking.

Further clarifying this, Sartre asked "How are we to understand that man makes history if at the same time History makes him?" Criticizing vulgar marxism, he answered: "Idealist Marxism seems to have chosen the easiest interpretation: entirely determined by prior circumstances - that is, in the final analysis, by economic conditions - man is a passive product, a sum of conditioned reflexes."17

Whether Sartre used the term "Stalinist", "contemporary", or "idealist" marxism, it is clear that he believed that living man has been lost by marxism. Marxism has reified itself. The theory of the social and economic relations among men is no longer a theory, but a reified truth, with the concept of "truth" having all the academic connotations I have criticized. "Dialectic materialism" has become an idealist philosophy because the acting humans, and the ideological struggle that affects them is not the core of the ideas. In Sartre's words: "What contemporary Marxists have forgotten is that man, alienated, mystified, reified, etc. still remains
One reason for this reification of marxism is the failure to root all ideas in praxis. Marx and Engels developed their ideas out of praxis, but vulgar marxists have taken them literally, not as part of a historical context. An example is how Engels' statement about men being a "product of circumstances" is often taken literally. Sartre clarified this by stating that "... men make their history on the basis of real, prior conditions ... but it is the men who make it and not the prior conditions." Sartre had a general explanation of how and why marxism became vulgarized. And his study, his existential project, was an attempt to make up for the lack. Sartre wrote that "Marxism lacks any hierarchy of mediations which would permit it to grasp the process which produces the person and his product inside a class and within a given society at a given historical moment." These mediations, for Sartre, would deal more inclusively with human experience. There is simply no way to understand human experience by reducing it to a class theory with a priori categories. "The point is to subordinate nothing a priori." Depending on a static and reductionistic class theory, vulgar marxists have ignored or forgotten about the human biography. "Today's marxists are concerned only with adults; reading them, one would believe that we are born at the age we earn our first wages. They have forgotten their own childhoods." Because of this Sartre believed that psychoanalysis was relevant to his existential project. "Psychoanalysis, conceived as a mediation, does not bring to bear any new principle of explanation" but it can challenge marxism to be more inclusive in its inquiry into human experience. Without these mediations, marxism itself has become reified. The method
implicit in it has not been dialectic, i.e., ideas have not been reformulated with praxis. Instead, thought has tended to be idealist, i.e., accepted as "ideas" per se. Sartre contrasted his method with the marxian method:

"The Marxist method is progressive because it is the result - in the work of Marx himself - of long analysis. Today synthetic progression is dangerous. Lazy Marxists make use of it to constitute the real, a priori; political theorists use it to prove that what has happened had to happen just as it did. They can discover nothing by this method of pure exposition. The proof is the fact that they know in advance what they must find. Our method is heuristic; it teaches us something new because it is at once both regressive and progressive." 25

Sartre's regressive method allows us to study the "historical particularity of the object" under consideration. Without this approach, the specificity of human action and events is lost and the meaning of them vulgarized. As Marx stressed the specificity of historical periods, Sartre emphasized the specificity of existential acts. The existential project then is an attempt to broaden the method utilized within marxism.

Sartre linked his existential ideology to Marx's own work. "The very notions which Marxist research employs to describe our historical society - exploitation, alienation, fetishizing, reification, etc. - are precisely those which most immediately refer to existential structures." 27 But these notions need to be applied specifically for knowledge to go beyond vulgarized marxism. As Sartre said "The object of existentialism - due to the default of the Marxists - is the particular man in the social field, in his class, in an environment of collective objects and of other particular people." 28 Or, put another way: "Existentialism ... can only affirm the specificity of the historical event; it seeks to restore to the event its function and its multiple dimensions." 29

An example of this for Sartre was the study of "... how the worker projects himself toward his own self-objectification in terms of material, historical condi-
The character of such a study would be much different than reducing all behavior and experience of workers to a reified notion of "the working class." Such reductionism is not only vulgar, it can actually increase the alienation of people. A very important statement by Sartre shows how this can happen. "Each time that the enterprise of a man or a group of men becomes an object for other men who surpass it toward their ends and for the whole of society, this enterprise guards its finality as its real unity, and it becomes, for the very people who initiated it, an external object which tends to dominate them and to survive them."31

It is important to understand how this statement relates to Sartre's idea of knowledge. Knowledge becomes alienating and dominating when it is treated in an idealist manner. This occurs when ideas are treated in abstract from praxis. Such idealist ideas, even if critical of the social relationships of a society, function to oppress people. Not growing with their own experience, but superimposed onto people by those objectifying them, idealist categories tend to become new, reified beliefs. When this happens, human praxis doesn't change, though rhetoric does; and the new rhetoric can function to further alienate people in the way that Marx and Engels saw ideology - e.g., abstract categories - alienating people.

Sartre believed that marxism, with its emphasis on progressive methods, did just this. He wrote that

"Marxism, after drawing us to it as the moon draws the tides, after transforming all our ideas, after liquidating the categories of our bourgeois thought, abruptly left us stranded. It did not satisfy our need to understand. In the particular situation in which we were placed, it no longer had anything new to teach us, because it had come to a stop."32

This understanding, in a "particular situation", is what Sartre believed existential ideology could begin to provide. This point is usually misunderstood, especially by
the vulgar marxists and the positivist and behaviorist social scientists all of whom seem to lack awareness of human existence. Sartre made his intention clear when he wrote: "Our intention is not, as is too often claimed, to 'give the irrational its due', but, on the contrary, to reduce the part of indetermination and non-knowledge, not to reject Marxism in the name of a third path or of an idealist humanism ..."33

Here Sartre described existential "ideology", as an attempt "... to reduce the part of indetermination and non-knowledge". Though Sartre was aware that existential ideology could become idealistic itself, it was not his intention to polarize it, as a total theory of man, against marxism. His intention was to break up the reification within marxism. Any mystification of existentialism as a total theory of humans is therefore a distortion of Sartre's philosophy. When his critics or, in some cases, his disciples, treat Sartre's theory as a total theory, this reflects their own idealism.

Sartre concentrated on a criticism of marxism because it is marxism that he wanted to challenge and change. His criticisms, however, also apply to positivistic social science. In fact, according to Sartre, vulgar marxism and positivistic social science have similar orientations. He pointed this out by writing that

"We must resolutely reject the so-called 'positivism' which imbues today's Marxist and impels him to deny the existence of these significations. The supreme mystification of positivism is that it claims to approach social experience without any a priori whereas it has decided at the start to deny one of its fundamental structures and to replace it by its opposite."34

For Sartre, these "significations" included statements of utility, means and ends, which help us understand "... men and relations among men across the structures of society."35 Positivism, though claiming to be thoroughly empirical, refuses, a priori, to deal with these significations. Denying the importance of studying anthropology,
it bases its theorizing on the reified form of description of which Marcuse was critical. Sartre concluded that "A positivist who held onto his teleological color blindness in practical life would not live long."36

This "color blindness" is in both positivism and vulgar marxism. Both err in not recognizing sociology itself to be a dynamic human creation. Both forms of sociology lack the kind of self-criticism which I have emphasized. Failing to understand the problem of ideology, both forms of sociology look only outward, i.e., projecting, using their assumed categories to sort out events in such a way that a proof for them is always found.

The needed self-criticism will only arise when it is understood that "the sociologist ... is an object of history".37 As Sartre said: "Indeed, the sociologist and his 'object' form a couple, each one of which is to be interpreted by the other; the relationship between them must be itself interpreted as a moment in history."38 This will not make sense unless the traditional idea of objectivity, stressing "scientific method" - rules, logic, etc. - is rejected. We have seen how superficial this view of science and objectivity is. Sartre's point will be understood only if the need to specify our knowledge, with both regressive and progressive methods, is also understood. If the sociologist does not undertake this specifying or signifying of events, he will simply accumulate observations of events that reinforce his or her categories and ideology, without even knowing the roots or consequences of such description.

Sartre stressed the need for the sociologist to totalize39 his or her own relationship to the events or objects being studied. In this way, he or she can gain new insights into the meaning of human events. Sartre wrote that "... without a movement, without a real effort at totalization, the givens of sociology ... and
psychoanalysis will sleep side by side and will not be integrated into 'Knowledge'. This dialectic view of sociology, taking account of the human as the source of knowledge, must be thoroughly radical; radical in method as well as in theory. This means that it must locate itself in human history, never allowing its ideas to become abstract. As Sartre put it: "... sociology, a temporary moment of the historical totalization, discovers new mediations between concrete men and the material conditions of their life, between human relations and the relations of production, between persons and classes (or some totally different sort of grouping)."

If sociology fails to recognize that its task is to develop and continually re-evaluate these mediations and instead tries to develop The valid theory, then it will lose contact with men, women and children - as real, living people - and totally fail to understand the social relations among them. If this occurs, it will not have real knowledge but images.

Sartre's criticism of positivistic sociology can be compared with that of C. Wright Mills. We would expect some similarity since both authors were conscious of the ramifications of the problem of ideology for social science. Mills' criticisms of positivistic sociology focussed on the separation of "abstract empiricism" from "grand theory". Conventional empiricism was "abstract" because its methodology was abstracted from intellectual problem-solving. Its methodology was more an orthodoxy than a tool. Conventional theory was "grand" since it never linked its work to the critical, empirical study of problem areas.

Sartre was very sensitive about this problem. Criticizing Kardiner, Sartre wrote "The 'basic personality' fluctuates between abstract universality a posteriori and concrete substance as a completely made totality." These characteristics, i.e., "abstract universality" and "concrete substance", come from a social science which
lacks mediations that give us specific understanding of a human biography or human events. The "universality" comes from a grand theory of institutions and the "substance" comes from a static description of personality. Sartre preferred another approach: "... if we can determine the primary institutions and follow the movement by which the individual makes himself by surpassing them, then why do we need to put on these ready-made clothes along the way?" These "ready-made clothes" are the abstract theory (e.g., Kardiner's "basic personality") which is used to give order to a static description of human behavior. Without recognizing the pragmatic nature of scientific knowledge, and without meditational notions that allow a specific understanding of humans, human beings become lost in these theories.

This kind of theory arises when the sociologist lacks awareness about his or her work as a moment in history. What Mills called "abstract empiricism" and Sartre called "hyper-empiricism" results from this naive objectivism. The belief that one is a detached observer and an objective describer of events perpetuates self-deception about how ideology operates within all science. Sartre emphasized how the neglect of history helped shape this uncritical attitude. Referring to sociology in North America, the same sociology of which Mills was so critical, he said: "Hyper-empiricism - which on principle neglects connections with the past - could arise only in a country whose history is relatively short."

Even with its ahistorical character, Sartre saw a value to this hyper-empiricism. "The more sociology is presented as a hyper-empiricism, the easier is its integration into Marxism." If concern with detailed description is linked with the marxian awareness of historical movement, then Sartre's existential project will be advanced. It is the lack of historical perspective and the related ignorance resulting from a denial of the problem of ideology, and not the commitment to empiricism, that makes positivistic social science inadequate.
Sartre's Pragmatism

It is necessary to specify why we have called Sartre's view of knowledge and of ideology pragmatic. In his Preface, Sartre made a statement which confirms this interpretation of his handling of the problem of ideology. Referring to his discussion of existentialism, he wrote

"It is the nature of an intellectual quest to be undefined. To name it (existentialism) and define it is to wrap it up and tie the knot. What is left? A finished, already outdated mode of culture, something like a brand of soap - in other words, an idea."47

Sartre was not looking for truth, validity or objectivity through naming and defining. Existentialism is not the truth, but an ideological project to bring a new class of problems into marxism. Rather than being interested in "truth", Sartre is interested in understanding, and this is not a static, linguistic matter. "To understand is to change, to go beyond oneself."48

Two statements by Sartre made it clear that this "change" does not result from "reflection" or simply through the development of certain "ideas". First, he wrote: "For us, reflection is not reduced to the simple imminence of idealist subjectivism; it is a point of departure only if it throws us back immediately among things and men, in the world."49 And, second, he wrote:

"... ideas do not change men. Knowing the cause of a passion is not enough to overcome it; one must live it, one must oppose other passions to it, one must combat it tenaciously, in short one must 'work oneself over'."50

These statements indicate that Sartre did not consider understanding to be passive knowing, but active changing. He continually spoke of gaining understanding by "surpassing" certain lived contradictions.51 For him, ideas were not true or false in themselves. Rather they are useful; they aid us "go beyond" a set of circumstances of which we are a living aspect. Understanding is not a subjective process. A situation must be in the process of change before a real understanding of that situation can develop.
Sartre believed that we cannot go beyond marxism at present. He believed that it is "the philosophy of our time ... and ... we cannot go beyond it because we have not gone beyond the circumstances that engendered it." To Sartre, the fact of scarcity is what makes marxism valid, but, once scarcity disappears, a new philosophy, a "philosophy of freedom", can develop. At present, marxism pin-points problems that exist because of the reality of scarcity in the world. The ideas of marxism act as "... guiding principles, as indications of jobs to be done, as problems - not as concrete truths."

So marxism is pragmatic. It is not correct. It, as a set of ideas, does not correspond to reality. Rather it gives us a direction, a perspective on the present situation, its roots, and a potential social reality beyond it. The existential project has validity "... because (marxist) assertions seem to us insufficiently defined and, as such, capable of numerous interpretations; in a word, it is because they appear to us as regulative ideas."

Vulgar marxists, who see their ideas as being true rather than regulative, are guilty of doing "idealistic violence to facts". They have a "Platonic" view of knowledge, and, therefore, lack the aptitude to understand lived history. To the Stalinist marxist "... a worker is not a real being who changes with the world; he is a Platonic Idea." Dialectical materialism has become a grand historical theory which reduces human acts and awareness to its tidy categories. But Sartre stressed that "the dialectic", at least for existential ideology, "on the contrary, refuses to reduce".

Sartre's pragmatic view of ideas takes us back to the epistemology of Marx and Engels. You will recall how they called their epistemological premises "material". Sartre was in full accord.
"We willingly grant that the group never has and never will have the type of metaphysical existence which people try to give it. We repeat with Marxism: there are only men and real relations among them."60

For Sartre, as for Marx and Engels, knowledge must be heuristic.

"... living Marxism is heuristic; its principles and its prior knowledge appear as regulative in relation to its concrete research. In the work of Marx we never find entities. Totalities (e.g., the petite bourgeoisie of the 18 Brumaire) are living; they furnish their own definitions within the framework of the research."61

It has been contemporary marxism's failure to understand the pragmatic and heuristic nature of knowledge, and the related ignorance about the intellectual problem of ideology, that has led it to become vulgarized. Thinking of ideas as being correct or incorrect, contemporary marxists have been unable to understand how ideology and science interrelate. Instead, they have called their own ideas "scientific" and those they oppose "ideological". Though from a different stance, they have made much the same error as the end-of-ideology liberal academics.

Sartre related this ignorance of the pragmatic nature of knowledge to an ignorance of the values and ends.

"By misunderstanding these principles, contemporary Marxism has prevented itself from understanding significations and values. For it is as absurd to reduce the signification of an object to the pure inert materiality of that object itself as to want to deduce the law from the fact (my emphasis). The meaning of a conduct and its value can be grasped only in perspective by the movement which realizes the possibles as it reveals the given."62

Vulgar marxism, rooted in an academic (e.g., idealistic) epistemology, makes the same error that the value-free doctrine does. Both are ignorant of the problem of ideology, as a problem. Both are ignorant of the role of "ends" in human events; or, in Sartre's words, both lack a "hierarchy of future significations".63

I have argued that Marx and Engels' theory of ideology was the first articulation of the problem of ideology. Sartre takes us back to their insights,
though from a different historical context, with different definitions (e.g., of ideology), and for different reasons. Sartre broke out of the dichotomies of value and fact, and of the subjective and objective, to redefine the problem of knowledge and ideology in a way that helps us to go beyond all mechanistic forms of social science. He not only criticized vulgar marxism and positivistic social science; he did this as part of a project which takes us to a new, more profound awareness of the problem of ideology.

Ideology as a Project

The concepts of "praxis" and "project" are Sartre's substantive contributions to the problem of ideology. Praxis refers to deliberate or purposeful action. From praxis comes thought, and into praxis goes thought. Or, to be more accurate, in praxis thought and action become unified. In Sartre's words: "Concrete thought must be born from praxis and must turn back upon it in order to clarify it, not by chance and without rules, but - as in all sciences all techniques - in conformity with principles."

Again we come face to face with the term "rules". Schumpeter tried and failed to define "science" by reference to rules and techniques. Kuhn pointed out that "paradigms" are primary to rules. Sartre, like Kuhn, saw rules as being pragmatic, as rooted in principles stemming from a type of praxis. But Sartre went beyond Kuhn because he started with an awareness of the problem of ideology. His study was consciously ideological, i.e., it was an attempt, in Rapoport's terms, to introduce a new "class of problems" into knowledge. Sartre's search for a method constitutes an ideological struggle against all forms of knowledge that abstract human existence.
Of his concept "project", Sartre wrote "We affirm the specificity of the human act, which cuts across the social milieu while still holding on to its determinations, and which transforms the world on the basis of given conditions." Sartre was uncompromising in his refusal to reduce human acts and events to any grand theory. His ideological project was rooted in his radical humanism; a humanism that begins and always returns to the living person, but not a naive humanism that ignores historical movement. He saw the living human as making history, and stressed the need for knowledge to begin and end with this recognition. It is "the project" which underlies this making of history. "It is by transcending toward the field of possibles and by realizing one possibility from among all the others that the individual objectifies himself and contributes to making History." With the aid of the concept of "project", Sartre broke out of both subjectivism and objectivism. He was therefore able to avoid the insoluble dilemmas that those who begin with these naive classifications always face. The human is not a passive consumer of ideas, some of which are true, some of which are false; but an active maker of ideas that are or are not useful for his or her project and affect on history.

The human is continually creating himself or herself through praxis. For Sartre this "praxis is a passage from objective to objective through internalization." The human is not a possessor of either "subjective" or "objective" ideas. A person is re-creating him or herself, through praxis. His or her subjectivity is the internalization of past, present and future events, and this continually (e.g., dialectically) leads to a new objective event. A brilliant passage from Sartre describes this process:

"Thus the subjective contains within itself the objective, which it denies and which it surpasses toward a new objectivity; and this new objectivity
by virtue of objectification externalizes the internality of the project as an objectified subjectivity. This means both that the lived as such finds its place in the result and that the projected meaning of the action appears in the reality of the world that it may get its truth in the process of totalization.68

This statement appears paradoxical and/or meaningless only if one clings to an academic view of knowledge and ignores the problem of ideology. Humans are always engaged in "projects", which "as a mediation between two moments of objectivity can account for history; that is, for human creativity".69 As acting beings we are continually passing through action, reflection and criticism (i.e., praxis) even if the process has differing characteristics among different people.

I began this discussion with Marx and Engels' theory of ideology and concluded that their handling of the problem of ideology was rooted in a pragmatic understanding of knowledge. I then showed the superficiality of various versions of the value-free doctrine and demystified all attempts to define science in isolation from ideology. I showed how an erroneous view of natural science supported the false handling of the problem of ideology in the social sciences. This allowed me to turn to a discussion of more sophisticated handlings of the problem.

Mills and Marcuse helped me explain why the problem of ideology has been ignored. And now Sartre has taken us full circle, and with his radical humanism, has raised the basic problem in a new way, in a new context. The main difference between Sartre, and Marx and Engels, is Sartre's consciousness of the role of choice in history. Marx and Engels raised the problem of ideology as part of their broad theory of history and capitalism, but did not recognize their own work to be an "ideological project". To the extent that Mannheim focussed on this lack within Marx, his work was a further clarification. Sartre not only discussed how ideology and science interrelate, he is an example of this process. He was describing the problem of
ideology and applying this awareness to the end of humanizing social science, through his existential ideology, at the same time. In short, Sartre's work is the problem of ideology.

Many loose ends exist thus far in this inquiry. Our purpose in this first section has been to make the problem of ideology explicit, while raising other issues for later discussion. It is now time to pick up on the discussion of logic; that is, to go into issues in the philosophy of social science in more depth. This will enable me to deal with the pragmatic idea of knowledge in more depth.

Footnotes


3Ibid., p. 112.


5Ibid., p. 116.

6Ibid., p. 115.

7Sartre's rejection of idealist marxism also implies a rejection of sectarianism. Ideological struggles are not reflected in tidy ways in human consciousness. In a period of ideological struggle, the contradictions within and between different ideological orientations themselves affect the person. The question is not who has true or false ideas, which is the epistemological approach which complements sectarianism, but how conflicting ideas, as an aspect of conflicting social relations, affect a person.

8Sartre, op. cit.

9Here Sartre differs from Mills. Mills wrote "Both marxism and liberalism bear the trademarks of a period of human history that is ending; both are marred by inadequate attention to leading facts and problems with which the world scene now presents us." The Marxists, op. cit., p. 12.
I take this phrase from Regis Debray's *Revolution in the Revolution*. Pelican (1968).

Mills argued that Marx was "... concerned with trends having the span of a historically specific epoch ... This principle of historical specificity is, first, a rule for social inquiry and reflection; it is, second, a method for criticizing polemically other theories and conceptions; and, third, it is a theory of the nature of social life and of history." (*The Marxists*, op. cit., p. 37.)
Vulgar marxism always splits the so-called "mature Marx" from the "young Marx". The former is equated with discovering economic laws, and the latter with philosophical radicalism. Having done this, it is easier to reify Marx's latter ideas into a positivistic marxism. Only recently has this vulgarizing of Marx been fundamentally challenged. For example, see Martin Nicolaus: The Unknown Marx. New Left Review, No. 48, Mar-Apr (1968); and Raya Dunayevskaya: Marx's Humanism Today, in Eric Fromm (ed.): Socialist Humanism. New York, Anchor (1966), pp. 66-83. Showing how awareness of the problem of ideology leads to a marxist critique of Stalinism, the latter author wrote: "The necessary ideology to cover up the exploitation of the laborer did not change its essence when it changed its form to the state capitalism that calls itself Communism." (Ibid., p. 73.)

Sartre's notion of "totalize" related to his use of the concept of dialectic. As Laing and Cooper said: "... Sartre uses dialectic to characterize both the relation between the knower and the known, and the nature of the known." (Reason and Violence, op. cit., p. 11.) Because a theorist's relation to "the known" affects the knowledge of the known "... there can be no final totalities in history." (Ibid.) This aspect of the dialectic makes it impossible to arrive at abstract truth. One "... may even pride oneself that one's own synthesis contains the overall truth - until one discovers that someone else has incorporated one's own synthesis into his synthesis, detotalized one's totalization, and so on, ad infinitum." (Ibid., p. 12.)

Sartre, op. cit., p. 84.

Ibid., p. 76.


Sartre, op. cit., p. 71. Abram Kardiner: The Psychological Frontiers of Society. New York, Columbia University Press (1945). While breaking from mechanistic psychological interpretations, this study remains psychologistic in its orientation. Neo-freudian explanations are no more historical than behavioristic ones and it is Kardiner's reliance on psychoanalytical concepts that limited his approach. For an integrated, rather than eclectic, approach to social science which takes psychological processes into account, see G.W. Mills and H. Gerth: Character and Social Structure. New York, Harcourt, Brace and World (1953).
Any theory which attempts to correspond to reality will end up reified. Epistemologies which stress the idea of "correspondence" all ignore the implications of the problem of ideology for theories of knowledge.
68 Ibid., p. 98.

69 Ibid., p. 99.
The ideology of scientism not only leads to an ignorance of the problem of ideology, it leads to false notions of logic and the role of language in science. In this section I will discuss problems of logic in the social sciences in a way that accounts for the problem of ideology directly. To accomplish this I will utilize the same method as in the first section and develop my points in dialogue with selected theorists.

Max Weber's work is most commonly associated with the value-free doctrine. His ideas about ethical neutrality, objectivity and logic in the cultural sciences, and science as a vocation are continually used to shore up that doctrine. This chapter will show that Weber's notion of value-freedom differed from the contemporary value-free dogma. Only a superficial treatment of his ideas can be used to justify the end-of-ideologist's position. Rather than Weber being the originator of the end-of-ideology, I will argue that he tended towards a pragmatic view of knowledge.

Dichotomies and Contradictions

Weber's ideas about logic were all based on dichotomies which emphasized the distinction between fact and value. For example, he emphasized "...the logical distinction between 'existential knowledge', i.e. knowledge of what 'is', and 'normative..."
knowledge', i.e. knowledge of what 'should be'. In one place, Weber spoke of "the logical disjunction between ... statements of logically deduced or empirically observed facts and ... statements of practical evaluations." Whether he replaced the term "existential" with "empirical" and grouped "logical" and empirical knowledge together, Weber's emphasis remained the distinction between normative or evaluative and non-normative knowledge.

Such a variety of terms for the same distinction can be confusing. But Weber's confusion, as we shall see, was more than terminological. In fact, terminological ambiguity usually reflects conceptual problems. Such conceptual problems were indicated by Weber's inclusion of "the value-oriented conduct" of people within the "empirical" side of his dichotomy. He spoke of "... the intrinsically simple demand that the investigator and teacher (keep) ... unconditionally separate the establishment of empirical facts (including the 'value-oriented' conduct of the empirical individual whom he is investigating) and his own practical evaluations ..." I shall argue that it is impossible to separate evaluation from a study of how values affect human behavior, and therefore that Weber's dichotomy is not tenable.

In addition to the above distinction, Weber insisted on the distinction between the "cultural" and the "historical" sciences. Both areas remained part of the "empirical" for Weber. As he stated: "We wish to understand on the one hand the relationships and the cultural significance of individual events in their contemporary manifestations and on the other the causes of their being historically so and not otherwise." This distinction shows how Weber's value-fact dichotomy related to a concept of causation and to a theory of social action. For Weber, humans act because of the meaning or significance of events for them. The social scientist must understand this process as part of his or her study. Doing this, however, does not explain
events. Explanation requires an historical study, or what Weber called a "causal regress".5

Weber made this same distinction in methodological terms. He wrote of the difference between a "heuristic instrument", which aids the scientist understand the cultural significance of an event, and a "... link in an historical situation as real effect and cause ..."6 For Weber

"... these are absolutely fundamental logical distinctions and they will always remain so. And however much these two absolutely distinct standpoints become intertwined in the practice of the student of culture - this always happens and is the source of the most interesting methodological problems - no one will ever succeed in understanding the logical character of history if he is unable to make this distinction in a clearcut manner."7

Weber claimed the absolute necessity of his logical distinctions for any historical understanding to occur. This claim must be evaluated. To do this, it is necessary to outline further distinctions and sub-distinctions in Weber's work. For instance, Weber distinguished "ontological knowledge", or "knowledge of certain 'facts' ... 'belonging' to the 'historical situation' and ascertainable on the basis of certain sources", from "nomological knowledge", or "knowledge of certain known empirical rules, particularly those relating to the ways in which human beings are prone to react under given situations".8 This distinction between rules and facts relates to the one between the study of cultural significance and the study of historical causes. The former searches for the rules of social action, and the latter looks for the causes of human events.

From this we can see that Weber's dichotomy between fact and value, i.e., between the empirical, existential and logical on the one hand and the normative and evaluative on the other, was fundamental to his view of social science. In his words:

"There is and always will be ... an unbridgeable distinction among (1) those
arguments which appeal to our capacity to become enthusiastic about and our feeling for concrete practical aims or cultural forms and values, (2) those arguments in which, once it is a question of the validity of ethical norms, the appeal is directed to our conscience, and finally (3) those arguments which appeal to our capacity and need for analytically ordering empirical reality in a manner which lays claim to validity as empirical truth. This proposition remains correct, despite, as we shall see, the fact that those highest "values" underlying the practical interest are and always will be decisively significant in determining the focus of attention of analytical activity ... in the sphere of the cultural sciences.

According to this view, though "values" are decisive in determining the focus of analysis, an "unbridgeable distinction" must remain between normative and empirical activity. Here we begin to see the contradictions that arise from Weber's dichotomies. Not only did Weber treat the study of value-oriented behavior as empirical knowledge, he admitted that values affect the analysis of such behavior. This makes it difficult, indeed, to maintain his split between normative and empirical knowledge.

A further distinction, one which draws all the preceding ones together, was made by Weber. He argued that meaning can never be deduced from facts.

"The fate of an epoch which has eaten of the tree of knowledge is that it must know that we cannot learn the meaning of the world from the results of its analysis, be it ever so perfect; it must rather be in a position to create this meaning itself. It must recognize that general views of life and the universe can never be the products of increasing empirical knowledge, and that the highest ideals, which move us most forcefully, are always formed only in the struggle with other ideals which are just as sacred to others as ours are to us."

Meaning, values, the normative or whatever you care to call it has a separate existence from logic, the existent or facts. If we use the term "ideology" (which Weber avoids consistently) to refer to the "struggle of ideals" with which Weber characterized values, we can see the split between science and ideology in Weber's thought. Underneath the various dichotomies and distinctions is the belief that science and ideology exist in separate realms.

We could reject Weber's theory of logic on the basis of our earlier discus-
sion. Doing this, however, would fail to critically evaluate the sophisticated system of thought that surrounded his dichotomies. To do this, we have to ask what, if any, logical value his distinctions have. What are the consequences of approaching social science with his orientation? It is also necessary to evaluate Weber's treatment of values to contrast it with my approach to values that accounts for the role of ideology in all knowledge.

Interpretative Understanding

To do this, we need to discuss Weber's general approach to social science. For example, what did he mean by "understanding"? How did his methodology reflect his general approach? What did he mean, in detail, by "empirical"?

Because of the dichotomy between the normative and the empirical, Weber stressed how understanding, not evaluation, was the task of social science. He wrote of how "... when the historian begins to 'evaluate', causal analysis almost always ceases - to the prejudice of the scientific results ... (and of how) his most important task ... is the task of 'understanding'." Elaborating on this view of social science Weber wrote:

"Every science of psychological and social phenomena is a science of human conduct (which includes all thought and attitudes). These sciences seek to 'understand' this conduct and by means of this understanding to 'explain' it 'interpretatively'." For Weber, explanation was rooted in interpretative understanding. This approach related to Weber's theory about the "value-oriented" nature of human conduct. As Weber stated "Interpretation can and does become first 'value-interpretation', i.e. it teaches us to 'understand' the intellectual, psychological and spiritual content ..." of human conduct. Weber also believed that this orientation could be used to understand the way a theorist's values affected his or her work.
He wrote of how "the 'value-analytical' interpretation... enables us to 'understand' (the) relations (of an intellectual work, his example being Marx's *Kapital*) to values." This interpretative understanding, however, did not mean that the social scientist makes value-judgments or evaluates human conduct. For Weber, "sober empirical analysis" always excluded "the insertion of personal evaluation." We shall see how Weber's attempt to undertake a value-free analysis of other's values was rooted in a false notion of logic.

Weber admitted that his approach presupposed "... the existence of an unconditionally valid type of knowledge in the social sciences, i.e. the analytical ordering of empirical social reality." We shall argue that this presupposition is not justifiable. Fundamental confusion underlies the attempt to understand human conduct in a neutral or value-free way.

Weber's understanding of laws and causation showed this basic confusion. I have already mentioned that Weber contrasted the study of the cultural significance of events with the causal analysis of them. For him it was the latter question that related to the development of laws. Thus he wrote that "The focus of attention on reality under the guidance of values which lend it significance and the selection and ordering of the phenomena which are thus affected in the light of their cultural significance is entirely different from the analysis of reality in terms of laws and general concepts." Weber believed that causes and laws derived from them can be distinguished, fundamentally, from heuristic instruments. He emphasized this point by writing that "... the meaning of history as a science of reality can only be that it treats particular elements of reality not merely as heuristic instruments but as the objects of knowledge, and particular causal connections not as premises of knowledge, but as real causal factors." Laws and values were unrelated in Weber's
scheme, yet values affect analysis. Laws were to be treated as representations of causal connections of objects, unaffected by any normative evaluation. Yet the selection and ordering of "objects" is related to the cultural significance of events, as interpreted by the individual scientist. Here we see the contradiction within Weber's work.

Weber expanded on his concept of causation. First, he asked "... whether the introduction of 'possibilities' into the 'causal enquiry' implies a renunciation of causal knowledge altogether ...?" Since interpretation is basic to analysis and includes a consideration of the role of values in human conduct, it is possible that a variety of causal links are valid in social science. Because of this, Weber was asking whether the concept of "cause" had any validity whatsoever. He concluded that "... the opposite of 'chance' is not ... 'necessity', but rather 'adequate' (cause) ..." In saying this, Weber was rejecting the notion of absolute cause.

Weber's concept of "understanding" was based upon an interdependence of value and fact. Yet he attempted to develop a neutral logic. His approach to causation also shows this contradiction. Because he rejected the notion of absolute cause, Weber realized that "laws" have a conceptual basis. He wrote that the scientist must bear "... in mind that (laws) rest on the abstraction of certain components of the real causal chain, on the conceptual generalization of the rest of the components in the form of judgments of objective possibility, and on the use of these to mould the event into a causal complex with a certain structure." Yet he continued that "It is not sufficient for us that in this case one agrees and remains aware that all our 'knowledge' is related to a categorically formed reality, and that, for example, 'causality' is a category of 'our' thought. Causality has a special character when it is the question of the 'adequacy' of causation." Weber based his ideas about logic on a rigid dichotomy between value and fact.
Yet he admitted that understanding human events involves a value interpretation. Nevertheless, he re-affirmed his initial dichotomy. The resulting dilemma was shown in his confused discussion of laws and cause. Laws were seen as representations of real causal connections among objects. But because of his own dilemma regarding values and facts, and the greater validity of probability over deterministic theory, Weber spoke of adequate cause. He acknowledged the conceptual character of laws and of the idea of causation, but then gave his notion of adequate causation a special status. He did not like the possibility that his idea of empiricism was rooted in a special thought process, i.e. an ideology, and tried in every way to give it a more special validity.

Weber's arbitrary separation of value and fact led him to a self-contradictory approach to logic. Though in one place he tried to give his idea of "adequate cause" a special (e.g. neutral) meaning, in another place he admitted the "... strictly relative nature of the distinction between 'adequate' and 'chance' causation which is determined by any of the possible goals of knowledge." But Weber did not critically analyze his own "goals of knowledge" and relate them to his ideas about knowledge. Had he done this he would have taken a different path in discussing facts and values.

Weber became trapped in a dilemma similar to that of Mannheim. He acknowledged that there were no absolute causes, hence no absolute laws; but still attempted to treat empiricism in an abstract manner. Over and over he emphasized that "The significance of a configuration of cultural phenomena and the basis of their significance cannot ... be derived and rendered intelligible by a system of analytical laws, however perfect it may be, since the significance of cultural events presupposes a value-orientation towards these events." Weber's dilemma was rooted in the fact
that analysis, in itself, cannot tell us about the significance of events. He consistently emphasized that

"The number and type of causes which have influenced any given event are always infinite and there is nothing in the things themselves (my emphasis) to set them apart as alone meriting. A chaos of 'existential judgments' about countless individual events would be the only result of a serious attempt to analyze reality 'without presuppositions'."²⁵

This statement shows how Weber's handling of the relations of values and facts led him to a confusing theory of logic. There are always presuppositions in knowledge; yet Weber wanted his own logical distinction between facts and values to be treated as fundamental. He continually avoided the implications of his dilemma. In one place he wrote of how "... the knowledge of causal laws is not the end of investigation but only a means."²⁶ This translation of causal ideas into ideas about ends and means simply obscured Weber's underlying contradiction. However, when he stated that "The inversion of 'cause and effect' propositions into 'means-ends' propositions is possible wherever the effect in question can be stated precisely"²⁷ he was approaching a pragmatic understanding of knowledge. Before I discuss this pragmatic tendency it is necessary to evaluate Weber's ideas about methodology.

Ideal Types and Ideology

Weber's concept of the "ideal-type" was central to his methodology. He spoke of "The distinction between simple class or generic concepts which merely summarize the common features of certain empirical phenomena and the quasi-generic ideal-type ..."²⁸ The function of the ideal-type was based upon this distinction. "Its function is the comparison with empirical reality in order to establish its divergencies or similarities, to describe them with the most unambiguously
intelligible concepts, and to understand and explain them causally.\textsuperscript{29} We have already seen how Weber failed to clarify what constituted "unambiguous and intelligible concepts". His own ambiguity about the relationship of values and facts made this clarification impossible. Still Weber did recognize the need to consider the presuppositions of any (e.g., an empirical) perspective. He discussed his ideal-type method in terms of this when he wrote: "Whoever accepts the proposition that the knowledge of historical reality can or should be a 'presuppositionless' copy of 'objective' facts, will deny the value of the ideal-type."\textsuperscript{30}

The basic problem with Weber's logic is that on the one hand he maintained a value-fact dichotomy as fundamental to all understanding, and on the other hand he acknowledged the pragmatic nature of analytical categories. Furthermore, he recognized the influence values had on these categories. Like Mannheim, he admitted that presuppositions enter into these categories; but unlike Mannheim, he did not relate this point to the problem that ideology presents for all forms of knowledge. As we continue, we shall see how his 'ideal-type' concept covered over his neglect of this problem.

Weber considered his ideal-type method to be heuristic.\textsuperscript{31} He wrote that

"The ideal-typical concept will help to develop our skill in imputation in research; it is no 'hypothesis' but it offers guidance to the construction of hypotheses. It is not a description of reality but it aims to give unambiguous means of expression to such a description."\textsuperscript{32}

Here the term "description" entered Weber's vocabulary. The use of this term was an attempt to maintain the ambiguous dichotomy between fact and value. If the ideal-type is not description, yet is the basis of description, what is description? "Description" becomes an abstraction unless a dialectic relation between value and fact, ideological model and inquiry is acknowledged. To do this, we must reject the scientific belief that language and thought can be value-free. In not em-
phasizing the centrality of language to both human conduct and human knowledge, Weber tended to reify his own notions of reality. His abstract notion of "description" was a result of his failure to deal with the problem of ideology that was implied by his own confusion about logic.

Weber wrote of how an ideal-type could be a representation of ideas existing within an epoch of history. He wrote that "An ideal type of certain situations, which can be abstracted from certain characteristic social phenomena of an epoch, might - and this is indeed quite often the case - have also been present in the minds of the persons living in that epoch as an ideal to be striven for in practical life or as a maxim for the regulation of certain social relationships." Here Weber recognized the link between ideologies and science, though he did not develop the point. Recall Marx and Engels' argument that ideas stem from practice; and theory, through abstraction, orders and refines them. From this they concluded that when theory is seen as the source of ideas, that is, if ideas are treated as abstract entities, then ideology is being created to further oppress people in their practical lives. Weber was approaching this same awareness, but his abstract notion of knowledge (which is different from a recognition of how knowledge relies on abstraction and imagination) kept him from carrying this thought through to a rejection of his contradictory and formal position on values and facts.

Weber's idea of "ideal-type" methodology is both a clarification of and a symptom of confusion about the problem of logic. The clarification resulted from his awareness of the heuristic nature of methodology. He made this awareness explicit when he wrote that "... methodology can only bring us reflective understanding of the means which have demonstrated their value in practice by raising them to the level of explicit consciousness; it is no more the pre-condition of fruitful
intellectual work than the knowledge of anatomy is the pre-condition for 'correct' walking.\textsuperscript{35} Here we see a slight similarity between Sartre and Weber. Both theorists saw methodological knowledge as being \textit{ex post facto} or reflective. Sartre's idea of praxis and Weber's concept of "ideal-type" hence overlap, though they certainly are not identical. C. W. Mills, who always emphasized the interdependency of problem, method and theory, and criticized abstract methodology, was likely influenced by this aspect in Weber's thought.\textsuperscript{36}

Emphasizing the need for a pragmatic epistemology, Weber wrote

"Only by laying bare and solving substantive problems can sciences be established and their methods developed. On the other hand, purely epistemological and methodological reflections have never played the crucial role in such developments."\textsuperscript{37}

When Weber wrote most of his methodological papers, he was immersed in his comparative studies of religion, and these ideas were probably of a pragmatic value. Others, however, have taken Weber's ideas, much as some took Marx and Engels' ideas, and treated them as "purely epistemological and methodological". Later, I will show how this process helped with the development of the value-free doctrine, as a dogma.

Weber's confusion, rooted in his contradictory handling of fact and value, was what allowed the abstract concept of "model" to develop in contemporary science. This concept, widespread in a time of over-specialization and abstract formalism (\textit{e.g.}, general systems theory), definitely has roots in a particular interpretation of Weber's work. As Hughes wrote:

"Such scholars as Joseph Schumpeter, Weber's greatest successor in the role of an economic sociologist, have delineated the concept (Weber's ideal-type, J.H.) more precisely under the new term of 'model'. And on this basis new 'models' have become an enormously popular stock-in-trade among social scientists."\textsuperscript{38}

Schumpeter's errors, with which we have dealt, were the result of taking on the same confusion as Weber had regarding the relations of value and fact.
Schumpeter may have refined this confusion into the idea of "model", but we have seen how superficial the results of this precision were. Much as the end-of-ideology proved to be a "mood", "models" are proving to be a formalistic and abstract attempt to avoid the problems of ideology, logic and language that are basic to science.39

The Value-Free Doctrine and the University

Weber's classic statement of his version of the value-free doctrine was given in his paper Science as a Vocation.40 In it the relationship between approaches to education and approaches to the relations of fact and value in Weber's work became clear. We raised this matter in Chapter Five by discussing the nature of scientistic education in the natural sciences. An evaluation of this relationship shows why we must understand how the structure and function of education, and of science, affects whether and how the problem of ideology is studied, and the form that theories of logic take.

In his paper Weber wrote "One can only demand of the teacher that he have the intellectual integrity to see that it is one thing to state facts, to determine mathematical or logical relations or the internal structure of cultural values, while it is another thing to answer questions of the value of culture and its individual contents and the question of how one should act in the cultural community and in political associations."41 Here we see how Weber's dichotomy between the normative and the empirical pervaded his "philosophy" of education. It is important to note that this separation of the so-called normative from the factual in the classroom related to the preference for a certain type of classroom. About the classroom Weber wrote
"In the lecture-room we stand opposite our audience, and it has to remain silent. I deem it irresponsible to exploit the circumstance that for the sake of their career the students have to attend a teacher's course while there is nobody present to oppose him with criticism."\[12]

Here we see how Weber's value-free doctrine related to a certain type of authority relationship in the classroom. If students are "condemned to silence", as Weber assumed and believed they must be, then there is a pragmatic argument for distinguishing between personal evaluation and the presentation of facts. If the classroom Weber described is both inevitable and justifiable, I cannot disagree that "... it is somewhat convenient to demonstrate one's courage in taking a stand where the audience and possible opponents are condemned to silence."\[43]

Weber had no ambivalence about the way authority should be used in the classroom. "In view of the fact that certain value-questions which are of decisive political significance are permanently banned from university discussion, it seems to me to be only in accord with the dignity of a representative of science to be silent as well about such value-problems as he is allowed to treat."\[44] The teacher, not only the student, is condemned to silence about value-questions. But Weber was not consistent on this matter. For example, Weber emphasized the need to question conventional values, and this has implications for one's view of education.

"What we must vigorously oppose is the view that one may be 'scientifically' contented with the conventional self-evidentness of very widely accepted value-judgments. The specific function of science, it seems to me, is just the opposite: namely to ask questions about these things which convention makes self-evident."\[45]

And Weber cannot have it both ways. He cannot state that "Fundamental doubt is the father of all knowledge"\[46] and also believe that the lecturer and students should not deal with value questions. It appears that Weber was unable to doubt his own assumptions about the classroom.

It is relevant to ask how this contradiction developed and how it affected
Weber's approach to logic. An evaluation of his image of the university can help us clarify this question. Weber acknowledged that one's view of the university will affect how one relates, or tries not to relate, values to teaching. According to him, this "... in the last analysis (must) be decided with reference to those tasks, which the individual, according to his own value-system, assigns to the universities."\(^{47}\)

For Weber, "... 'intellectual integrity' is the only specific virtue which (the university) should seek to inculcate."\(^{48}\) In the context of Weber's statement about doubting conventional values and his emphasis on interpreting the values implied in human conduct, the association of "intellectual integrity" with totally value-free teaching seems absurd. Intellectual integrity, for Weber, implied the discipline to not pass value judgements; yet knowledge came from doubt about conventional ideas and understanding of the role of values in conduct. This suggests that Weber was caught between his role as a teacher in a traditional university and his intellectual curiosity.

Weber rejected the idea of democratic relations within the classroom. He stated that

"Democracy should be used only where it is in place. Scientific training, as we are held to practice it in accordance with the tradition of German universities, is the affair of an intellectual aristocracy, and we should not hide this from ourselves."\(^{49}\)

As in so many other topics, Weber's ambiguity led him to hold a self-contradictory position. On the one hand, he accepted the traditional, aristocratic university. On the other hand, he recognized how capitalist industrialization was affecting the university. Speaking about the large institutes growing in German universities in his time, he wrote that there exists "... the same condition that is found wherever capitalist enterprise comes in operation: the 'separation' of the worker from his
means of production." Weber seemed disturbed by this and implied that the quality of learning would be detrimentally affected. Yet, a page later, he described mediocre teaching in the university as natural. "The predominance of mediocrity is rather due to the laws of human cooperation, especially of the cooperation of several bodies, and in this case, cooperation of the faculties who recommend and of the ministries of education." Rather than undertaking a structural analysis of the university and situating the social and educational relations in the classroom within this, Weber's ambiguity led him to mystify the problems of education into "laws of human cooperation".

Weber desired the traditional university; he saw capitalism creating a division of labour which took control out of the hands of the teacher; yet, he accepted as natural the bureaucratic relationships within these divided institutions. He was clearly confused about the kind of social relationships which are best for teaching and learning. He was unable to translate his insights about doubting conventions into an appropriate philosophy of education. His awareness of the conditions in in education was idealistic, not strategic. He adhered to the value-free doctrine in education because of his uncritical acceptance of the authority relations in the traditional university as it was being incorporated by capitalism.

For Weber values were basically an individual matter, and this related to his confusion about education. As he said: "To apply the results of ... analysis in the making of a decision ... is not a task which science can undertake; it is rather the task of the acting, willing person; he weighs and chooses from among the values involved according to his conscience and his personal view of the world." Here Weber again relied on the dichotomy between the normative and the empirical. But we see that in the final analysis, the normative is rooted in the "willing
person”; in his or her personal view of the world. Values are personal, while facts are social and historical. Yet, according to Weber, people act in terms of the meaning of events, which is affected by values. Weber's personalistic view of values and his interpretative sociology once again clash.

If values are solely personal, they are not open to scientific validation. And, in several places, Weber as much as stated this. In one place, he wrote "... one cannot - because it is a value judgment - refute this point of view." In another place, he wrote

"Only on the assumption of belief in the validity of values is the attempt to espouse value-judgments meaningful. However, to judge the validity of such values is a matter of faith. It may perhaps be a task for the speculative interpretation of life and the universe in quest of their meaning. But it certainly does not fall within the province of an empirical science in the sense in which it is to be practised here."54

Weber's rigid separation of values from facts led him to see only a "hairline"55 between faith and science. For him values had an almost mystical character. For example, declaring his despair about the rationalization of Western culture, Weber wrote "Precisely the ultimate and most sublime values have retreated from public life either into the transcendental realm of the mystic or into the brotherliness of direct and personal human relations."56 A little farther, speaking about the intellectual person becoming religious, he continued

"... such an intellectual sacrifice in favor of an unconditional religious devotion is ethically quite a different matter than the evasion of the plain duty of intellectual integrity, which sets in if one lacks the courage to clarify one's own ultimate standpoint and rather facilitates this duty by feeble relative judgments. In my eyes, such religious return stands higher than the academic prophecy, which does not clearly realize that in the lecture-rooms of the university no other virtue holds but plain intellectual integrity."57

Weber was trapped by the very intellectualization with which he characterized Western culture. Searching for "one's own ultimate standpoint" is rooted in a false
understanding of consciousness, language and methodology. No person has an ultimate standpoint or ultimate assumptions. "Assumptions" are notions that we create to engage and criticize our own and other's ideas. They are pragmatic. We make other people's behavior and experience relevant and meaningful to our own by using language in a comparative way. This does not, in any way, mean that we possess some ultimate position or assumption. Chapter Nineteen on language and logic will attempt to clarify this matter.

Weber's obsession with locating ultimates related to his splitting of values from facts. His highly individualized view of values and evaluation underlay his own need to split the normative off from the empirical. Yet, intellectually, he also saw the inadequacy of this. For example, he wrote of how "The transcendental presupposition of every cultural science lies not in our finding a certain culture or any 'culture' in general to be valuable but rather in the fact that we are cultural beings, endowed with the capacity and the will to take a deliberate attitude towards the world and to lend it significance."58 This admission that our ability to know about culture is rooted in our cultural makeup invalidates an individualistic approach to human values.

Weber's concern with ultimates or "transcendental presuppositions" and his belief that the individual "willing person" lends significance to the world kept him from seeing how the problems of ideology and logic were related. An intellectual reductionism is apparent in his work and it is this that led Weber into so many dead-ends. Yet, he was aware of the importance of us being cultural beings to be able to understand culture. Had he based his analysis of values and facts on this awareness he might have avoided his own confusion.

What leads certain cultural values to be emphasized over others? Weber
refused to look at this question; in fact, he was unable to consider it because of his value-free orientation to science. This question, the kind that follows from an adequate handling of the problem of ideology, forces us to consider how our own life style and our place in the culture leads us to emphasize certain values over others. It forces us to study how and why these values affect our selection and treatment of a certain class of problems. Weber did not deal with these questions because his beginning point, what he accepted a priori, excluded their consideration.

Social Policy and Ideology

When Weber discussed "social policy", he changed his orientation to the study of values. He acknowledged that conflict existed between different value systems, but did not see how ideological struggle in the society related to this conflict.

In his words:

"Normative standards of value can and must be the objects of dispute in a discussion of a problem of social policy because the problem lies in the domain of general cultural values. And the conflict occurs not merely, as we are too easily inclined to believe today, between "class interests" but between general views on life and the universe as well."  

When discussing social policy, Weber consistently undermined his more general intellectual position. Though values were seen as personal points of view, not open to validation by analysis, what he called "ends" were open to critical analysis. This distinction of values and ends, one we have refused to make, is the way Weber applied his general theory to practical matters without dealing with the problem of ideology or revamping his view of logic accordingly.

Ends, for Weber, could be evaluated technically. His position probably influenced Schumpeter who also treated ends in this way. Let us recall that for Weber "Causal analysis provides absolutely no value judgment and a value judgment is
absolutely not a causal explanation." In view of this total separation of value judgments from causal analyses, consider Weber's following statement about the relation of ends and analysis. "Strictly and exclusively empirical analysis can provide a solution only where it is a question of a means adequate to the realization of an absolutely unambiguous given end." To say that value judgments or evaluations of analyses can be avoided when ends are "absolutely unambiguous" and "given" is to say nothing. It side-steps the basic issue of why some ends become dominant in institutions and become the emphasis for a particular approach to analysis. No "ends" are given. A social arrangement of science and politics always underlies the dominance of one end over another.

Weber's discussion of social policy, in particular his shift from a discussion of facts and values to means and ends, undermined his own attempt to conceptualize a neutral logic. This conflict between the theoretical, value-free Weber and the practical, policy-concerned Weber was shown in the following statement:

"... the scientific treatment of value-judgments may not only understand and emphatically emphasize the desired ends and the ideals which underlie them; it can also 'judge' them critically. This criticism can of course have only a dialectical character, i.e. it can be no more than a formal logical judgment of historically given value-judgments and ideas, a testing of the ideals according to the postulate of the internal consistency of the desired end." Treating ends as being "historically given" ignores the reasons why certain values and ends (e.g., monetary) come to dominant a period. Weber's "causal, historical" analysis could not deal with this question because he did not take the way dominant values affect causal analysis, nor the ideological function of this relationship, into account in this theory of logic.

This so-called technical approach to ends and values is common among those who dichotomize science and ideology. This approach is part of the ideological
foundation of the liberal, academic approach to social science. Weber's commitment to this ideology was shown by his statement that

"The use of the term 'progress' is legitimate in our disciplines when it refers to 'technical' problems, i.e. to the 'means' of attaining an unambiguously given end. It can never elevate itself into the sphere of 'ultimate' evaluations."64

Again Weber talked of "unambiguously given" ends, which avoids the problem of why some ends are dominant and what the effects of such dominance are for science. He again talked of "ultimates" and, in the process, abstracted these sorts of questions into the realm of the transcendental, away from critical analysis. The fact that his concepts were abstract does not change the ideological function of a neutral logic. In fact, as I argued in Chapter Ten, such abstraction is the form that liberal ideology takes.

Weber consistently avoided the question of why some values dominate. His abstract treatment of ends, and his emphasis on the ends that are given by "history" - which is also abstract and neglects the way a particular power and authority system in a society leads to certain values being emphasized - actually functioned to reinforce the dominant ends. It was in this sense that Weber's approach to values was in the interests of the established order. To abstract value judgments into the realm of the transcendental and the personal, and to deal only technically with the so-called given ends, does not constitute an evaluation of the way certain ends and means pervade an approach to science. Weber's approach typified what both Mills and Marcuse criticized when they argued that abstract empiricism has authoritarian, if not totalitarian, overtones. Because it helps maintain an ignorance of the reasons why certain facts, ends and related social relationships predominate, Weber's approach was inherently conservative.

Weber's extremism, i.e., his treating of values as personal, his treating of
analysis as social, and his avoidance of the problem of ideology by talking of ends as given, was shown by the following statement.

"Science today is a 'vocation' organized in special disciplines in the service of self-clarification and knowledge of interrelated facts. It is not the gift of grace of seers and prophets dispensing sacred values and revelations, nor does it partake of the contemplation of sages and philosophers about the meaning of the universe. This, to be sure, is the inescapable condition of our historical situation. We cannot evade it so long as we remain true to ourselves."65

Weber did not point out that the meaning we ascribe to the universe is related to the ideological foundations of a theorist's orientation to science. The organization of "special disciplines" and the "interrelated facts" that are emphasized by them are both an expression and a result of these foundations. The very notion of science as a vocation is rooted in the professionalization of science as part of capitalist industrialization.

In the Foreword to the Methodology of the Social Sciences, Shils wrote "... (Weber's) powerful mind, which strove restlessly for clarity at levels where his contemporaries were satisfied with ambiguities and cliches, drove through to the fundamental problems of the relationship between general sociological concepts and propositions on the one hand, and concrete historical reality on the other.66 In view of our analysis - the exposure of Weber's contradictory handling of value and fact - we cannot agree that he reached 'fundamental problems'. As Mannheim strove for clarity at new levels in his treatment of the sociology of knowledge and ideology, Weber strove for clarity regarding methodology. But his inability to deal critically with his own categories kept him from reaching the level of insight that Mannheim reached. Weber could not even begin to discuss the problem of ideology or problems of logic implied by it while he maintained his dichotomy between values and facts.
Weber depended on a formal logic to cover over his confusion.

"All scientific work presupposes that the rules of logic and method are valid; these are the general foundations of our orientation in the world; and, at least for our special question, these presuppositions are the least problematic aspect of science. Science further presupposes that what is yielded by scientific work is important in the sense that it is 'worth being known'. In this, obviously, are contained all our problems. For this presupposition cannot be proved by scientific means. It can only be interpreted with reference to its ultimate meaning, which we must reject or accept according to our ultimate position towards life." 67

When Weber stated that "presuppositions are the least problematic aspect of science" one wonders why he took so much time to prove the validity of the value-free doctrine and develop a theory of logic from it. In doing this, Weber was trying to make his own presuppositions explicit. But he did not treat his presuppositions critically or historically for that would involve a consideration of the problem of ideology. It was his failure to do this that led him into the realm of the transcendental.

His intellectual reductionism, i.e., his obsession with intellectual clarification, made it impossible for him to tackle the problem of ideology. Searching for one's "ultimate position" is a retreat from this problem. And Weber did retreat. Rather than analyzing how particular presuppositions function for a particular kind of science, he treated them as a personal matter. The way Weber's value-free ideas have functioned to shore up the end-of-ideology ideology, however, are quite historical.

Weber's intellectual individualism is typical of all those who separate their presuppositions or values off from their social roles (e.g., scientist, teacher). There is some truth in saying that analysis will not give us answers to value questions. Knowledge, which is conceptualized and communicated in abstracted language, will certainly not give us any clues about practical matters. But knowledge, seen as praxis, can accomplish this because it explicitly stems from practice.
In the final analysis, it was Weber's academic view of knowledge that underlay his errors.

Doctrine Becomes Dogma

An academic view of knowledge is very useful for those who use knowledge in the guise of abstracted objectivity to further the political decisions of the status quo. How much can we associate Weber with this modern trend? Is he the father of the value-free dogma or were his ideas reified and used as rationalizations for this dogma? Weber certainly tended towards the abstract empiricism that underlies the end-of-ideology ideology. His separation of empiricism from the normative is the foundation on which the more vulgar rationalizations for this scientism rest. His privatist treatment of values also served as a rationalization for academics who do research and teaching that inherently stresses certain (e.g., capitalist) values. The value-free doctrine helps an academic believe that his or her values are a personal matter. Criticism of the consequences (real values) of one's life-work is rare for those who separate the public and the private self.

When Weber wrote that "The social sciences, which are strictly empirical sciences, are the least fitted to presume to save the individual the difficulty of making a choice, and they should therefore not create the impression that they can do so," we see, in a nutshell, both his sophistication and the reason why his ideas were and are useful to the vulgar end-of-ideologists. Knowledge cannot save us from choice, and those who search for absolutes or "ultimates" in science are potentially no less authoritarian in their dependency than are religious bigots. But neither is choice something separated from knowledge. Such a separation is rooted in a false notion of knowing and of being. We can choose the class of problems with which we
will work in terms of the probable consequences of that work which we value. This approach, not Weber's, is how to conceptualize the relationship between choice and knowledge.

From this stance, Weber's ideas become as simplistic as those of Ries, which I discussed in Chapter Three. But it is unfair to reduce Weber's thought to such ignorant assumptions. For example, while Ries used the value-free doctrine to make Marx's sociology appear scientific, Weber acknowledged the value of "... the science of social economics since Marx." Furthermore, there are statements by Weber that show how today's value-free doctrine and the end-of-ideologists distort Weber's value-fact dichotomy. They took it out of the context within which it was developed, and thus absolutized the doctrine. It became crude ideology - solely a rationalization for the scientism of the established order. We can be critical of Weber for not treating his own presuppositions sociologically and historically; but we still cannot reduce his position to today's dogma of value-freedom.

We may disagree with Weber's individualized view of values and evaluation - rooted in his ignorance of the problem of ideology - but we have to admit that he treated "evaluation" as a problem. For example he wrote that "We are far removed, then, from the view that the demand for the exclusion of value-judgments in empirical analysis implies that discussions of evaluation are sterile or meaningless." In another place, he wrote that "An attitude of moral indifference has no connection with scientific 'objectivity'." Both these statements show that Weber did not equate value-freedom or objectivity with being value-less or indifferent. To the extent that indifference about the consequences of one's academic research and teaching characterizes social
science today - and I would argue it is now typical - Weber's value-free doctrine has been replaced with a psychopathic version.

Weber's attitude towards the university and teaching underlay his rigid separation of problems of value from those of fact. Weber's own statements substantiate this interpretation. Talking about the possibility of dialogue in the Journal Archiv, of which he was an editor, he wrote "... there are psychological limits everywhere and especially in Germany to the possibility of coming together freely with one's political opponents in a neutral forum, be it social or intellectual." Value-freedom in analysis may therefore have been more an attempt to get at political differences explicitly, i.e. intellectually, than to deny the political differences. And such may have been justified, though a little naive. It is one thing to arbitrarily emphasize the separation of value from fact to facilitate a more intellectually based debate. It is quite another thing to believe that values are not inherent, as ideology, in the analytical arguments. Weber seemed to project his pragmatically understood categories onto the world, and, in doing such, he became totally unaware of the ideological struggles - both political conflicts and the related struggle over the relevance of certain classes of problems - around him. He was not even able to see how his own value-free doctrine was an aspect of this struggle.

A similar interpretation was presented by Gouldner. He argued that Weber's "... promotion of the value-free doctrine may, then, be seen not so much as an effort to moralize as to depoliticize the University and to remove it from the political struggle." But such an attempt was naive for the structure and function of teaching and learning is inherently political, and only appears to be neutral in a time of ideological homogeneity. Once an ideological system begins
to break down - when conflicting values begin to develop - the politics of
education becomes more clear. This is what is happening now (1969) in North
America. The conflict that underlies and results from this is partly respon-
sible for opening up the kinds of questions with which I am dealing.

Webert's aristocratic university and his value-free doctrine may have
facilitated the production of grand theory. It did not help to break down the
division of mental and physical labour, and to make theory relevant to the prac-
tice of the mass of people. Nor did it lead to an intellectual handling of the
problem of the relations of ideology and science. Instead, the value-free doc-
trine developed within the ivory towers of Germany until the intellectuals (some,
most went on being value-free under Hitler) were themselves forced to flee the
universities.

Webert's value-free doctrine must be analysed by its effects, not accord-
ing to abstract principles. Its effect was not to make academics more conscious
of the politics of education. It did not educate students and teachers to be
articulate about the problem of ideology. Instead, it reinforced a fragile facade
of neutrality in the universities which proved to be passive in the face of fascism.
As Max Lerner wrote "We must not forget that a Germany which built a lofty and im-
posing house for the intellect was also capable of what was perhaps the greatest
collective crime in human history."76

Academic and Pragmatic Logic in Weber

What can we conclude about the worth of Webert's methodological ideas?
Is there any value whatsoever in his value-free doctrine? The best way to approach
these questions is by tracing through the two strains, one academic and the other
pragmatic, in his logic. Weber's academic strain was dominant as our above analysis of his dichotomies, contradictions and intellectual reductionism showed. A discussion of his approach to the question of "meaning" will exemplify his academic approach to logic for the purposes of our comparison.

For Weber, the empirical sciences cannot settle questions of "meaning". In saying this, Weber was not implying that "meaning" is a practical matter. For him, "meaning" was a philosophical matter, that is, something to be settled through philosophical reflection. As he said "Philosophical disciplines can go further and lay bare the 'meaning' of evaluations, i.e., their ultimate meaningful structure and their meaningful consequences, in other words, they can indicate their 'place' within the totality of all the possible 'ultimate' evaluations and delimit their spheres of meaningful validity."

Once again we see Weber's concern with "ultimates". Throughout his discussions of logic, he wrote of ultimate meanings rooted in ultimate problems. This academic treatment of "meaning" led Weber to postulate ultimates which were solely private matters of contemplation. Weber's approach to logic, however, was not one-dimensional. In several places, he expressed a pragmatic orientation to logic; that is, looking to practical matters, not philosophical reflection, as the way to clarify the meaning of knowledge. I already quoted Weber's statement that "... the meaning of history as a science of reality can only be that it treats particular elements of reality not merely as heuristic instruments but as the objects of knowledge, and particular causal connections not as premises of knowledge but as real causal factors." Other statements show that Weber recognized that the "particular elements of reality" and our knowledge of them was going through continual changes. He wrote of
"... the meaninglessness of the idea which prevails occasionally even among historians, namely, that the goal of the cultural sciences, however far it may be from realization, is to construct a closed system of concepts, in which reality is synthesized in some sort of permanently and universally valid classification and from which it can again be deduced. The stream of immeasurable events flows unendingly towards eternity. The cultural problems which move men form themselves ever anew and in different colors, and the boundaries of that area in the infinite stream of concrete events which acquires meaning and significance for us, i.e., which becomes an "historical individual", are constantly subject to change. The intellectual contexts from which it is viewed and scientifically analyzed shift."80

Here, in contrast to Weber's dominant, academic approach to logic, "meaning" was related to the significance of events, and not to "ultimates" derived from philosophical reflection.

Other statements by Weber reinforce this interpretation. For example, "The history of the social sciences is and remains a continuous process passing from the attempt to order reality analytically through the construction of concepts - the dissolution of the analytical constructs so constructed through the expansion and shift of the scientific horizon - and the reformulation anew of concepts on the foundations thus transformed."81 This statement even suggests that Weber was approaching a notion of "praxis" in his studies. When he stated that

"... concept-construction depends on the setting of the problem, and the latter varies with the content of culture itself. The relationship between concept and reality in the cultural sciences involves the transitoriness of all such syntheses."82

he was approaching the dialectic idea of knowledge around which Sartre developed his idea of "praxis".83 It is important to note that once we acknowledge that the syntheses that constitute knowledge are rooted in a changing culture and changing concepts it is absurd to search for ultimate meanings.

The pragmatic strain in Weber's thought was shown when he wrote, about historical research, that "... the concepts are not ends but are means to the end
of understanding phenomena which are significant from concrete individual viewpoints."\textsuperscript{64} This emphasis on the significance of phenomena can be found throughout Weber's writings. In another place he stated that

"...social science in our sense is concerned with practical \textit{significance}. This significance however can very often be brought unambiguously to mind only by relating the empirical data to an ideal limiting case."\textsuperscript{85}

For Weber, "concepts", particularly "ideal-types", have a pragmatic function in inquiry. Saying this, however, does not tell us specifically how he understood the function of concepts in inquiry. To outline this it is necessary to discuss how Weber understood the process of "abstraction" and the role of "presuppositions" in science.

Weber wrote of how "... the attribution of effects to causes takes place through a process of thought which includes a series of abstractions."\textsuperscript{86} "Causes" were not mystified by Weber. As he said "Even the first step towards an historical judgment is thus ... a process of abstraction."\textsuperscript{87} Weber recognized that "... 'theory' is involved in the 'fact' ..."\textsuperscript{88} Such an awareness of the role of abstract thought in science undercuts the scientistic view of discovery and interpretation. As Weber stated "... the formulation of propositions about historical causal connections not only makes use of both types of abstraction, namely, isolation and generalization; it shows also that the simplest historical judgment concerning the historical,'significance' of a 'concrete fact' is far removed from being a simple registration of something 'found' in an already finished form."\textsuperscript{89} A judgment is always tied to a set of presuppositions. Such presuppositions are necessary to guide inquiry; to determine the "practical significance" of certain events. "A chaos of 'existential judgments' about countless individual events would ... result (from analysis) 'without presuppositions.'\textsuperscript{90}
An awareness of the role of presuppositions in inquiry invalidates the notion of strict determinism. The claim of strict determinism "... fails to observe that in order to be able to reach this result even in the simplest case, the totality of the existing historical reality including every one of its causal relationships must be assumed as 'given' and presupposed as known."91

If presuppositions are involved in inquiry then the belief in the dualism between the "subjective" and the "objective" is untenable. In a way similar to Sartre Weber wrote "The objective validity of all empirical knowledge rests exclusively upon the ordering of the given reality according to categories which are subjective in a specific sense, namely, in that they present the presuppositions of our knowledge and are based on the presupposition of the value of those truths which empirical knowledge alone is able to give us."92 Saying this constitutes a rejection of the idea of objective, value-free or non-subjective knowledge. And Weber acknowledged this. "It is not the determination of the historical 'causes' for a given 'object' to be explained which is 'subjective' ... - rather is it the delimitation of the historical 'object', of the 'individual' itself, for in this the relevant values are decisive and the conception of the values is that which is subject to historical change."93

All these statements indicate the pragmatic strain in Weber's thought. His awareness of the role of abstraction and the related role of presuppositions led him to a view of knowledge quite different than that which we have called scientistic. Others have recognized this aspect of Weber. Gerth and Mills wrote that Weber's "... conceptual nominalism and his pragmatic outlook are opposed to all reification of 'unanalyzed' processes."94

Because of this orientation, Weber recognized the uncertainty of all
science, and that ultimately the purpose one saw for science would affect the nature of science. "The question as to how far, for example, contemporary 'abstract theory' should be further elaborated, is ultimately also a question of the strategy of science, which must, however concern itself with other problems as well."95 Depending on one's "strategy for science", as Weber put it, one will have different methods of evaluating phenomena. Weber made this same point when he wrote "... without the investigator's evaluative ideas, there would be no principle of selection of subject-matter and no meaningful knowledge of the concrete reality."96 The primary role of these evaluative ideas in science invalidates the simplistic positivistic notion of objectivity. Weber also recognized this. "The 'objectivity' of the social sciences depends ... on the fact that the empirical data are always related to those evaluative ideas which alone make them worth knowing and the significance of the empirical data is derived from these evaluative ideas."97

With this awareness of the role of presuppositions and evaluative ideas in knowledge, we might have expected Weber to understand how ideology and logic interrelate. In one place Weber seemed to indicate such an understanding. "It is of course easily overlooked that however important the significance even of the purely logically persuasive force of ideas ... nonetheless empirical-historical events occurring in men's minds must be understood as primarily psychologically and not logically conditioned."98 But this point was never thought through by Weber. Instead of seeing logic in a pragmatic way and admitting that it can never be value-free, Weber stated "The categories of logic, which in its present state of development is a specialized discipline like any other, require, if they are to be utilized with assurance, the same daily familiarity as those of any other discipline."99 This treatment of "logic" as a specialized discipline is what
makes it difficult to see how the "categories" of any approach to logic relate to an ideological orientation.

Weber was unwilling and/or unable to think through his hypothesis about presuppositions and evaluative ideas. In many places he admitted that logic was not value-free, but he did not make the implications of this explicit. He did admit that a struggle was involved between different evaluative ideas. As he said: "Every meaningful value-judgment about someone else's aspirations must be a criticism from the standpoint of one's own Weltanschauung; it must be a struggle against another's ideals from the standpoint of one's own." 100 In one place he admitted that scientific disciplines reflect political struggles when he referred to anthropology as the discipline where "... the political and commercial struggles of nations for world dominance are being fought with increasing acuteness." 101 But he never analyzed the implications of these points and discussed the relations of ideology and logic. There are statements made by Weber which could have been developed into such an analysis. For example, he wrote that

"The quality of an event as a 'social-economic' event is not something which it possesses 'objectively'. It is rather conditioned by the orientation of our cognitive interest, as it arises from the specific cultural significance which we attribute to the particular event in a given case." 102

Here Weber avoided the term "ideology", but the phrase "the orientation of our cognitive interest" has a definite similarity with the notion of ideology.

What can we conclude about Weber's approach to logic? It is more than ambiguous - it is confusing. Weber never interrelated his different ways of analyzing the relation of value and fact and hence ended up with an array of self-contradictory positions. Though he did not accept a value-free notion of
logic, his academic approach to "meaning" can easily lead to such a theory. Or, conversely, though his assessment of the role of presuppositions and "evaluative ideas" in science leads to a consideration of the problem of ideology, because of his academic orientation, Weber could not undertake such an analysis.

Weber presented a hypothesis that could begin to explain his own confusion. He stated that

"All research in the cultural sciences in an age of specialization, once it is oriented towards a given subject matter through particular settings of problems and has established its methodological principles, will consider the analysis of the data as an end in itself. It will discontinue assessing the value of the individual facts in terms of their relationships to ultimate value-ideas. Indeed, it will lose its awareness of its ultimate rootedness in the value-ideas in general. And it is well that should be so. But there comes a moment when the atmosphere changes. The significance of the unreflectively utilized viewpoints becomes uncertain and the road is lost in the twilight."103

Though Weber saw the relevance of analyzing "ultimate value-ideas", the academic ideology, which reifies the historically rooted specialization of research and teaching, was too pervasive in his orientation for him to undertake such a study. Weber lacked the skills, rooted in the sociology of knowledge, for undertaking the necessary self-criticism to expose the specific interrelations of ideology and logic in his own work and time.

Weber wrote of "... the inevitable monistic tendency of every type of thought which is not self-critical ..."104 It is ironic, but understandable, that the one-dimensional value-free doctrine or end-of-ideology ideology relies so heavily on Weber's work.

Footnotes

essays by Weber written between 1903 and 1917. Rather than examining them separately, I have taken Weber's ideas on logic as a whole. This made the task of this chapter more difficult, in fact, the most difficult of the thesis, since Weber has many contradictions within and between his essays. An analysis of his work, as a whole, however, was necessary to accomplish a thorough critique of the most sophisticated attempt to develop a neutral approach to logic.

2 Ibid., p. 2.
3 Ibid., p. 11.
4 Ibid., p. 72.
5 Ibid., p. 176.
6 Ibid., p. 136.
7 Ibid.
8 Ibid., p. 174.
9 Ibid., p. 58.
10 Ibid., p. 57.
11 Ibid., p. 33.
12 Ibid., p. 40.
13 Ibid., p. 143.
14 Ibid., p. 147.
15 Ibid., p. 9.
16 Ibid., p. 63.
17 Ibid., p. 77.
18 Ibid., p. 135.
19 Ibid., p. 160.
20 Ibid., p. 155.
21 Ibid., p. 180.
22 Ibid.
Weber made rather uncharacteristically vague and conflicting claims about both the nature and uses of ideal types. Some of his assertions suggest that ideal types are systems of concepts, that is, nontheoretic formulations; others suggest that they are systems of statements, which would imply that they were theoretic formulations. Again, he makes assertions that indicate their use is merely heuristic— that they are not, themselves, susceptible to confirmation or disconfirmation; but he also claims that they belong to the context of validation or justification rather than to the context of discovery when he asserts that they are methodologically indispensable in the construction of social-science theory." Richard S. Rudner: Philosophy of Social Science. Englewood Cliffs, N.J., Prentice-Hall (1966), p. 54. Rudner, like most academics who have studied Weber, recognized Weber's conceptual ambiguity but failed to relate this to an ignorance of the relations between the problem of ideology and logic.


Weber was aware of some of the same problems that concerned Marx but his academic treatment of knowledge led him in a different direction. Some authors saw Weber's approach as an improvement over Marx. For example, Hughes wrote that "... Weber did not stop when he had incorporated what he found valid in Marxism into the canon of his own thinking; we went on to relate the one-sidedness of historical materialism to the unilateral character of all social theory, and to give Marxism a new dimension by running another unilateral sequence of his own." (H.S. Hughes: Consciousness and Society, op. cit., pp. 316-17.) On the basis of this study, I would make the opposite claim.

Mills included both Marx and Weber in what he called the "classic tradition" in sociology: "... it is obviously as a kind of 'conversation' with Marx that much of Max Weber's ... work occurs ..." C.W. Mills: Images of Man. New York, George Braziller (1960), pp. 9-10.
The term "model" has been used to reflect both an academic and pragmatic orientation to knowledge. Though critical of the way it is used by those who search for a neutral logic, it has some value, as used in Chapter Seven, when discussing how an ideological model relates to a scientific paradigm. Mills used the term similar to this when discussing Marx: "A model is a more or less systematic inventory of the elements to which we must pay attention if we are to understand something. It is not true or false; it is useful and adequate to varying degrees. A theory, in contrast, is a statement which can be proved true or false, about the casual weight and the relations of the elements of a model. Only in terms of this distinction can we understand why Marx's work is truly great, and also why it contains so much that is erroneous, ambiguous, or inadequate. His model is what is great; that is what is alive in marxism." C.W. Mills: The Marxists, op. cit., p. 36.


Ibid., p. 13.

Ibid., p. 7.

Ibid., pp. 2-3.

Ibid., p. 3.


Ibid., p. 131.

Ibid., p. 132.


Ibid., p. 4.

Ibid., p. 55.

Ibid., p. 100.

57 Ibid., pp. 155-56.


59 Ibid., p. 56.

60 Chapter Twenty.


63 Ibid., p. 54.

64 Ibid., p. 38.


69 See pp. 50-55 above.

70 I would say this, however, about Parson's functionalist sociologism.


72 Ibid., p. 14.

73 Ibid., p. 60.

74 Ibid., p. 61.


78 For example, Weber spoke of the "... ultimate elements of meaningful human conduct." (Ibid., p. 52) and of "... truly ultimate problems," in Gerth and Mills: *From Max Weber*, op. cit., p. 151.
The comparison between Weber and Sartre is relevant, but cannot be pushed too far. Though Weber, like Sartre, was concerned with the significations of human action, his separation of the normative and empirical could not allow him to develop an existential project to challenge positivistic sociology to deal with this matter. And, unlike Sartre, Weber tried to study individual significations in an individualistic way.

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85 Ibid., p. 79.
86 Ibid., p. 171.
87 Ibid., p. 173.
88 Ibid.
89 Ibid., p. 175.
90 Ibid., p. 78.
91 Ibid., p. 98.
92 Ibid., p. 110.
93 Ibid., p. 159.
95 Weber: *The Methodology of the Social Sciences*, op. cit., p. 89.
96 Ibid., p. 82.
97 Ibid., p. 111.
98 Ibid., p. 96.
99 Ibid., p. 113.
100 Ibid., p. 60.
101 Ibid., p. 69.
102 Weber: *The Methodology of the Social Sciences*, op. cit., p. 64.

103 Ibid., p. 112.

104 Ibid., p. 69.
Chapter Thirteen

A Humanist Logic: Bronowski

Sometimes the simplicity of an analysis reflects its relevancy. This is the case with Bronowski's *Science and Human Values.* A lengthy criticism of Weber's confusing writings on logic was required to show the impossibility of a value-free logic. A short discussion will suffice to demonstrate the relevance of Bronowski's humanist approach to science, values and logic.

The Context of Science

Bronowski argued that our culture "...erodes our sense of the context in which judgments must be made." His interest was in the social context required for critical science to flourish. Bronowski was a thorough-going pragmatist. Unlike Weber, he not only saw problems of fact but also problems of value in a pragmatic way. He stood opposed to technicians who talk only of abstract facts and never of the concrete consequences of science. He was critical of the scientist who takes "...flight from (science's) consequences by protesting that others have failed him." As he stated "We live in a world which is penetrated through and through by science..." and continued that "The world today is made, it is powered by science; and for any man to abdicate an interest in science is to walk with open eyes towards slavery."

For Bronowski science was a vital part of human reality and cannot be treated as a specialization or a profession. Bronowski believed that the dominant dichotomy between the so-called "arts" and "sciences" keeps us
from understanding how science has penetrated our lives. He talked of

"... the prejudice of the humanist who takes his science sourly, and equall y, the petty view which many scientists take of their own activity and that of others. When men misunderstand their own work, they cannot understand the work of others; so that it is natural that these scientists have been indifferent to the arts. They have been content, with the humanists, to think science mechanical and neutral; they could therefore justify themselves only by the claim that it is practical. By this lame criterion they have of course found poetry and music and painting at least unreal and often meaningless. I challenge all these judgments."6

His rejection of the technical (what we have called "scientistic") view of science and his concern for the "... likeness between the creative acts of the mind in art and in science"7 led Bronowski to reject the common "boundary between knowledge and use".8 As he wrote, "There are of course people who like to draw a line between pure and applied science; and oddly, they are often the same people who find art unreal."9

In a sense, Bronowski saw science as one form of art. He did not subscribe to the view that reduces all knowledge to immediate use. For him "Man does not invent by following either use or tradition,"10 but by gaining understanding of relevant problems with the aid of linguistic metaphors. Obviously, the uses of science and the priorities of any social structure which underlie these manifest uses enters into this. Bronowski was not saying that science is a neutral accumulation of so-called objective observations. Like Toulmin, who we shall discuss in Chapter Sixteen, Bronowski believed that

"No scientific theory is a collection of facts. It will not even do to call a theory true or false in the simple sense in which every fact is either so or not so."11

Science stems from human understanding. The use to which knowledge is put and the methods of obtaining it cannot be separated, but neither can the human creativity basic to science be ignored. It is this creativity which finds
"unity in hidden likeness".\(^1\)\(^2\) As Bronowski wrote

"The scientist looks for order in the appearances of nature by exploring such likeness. For order does not display itself of itself; if it can be said to be there at all, it is not there for the mere looking. There is no way of pointing a finger or a camera at it; order must be discovered and, in a deep sense, it must be created."\(^1\)\(^3\)

Bronowski, unlike Weber, placed scientific judgments within a human and social context. Below we shall discuss the "sociology of knowledge" that is implicit in his approach. Before doing that let us look at his handling of fairly common problems of logic.

**The Habit of Truth**

Bronowski's approach to what he called the "habit of truth" contrasts sharply with the scientistic approach to truth. Truth does not come from recording "facts". "If we did not (build a map)," he argued, "our minds would contain only a clutter of isolated experiences."\(^1\)\(^4\) For Bronowski, discovery did not come from "the facts", but involves three distinct processes. First, there is "the separate data of the senses"; second, there is "the coherence of ... our experience"; and third, there is the attaching of "a symbol or a name" to this coherence.\(^1\)\(^5\)

This is obviously a simplistic description of how a scientific discovery occurs. But it does help us make sense of some very complicated problems of logic. For example, about his "three steps", Bronowski wrote

"The words true and false have their place at the latter steps, when the data of the senses have been put together to make a thing which is held in the mind. Only then is it meaningful to ask whether what we think about the thing is true. That is, we can now deduce how the thing should behave, and see whether it does so."\(^1\)\(^6\)

Much confusion in the philosophy of science results from the use of the term "truth" solely in terms of "facts". What is important is that Bronowski's pragmatic orienc-
Bronowski over-simplified the problem of verification by reducing the question of truth to deductive logic. For example, about scientific theory, he wrote:

"The construction is true or false by the test of its behaviour. We have constructed the thing from the data; we now deduce how the thing should behave; and if it does not, then our construction was false. What was false was not the sense data but our interpretation of them: we construct-an hallucination."17

We will have to leave our criticism of deductive logic until Chapter Sixteen.

Of scientific laws, Bronowski said:

"It begins with a set of appearances. It organizes these into laws. And at the centre of the laws it finds a knot, a point at which several laws cross: a symbol which gives unity to the laws themselves."18

He believed that the concept or "symbol" which gives unity to the laws themselves must be tested

"... by its implications. That is, when the concept has been built up from some experiences, we reason what behaviour in other experiences should logically flow from it. If we find this behaviour, we go on holding the concept as it is. If we do not find the behaviour which the concept logically implies, then we must go back and correct it. In this way logic and experiment are locked together in the scientific method, in a constant to and fro in which each follows the other."19

In Chapter Sixteen, I shall argue that all formal, academic approaches to logic are inadequate because they are not rooted in the subject matter they purport to be evaluating. Throughout the thesis, I shall argue that a pragmatic orientation to logic does have such a rooting. Bronowski tended toward this same view. He explicitly rejected both "positivistic" and "behaviouristic" theories of logic in favor of his "conceptual method".

Bronowski argued "... that thinking as we understand it is made possible only by the use of names or symbols."20 Thought, language and human reality are
therefore completely intertwined. As Bronowski said "The world which the human
mind knows and explores does not survive if it is emptied of thought." An
adequate logic must take this interdependence of human thought and reality into
account. Yet, according to Bronowski, the "common view" in logic does not do
this, but engages in "classical" debates about matters of truth and falsehood.
As he wrote:

"These debates are scholastic exercises in absolute logic. They begin from
concepts which are held to be fixed absolutely; they then proceed by deduc-
tion; and what is found in this way is subject to no further test. The de-
ductions are true because the first concepts were true: that is the scho-
lastic system."22

Bronowski concluded his discussion of "the habit of truth" by contrasting
"two ways of looking for truth". He wrote that

"One is to find concepts which are beyond challenge, because they are held
by faith or by authority or the conviction that they are self-evident.
This is the mystic submission to truth which the East has chosen, and
which dominated the axiomatic thought of the scholars of the Middle Ages."23

He described the other, the one to which he adhered, as "... the habit of testing
and correcting the concept by its consequences in experience ..."24 Science is
not value-free, but pragmatic. Like Dewey, who I shall discuss in Chapter Twenty,
Bronowski believed it is "By doubting we are led to inquire, and by inquiry we
perceive the truth."25

The Myth of the "Is" and "Ought"

Bronowski's orientation to epistemology has direct implications for the
widespread belief that science can be neutral.

"If, as many think, science only compiles an endless dictionary of facts,
then it must be neutral (and neuter) as a machine is; it cannot bear on
human values. But of course science is not a giant dictionary, any more
than literature is; both are served by, they do not serve, the makers
of their dictionaries."26
In rejecting the possibility of a neutral science or logic, Bronowski was aware that he was accepting pragmatism. He wrote of "My method derived from the tradition of pragmatism which, since William James advanced it about 1890 (and Charles Peirce before that), has been the most original philosophical thought in America." According to the pragmatic view of science "... every fact is a field - a criss-cross of implications, those that lead to it and those that lead from it."

But Bronowski did not just affirm his pragmatic method. He returned to questions derived from his original concern about "the context in which judgments must be made". He dealt with some of the sociological questions which are implied by his approach to logic. For example, Bronowski was skeptical of the separation of the "is" or empirical from the "ought" or normative in science. His analysis of the habit of truth undermined the dichotomy on which Weber tried to develop a neutral logic. But he went beyond criticism and suggested how and why the separation occurred and is maintained.

Bronowski believed that human conduct is as open to empirical investigation as natural phenomena. But, unlike Weber, he proposed that we should always look at both the role of "duties" and of "freedom" when we study human conduct. Our understanding of the nature of verification, and abolition of the confusion that underlies the value-fact dichotomy, will depend on this twofold study:

"Positivists and analysts alike believe that the words is and ought belong to different worlds, so that sentences which are constructed with is usually have a verifiable meaning, but sentences constructed with ought never have. This is because ... all British empiricist philosophy is individualist. And it is of course clear that if the only criterion of true and false which a man accepts is that man's, then he has no base for social agreement. The question how a man ought to behave is a social question, which always involves several people; and if he accepts no evidence and no judgment except his own, he has no tools with which to frame an answer."
Bronowski thus argued that the separation of the "is" and "ought" is rooted in the individualism of much philosophical speculation and the philosophy of science developed from this. This individualism gives us a distorted view of knowledge. As Bronowski said "... all our knowledge has been built up communally"30 and "... there is a social nexus which alone makes verification possible."31

The "is" and the "ought" are united once a sociology of knowledge perspective is brought to bear on science. It is a social arrangement, what Bronowski called the "fellowship of scientists", which makes science possible. It is this arrangement which implies that "We ought to act in such a way that what is true can be verified to be so."32

What way of acting, what social arrangement facilitates the development of science? Bronowski argued that the acts of science cannot be understood in terms of professional codes. He listed three things that characterized the scientist for him. First, "... comes independence in observation and thence in thought."33 Scientists give "... a value to the new and the bold in all their work."34 Second, "Science has bred the love of originality as a mark of independence."35 And, third, "dissent" characterizes the scientist. As Bronowski said "... the profound movements of history have been begun by unconforming men."36

The relation between dissent and science is an important one. We touched on it when outlining Kuhn's idea of "scientific revolutions". About dissent, Bronowski wrote:

"Dissent is not itself an end; it is the surface mark of a deeper value. Dissent is the mark of freedom, as originality is the mark of independence of mind. And as originality and independence are private needs for the existence of a science, so dissent and freedom are its public needs."
No one can be a scientist, even in private, if he does not have independence of observation and of thought. But if in addition science is to become effective as a public practice, it must go further; it must protect independence. The safeguards which it must offer are patent: free inquiry, free thought, free speech, tolerance.\textsuperscript{37}

In sharp contrast to Weber, Bronowski recognized that "Dissent is the native activity of the scientist, and it has got him into a good deal of trouble in the last years. But if that is cut off, what is left will not be a scientist. And I doubt whether it will be a man."\textsuperscript{38} And, because of this, Bronowski recognized that the so-called private and public aspects of science can not be divided. A certain form of "social nex tus" provides the context for the actualization of science.

Science is founded on certain values and requires a social arrangement that gives those values a human expression. Science is not rooted in fact-finding but in the "commitment to explore the truth".\textsuperscript{39} Only when both this commitment and a social arrangement that facilitates it exist do any logical requirements of science become self-evident. And these "rules" are never static. That is why, as Bronowski said, "There are, oddly, no technical rules for success in science."\textsuperscript{40}

Bronowski argued that for science to flourish a "democracy" must exist. He, like Berlin, recognized that political philosophy and science ultimately relate. Bronowski believed that this democracy comes when you "... fuse ... the private and public needs"\textsuperscript{41} of science. And, like Marcuse,\textsuperscript{42} he did not believe that "tolerance" is enough to accomplish this. The basis of science, the social relations that facilitate free inquiry, must exist in a society if science is to survive.

If this is so, if science is based on values, how can it be value-free?
Bronowski answered this question as follows:

"Science is not a mechanism but a human progress, and not a set of findings but the search for them. Those who think that science is ethically neutral confuse the findings of science, which are, with the activity of science, which is not."43

Bronowski believed that the scientific acts must be respected more than the results since the latter depend on the former. This humanism pervaded his analysis. "Science at last respects the scientist more than his theories; for by its nature it must prize the search above the discovery, and the thinking (and with it the thinker) above the thought."44 And Bronowski is consistent in his humanism.

Near the end of his book, he wrote "... that the concept is more profound than its laws, and the act of judging more critical than the judgment."45

Bronowski did not engage in a sociological analysis to determine what social (including political and economic) relations facilitate science and which hinder science. But his ideas show the relevance of such an inquiry. In fact, Bronowski's terminology is not adequate for such an inquiry. He talked of "the society of scientists" as if the social nexus of science is autonomous from the broader social relations. He implied this again when he wrote of how "the society of scientists has survived (historical) changes without a revolution".46 Yet, no understanding of the development of science is possible without tracing the changes in the societies in which it has been developing.

The main emphasis of Bronowski's analysis remained his humanism. His concern was with "what scientists do"47 not with a mystified, abstracted notion of science. This commitment did not lead into the complications of formal logic. Instead, he saw the relevance of an analysis of the conditions that underlie science. As he wrote "We must lay bare the conditions which make it possible for
Bronowski's analysis implied a total rejection of scientism and its value-free ideology. Such a scientism, though rationalized with a technical "body of knowledge", not only distorts our understanding of science, but allows an uncritical application of scientific ideas. In Bronowski's words:

"The body of technical science burdens and threatens us because we are trying to employ the body without the spirit; we are trying to buy the corpse of science. We are hag-ridden by the power of nature which we should command, because we think its command needs less devotion and understanding than its discovery."

Bronowski proposed a scientific "ethic" to "command" the power of science. The idea is too undeveloped to be taken seriously. What is clear, however, is that the myth of a neutral logic helps maintain our ignorance of the precarious equilibrium between the political and economic context of science and the development of independent, original and critical thought. And, perhaps more important, a facade of neutrality is no defense against a political system when it becomes hostile to the commitments of science. When there is repression of criticism and dissent, a science that maintains a value-free facade is easily reduced to no more than rhetoric, technique and obedience.

Footnotes

2 Ibid., p. 9.
3 Ibid., p. 13.
4 Ibid.
5 Ibid., p. 14.
6 Ibid., p. 15.
7 Ibid.
8 Ibid., p. 16.
9 Ibid.
10 Ibid., p. 18.
11 Ibid., p. 22.
12 Ibid., p. 23.
13 Ibid.
14 Ibid., p. 35.
15 Ibid., p. 36.
16 Ibid., p. 37.
17 Ibid., p. 38.
18 Ibid., p. 40.
19 Ibid.
20 Ibid., p. 41.
21 Ibid., p. 42.
22 Ibid., p. 44.
23 Ibid., p. 52.
24 Ibid., p. 53.
25 Ibid.
26 Ibid., p. 55.
27 Ibid., p. 56.
28 Ibid.
29 Ibid., p. 61.
30 Ibid., p. 62.
31 Ibid., p. 63.
32 Ibid.
33 Ibid., p. 66.
34 Ibid.
36 Ibid.
37 Ibid., pp. 67-8.
38 Ibid., p. 68.
39 Ibid., p. 68.
40 Ibid.
41 Ibid., p. 69.
43 J. Bronowski, op. cit., p. 70.
44 Ibid., p. 71.
46 Ibid., pp. 74-5.
47 Ibid., p. 77.
48 Ibid.
49 Ibid., p. 78.
Weber's ideas cannot serve as the basis of a value-free logic. His intelligent confusion had little to do with the value-free dogma often associated with his name. Durkheim had more clarity in his work, but it is rooted in a dangerous simplicity. He over-simplified logical questions and in the process distorted the problem of ideology. In doing this he exemplified the authoritarian potential of sociologism. Durkheim's approach to logic is the kind that can be used to rationalize the obedient, technical and rhetorical scientism that our analysis of Bronowski criticized.

The Study of Social Facts as Ideology

Durkheim's central point was that "social facts" exist, have an "objective reality" and therefore must be "treated as things". These social facts have two properties: first, "being general throughout the extent of a given society", and second, being "capable of exercising over the individual exterior constraint". Or, another way Durkheim characterized a social fact was by its "... power of external coercion which it exercises or is capable of exercising over individuals" and the fact that "its own existence is independent of the individual forms it assumes in its diffusion".

We could argue, in abstract, about the worth of this idea, but this would be to no avail. It is necessary to see what point of view, what ideology, related to Durkheim's notion of a "social fact". And Durkheim was quite explicit in this regard. When outlining his idea of a "social fact", he was also arguing for a
certain type of social relationship. For instance, Durkheim wrote that "Each individual drinks, sleeps, eats, reasons; it is to society's interest that these functions be exercised in an orderly manner."\(^5\) This statement may appear so general that disagreement with it, or agreement, for that matter, seems absurd. But there is a definite pattern to Durkheim's ideas of "society", "functions" and "order".

A statement of the value of these terms to Durkheim appeared early in his book. Referring to the construction of social facts, he wrote "Of course, when I fully consent and conform to them, this constraint is felt only slightly, if at all, and is therefore unnecessary."\(^6\) Here, he showed the value he placed on the individual adapting to the coercive effects of social facts. His view of education was a further expression of this value. When Durkheim wrote that "... all education is a continuous effort to impose on (my emphasis) the child ways of seeing, feeling and acting which he could not have arrived at spontaneously,"\(^7\) it was clear that for him education should function to ensure this adaption.

The idea of "social facts" is connected with a particular ideology. Durkheim not only saw society as a force over and above the individual, but implied that this is both natural and good. As we proceed, we shall see how this orientation related to the type of logic Durkheim advocated and to his inadequate handling of the problem of ideology.

One sentence summed up Durkheim's view of the relationship of the individual to the society. Utilizing the gestalt metaphor to make his point, he stated that "It (group condition) is to be found in each part because it exists in the whole, rather than in the whole because it exists in the parts."\(^8\) His value of the whole or general (i.e., "society") over the part (i.e., "individual") is quite explicit.
It was stated even more clearly when he wrote "... the system formed by their association represents a specific reality which has its own characteristics." It seems indisputable that the association of humans creates a reality over and above any one of us. But saying this does not even begin to clarify methodological problems in the social sciences. This view covers up important value problems. It ignores how our values affect our way of approaching problems rooted in the association of many humans; how an approach to logic parallels the way we locate, define and study these problems; and how an approach to logic and certain values affects which problems we consider relevant and meaningful out of the potential problems implied by the association of many humans.

After outlining his idea of a "social fact", Durkheim discussed his socio-logical rules - rules for observation, rules for distinguishing the so-called normal and pathological, rules for classifying what he called "social types", rules for explaining social facts, and rules for establishing sociological proofs. I will look at each one of these in order to draw out contradictions and problems and to show why Durkheim's approach to logic is inadequate.

Logical Rules as Ideological Rules: 1 - Rules of Observation

Durkheim outlined three rules or principles for the observation of social facts. They are all traditional points that, upon analysis, prove to ignore real problems. Durkheim began by stating that his method "eradicates all preconceptions". We saw in our discussion of ideology how this is an impossible task. Our discussion of Mannheim, for example, showed how concepts of reality always imply presuppositions that must be made explicit if our knowledge is to be inclusive enough to be self-critical.
Durkheim clearly lacked this awareness. By arguing abstractly, he tried to make his method appear to be free of preconceptions. By arguing that social facts must be treated as things, external to the individual, he set up a dichotomy between what is objective (facts or phenomena) and what is subjective (their individual representation). This dichotomy proves to be untenable once it is recognized that the scientist is an individual operating with a set of beliefs broader than any facts he or she articulates. His method was supposedly concerned only with the social "phenomenon represented in the mind" and not with the representations themselves. This separation, however, is an impossible one once the role of belief in science is recognized.

In a statement linked with this confusing logic, Durkheim wrote

"But, because these ideas are nearer to us and more within our mental reach than the realities to which they correspond, we tend naturally to substitute them for the latter and to make them the very subject of our speculations. Instead of observing, describing, and comparing things, we are content to focus our consciousness upon, to analyze, and to combine our ideas. Instead of a science concerned with realities, we produce no more than an ideological analysis."\(^{10}\)

It is absurd to say that one is concerned only with "realities", not with ideas about them, when one is in the process of creating ideas oneself. Yet, it is upon this "trick" that Durkheim's case was built. He implied that there are social facts that we treat as things, and there are ideas about them. His ideas are based on the things - hence he had no preconceptions. This is the circular argument hidden within Durkheim's verbiage.

Criticizing Spencer's definition of societies, Durkheim concluded "... so here again a certain conception of social reality is substituted for reality itself."\(^{11}\) We must admit that there is a large difference between ideas anchored to an empirical process and those created without any commitment to such a process, but
this is much different from saying that one can distinguish reality from conceptions about social reality. Yet, Durkheim implied that his rules could do the latter.

Durkheim's error was in believing in the external reality of his own ideas. Out of his social research he created logical concepts (e.g., social facts). Yet, he made a dichotomy between "concepts" and "things", with the description and explanation of the latter being seen as science. Again criticizing Spencer he wrote "... the facts accumulated in his sociology seem to function principally as arguments, since they are employed to illustrate analyses of concepts rather than to describe and explain things." This dichotomy between concepts and things, between argument and description-explanation, is self-contradictory since it is itself an argument. This is the fate of all dichotomies in logic which are given an ontological connotation. The problem of logic and ideology will be clarified when the primary role of argument in all knowledge is acknowledged and all pretense that one's ideas are objective, per se, is ended.

Even if Durkheim was unaware that he was arguing a point of view and that his logic was related to it, his statements show this was the case. For example, in criticizing moralists who search for the "essence" rather than the "nature" of ethics, Durkheim wrote "They have not yet arrived at the very simple truth that, as our ideas (representations) of physical things are derived from these things themselves and express them more or less exactly, so our idea of ethics must be derived from the observable manifestation of the rules that are functioning under our eyes, rules that reproduce them in systematic form." This analogy between things and so-called ethical "rules" reflects Durkheim's ideology - what has been called the
"solidarist school of political philosophy" - and a theory of logic. The relationship between the two is what concerns us. In linking (i.e., reducing) ethics to rules, in treating rules as given ("functioning under our eyes"), and in utilizing a scientistic view of the natural sciences, Durkheim narrowed the field of ethics (e.g., values) and logic down in such a manner that he had a tautology. Those who are mystified by verbiage (e.g., who still treat language magically) may not recognize the point of view that was implied by Durkheim. Once the problem of logic is articulated in the broader context of the problem of ideology, however, his point of view is exposed.

Durkheim also had a formalistic view of laws that related to his overall point of view. His version of the value-free doctrine - whereby his own point of view was seen as a study of social facts, as things, without concepts - was further reinforced by an arbitrary distinction he made between "proper laws" and "laws" that are really "maxims for action". Criticizing economists who judge society and implying that he never made such judgments, Durkheim wrote "... what are commonly called 'laws' are generally unworthy of this designation since they are merely maxims for action, or practical precepts in disguise."15 A little further he wrote about the "true laws of nature".16 If we contrast this approach with Kuhn's we see how a mystification of scientific laws can be used to make certain judgments appear to be objective in some metaphysical or transhuman sense.

Durkheim's statement that "... social phenomena are things and ought to be treated as things"17 reflects a particular way that values can be woven into a system of logic. The "ought" reflects the judgment being made. The "phenomenon" or "things" represent the terminology of objectivity. The approach to logic is inadequate because it lacks self-consciousness and ignores the basic questions
raised in the first section of this study. These questions are fundamental to any logic that is to be rooted in intellectual, not traditionalist, values.

Durkheim's first rule or principle of observation was a faith more than a rule. And, in saying this, I am not suggesting that what is needed is a valid rule. An approach to logic, which accounts for the problem of ideology, will not be based on "rules", but on conscious, pragmatic judgments about method. Rather than stressing the pragmatic character of method, Durkheim wrote of the professionalization of the academic and relied on this for backing to his argument. Of the professional sociologist he wrote "He must emancipate himself from the fallacious ideas that dominate the mind of the layman; he must throw off, once and for all, the yoke of these empirical categories, which from long continued habit have become tyrannical." But, as Bronowski pointed out, professionalization is not sufficient backing for an argument. We cannot assume that the academic knows intrinsically what he or she is doing; that he knows about something because he or she is an academic. Rather, we must look at how the training of the academic develops his or her commitments to a class of problems, methods and theories. Doing this undermines Durkheim's approach, for his "rules" and "social facts" prove to be related to certain ideological commitments, rooted in social relationships, but not synonymous with social reality.

Durkheim's second "rule" also proved to be superficially conceived. Durkheim called his second rule "definition". This "rule" negated the first rule (having no preconceptions) because the definition of reality always involves preconceived ideas. Had Durkheim applied his three rules to each other, he might have been able to recognize the mechanistic character of his logic. A linear, non-dialectic thought process kept him from doing this.
Once again a tautology underlay the credibility of this rule. Durkheim wrote that "In order to be objective, the definition must obviously deal with phenomenon, not as ideas, but in terms of their inherent properties." Here, Durkheim wrote as though he was in a chemistry laboratory where properties can be defined experimentally. His use of the adjective "inherent" showed that he viewed experimentation in a metaphysical, non-pragmatic way. More vital, his poorly conceived, experimental notion of definition constituted a denial that he, as a sociologist, was one human among many. There are two problems with this definition of definition for the social sciences. First, we must ask how do you deal with social and human phenomenon without ideas? How do you discover (relevant) "properties", to use his term, without ideas? A mysticism is implied in Durkheim's approach. He implied that knowledge about the phenomenon was held before the defining begins. But how? To answer this, Durkheim would have had to abandon his idea of a "social fact" with its dichotomy between "concepts" and "things". Common sense and science, lay person and professional, would also cease to exist in mutually exclusive realms.

Durkheim may have seen his own error.

"Since the definition in question is placed at the beginnings of the science, it cannot possibly aim at a statement concerning the essence of reality; that must be attained subsequently. The sole function of the definition is to establish contact with things; and since the latter can be grasped by the mind only from its exteriors, the definition expresses them in terms of their external qualities." I don't wish to argue here with Durkheim's idea of "mind" (grasping external qualities) or his notion of the "essence of reality". The relevant point is that Durkheim's second rule was based on a reversal of the process of inquiry and he himself seemed to recognize this.
The second problem with Durkheim's view of definition arose from his own idea of a social fact. If social facts which are rooted in the association of many humans have a reality over and above each individual, how is the individual scientist to define their so-called properties in a manner similar to the way a natural scientist defines the properties of matter? Using the type of logic developed by J.S. Mill, Durkheim tried to develop rules for making his social facts intelligible, but there is no analogy between these methods and direct experimentation with the properties of matter. Furthermore, when we discuss the philosophy of the physical sciences in Chapter Sixteen, we shall see that the notion of "properties" is simplistic even for the so-called "exact sciences".

Durkheim held to the positivist faith that reality can be defined without bias. He wrote that "Since objects are perceived only through sense perception, we can conclude: Science, to be objective, ought to start, not with concepts formed independent to them, but with these same perceptions." He then argued that science "... needs concepts that adequately express things as they actually are, and not as everyday life finds it useful to conceive them." From this, we again see Durkheim's dilemma. The phrase "things as they actually are" is very powerful and deceptive. But what things, associated with what problems, and what class of problems, and selected on what basis? All the questions that arise from the problem of ideology were ignored by Durkheim. And again it is the professional, free of the subjectivity of "everyday life", who becomes the one who can see things as they really are. As Durkheim said: "Science, then, has to create new concepts; it must dismiss all lay notions ..." But lay power affects the scientist and his definition of problems. It affects the training and commitments of the professional and establishes a political function for science. Again, we see that
the questions arising from the problem of ideology were not and could not be
dealt with in terms of Durkheim's rules.

The weaknesses in Durkheim's third rule follow from those of the first
two. His third "rule" stressed the need to obtain an objective representation
of social facts. Durkheim handled this question with a nomothetic logic. Ac-
cording to this the more stable a social fact is the more objective it is. The
social scientist must strive for "... the elimination of what is variable and
hence subjective ..."26

It is fruitless to engage in an abstract argument about the relative
merits of ideographic or nomothetic data.27 It depends on the kind of problem
and the values and ends desired. It depends on the field of study and the sub-
ject matter involved, not on some absolute "truth" about logic itself. What is
important is to note how focussing on the stable data and ignoring the variable
data complements Durkheim's ideology. His emphasis on social order and social
control and his emphasis on stable data are complementary.

I shall return to this relationship later. For now, we can say that
Durkheim's third so-called "rule" is really an expression, in formal logic, of a
set of beliefs about society. That is not to say that no valuable knowledge can
ever come from problems rooted in his particular beliefs. It is with Durkheim's
understanding of that knowledge that we are concerned and it has proven to be
quite superficial.

2 - Rules For Distinguishing the Normal and Pathological

Discussing Durkheim's rules for distinguishing the normal and the patho-
logical allows us to expand on the question of values in science and how any
handling of this is related to one's approach to logic. Durkheim rejected the common view that "... science can teach us nothing about what we ought to desire." His approach involved two things. First,

"... by revealing the causes of phenomenon, science furnishes the means of reproducing them. Every means is from another point of view, an end." But how are we to determine the ends to which scientific knowledge should be put? Durkheim replied to this with his second point. "If, then, we can find an objective criterion, inherent in the facts themselves, which enables us to distinguish scientifically between health and morbidity in the various orders of social phenomena, science will be in a position to throw light on practical problems and still remain faithful to its own method."

To search for an "objective criterion inherent in the facts" is to forget that the facts are themselves related to an exclusive class of problems and to an orientation to knowledge that is relevant to studying them. For example, Durkheim's nomothetic sociology created a different kind of facts than would a dialectic sociology like that developed by Gurvitch. Durkheim seemed to think that his logic had escaped this problem. Contrasting his logic with classical economists and with socialists', he wrote

"They presuppose propositions which, true or not, can be proved only at a more advanced stage of science. This is just the case where we should apply the rule previously established. Instead of aspiring to determine at the outset the relations of the normal and the morbid to vital forces, let us simply seek some external and perceptible characteristic which will enable us merely to distinguish these two orders of facts."

The problem with this is that he started with the "two orders of facts" - the normal and the pathological - as an a priori. And the erroneous positivistic assumption that one can build facts strictly on external preceptions was again enunciated.
Yet a belief that what is general is true and normal, and that what is variable is false and pathological, is what really underlay Durkheim's position. He wrote "We shall call 'normal' these social conditions that are the most generally distributed and the others 'morbid' or 'pathological'." From this, an "average type" representing the normal was constructed - and supposedly an objective criteria of value has been established.

This method is deceptive. It only appears to be a value-free approach to values. For instance, Durkheim wrote

"After having established by observation that a particular fact is general, he will go back to the conditions which determined this generality in the past and will then investigate whether these conditions are still given in the present or if, on the contrary, they have changed. In the first case he may properly designate the phenomenon as normal; and, in the second, refuse it this designation."

The same view is expressed in another way:

"It is impossible to deduce the greater from the less, the genus from the species. But the species, since it is contained in the genus, can be discovered in the latter."

In both statements, there is the assumption that the general is true and normal and the definitions and the rules of logic that Durkheim expounded reinforced this assumption. But belief that conformity to the social order is good still remained fundamental to both. And this belief is far from being value-free.

A look at Durkheim's three rules for "normal sociology" shows the superficiality of this method. His rules were:

"1. A social fact is normal, in relation to a given social type at a given phase of its development, when it is present in the average society of that species at the corresponding phase of its evolution.
2. One can verify the results of the preceding method by showing that the generality of the phenomenon is bound up with the general conditions of collective life of the social type considered.
3. This verification is necessary when the fact in question occurs in a social species which has not yet reached the full course of its evolution."
When critically analyzed, these three rules prove to be tautological statements based on the assumption that what is general can be equated with what is normal. The normal is the average for a society in its present phase of evolution (rule 1). This is the case because of the generality of the social facts (rule 2). This circular logic solves nothing, particularly because of its formality, i.e., lack of historical example. The general is assumed to be necessary or true, not relative, if the particular species has not fully evolved (rule 3). But how do we evaluate the degree of evolution. There is no doubt that an historical-biological theory could establish some norms to help us speculate about this, but this is quite different than saying that our social facts are verified because they are general at a stage in evolution.

The reliance on "evolution" for backing for Durkheim's logic raises vast complications and questions that do not consolidate Durkheim's position, but rather show the impossibility of having logical rules, per se. Durkheim seemed aware that his rules did not stand on their own and that they required backing, but he did not consider the need to go beyond his social facts for such a backing. Here lies the major error in his argument.

It is common in social science for a logic and definitions to be developed which support the beliefs of the theorist. This does not mean that knowledge cannot be developed in this way, but it does mean that this process should be made explicit. Durkheim is an excellent example of this. His approach, which he summarized with the statement "In order that sociology may treat facts as things, the sociologist must feel the necessity of studying them exclusively," allowed him to develop ideas that continue to be of use to social science. But what if the sociologist wants to study facts dialectically? What if he or she wants to
study the relations of facts to historical conditions and change? A different logic and different aims will have to be developed.

Knowledge derived from a dialectical sociology would also have a different function. What was the function of Durkheim's logic and knowledge. He stated that:

"In order that sociology may be a true science of things, the generality of phenomenon must be taken as the criterion of their normality. Our method has, moreover, the advantage of regulating action at the same time as thought (my emphasis)." 38

The general, defined by an exclusive treatment of facts, is a criterion for normality only if you want it to be, and, in addition, there are other ways to define the general. The second part of the quote shows why Durkheim believed his way was the right way. The sociologist's job is to help maintain the status quo, or the normal; the two being similar to Durkheim. This reflects the latent authoritarianism in Durkheim's logic.

3 - Rules For Classification

Durkheim then outlined his rules for classifying "social types". Since the normal and pathological were relative to what Durkheim called "social species" he required such a classification in his rules of logic. Durkheim believed that his classification existed between the extremes of the nominalism associated with historians and the realism associated with philosophers. For him, the former was mainly descriptive and the latter abstract. His method, the "... only method acceptable in a science of observation" dealt with "... decisive or crucial facts which have scientific value ..." 39

This concern with the relevance of facts does not seem to fit with Durkheim's overall logic. This concern with relevancy is consistent with the conclu-
sions of our discussion of the problem of ideology. The class of problems that concerns us and relates to our overall ideological orientation will determine the relevance or irrelevance of certain observations for us. Durkheim came to a similar conclusion when he argued for the use of a limited number of social types. According to him, the classification of social types "... will only be useful if it permits us to classify other characteristics than those serving as its basis and if it procures for us a framework for facts to come." For Durkheim, such a classification could not come from an excessive concern with the uniqueness or the commonality of social events.

This concern may be a reason why C.W. Mills considered Durkheim one of the classic sociologists, that tradition in sociology that provides an alternative to both abstract empiricism and grand theory. Durkheim's approach to classification, for example, had a potential similarity to that developed by Mills when he contrasted "macroscopic" and "microscopic" research and argued that we must learn to "shuttle" between the two.

Durkheim's formalism, rooted in his conservatism, however, could not allow for a dynamic classification of social types. Instead of a classification which could deal explicitly with changing social structures, he ended up creating another level of abstraction in his logic. What he calls "social morphology" took the place of a historically specific study of societies. His commitment to order, to tradition - and his rules of logic that reflected this commitment - made such a study impossible.

It is important to note that this "social morphology", based on an analogy between biology and sociology, can lead to, and/or result from, a racist mentality. For example, Durkheim stated "Only colonization can be compared to reproduction by
germination; and in order that the type may persist, the colonial society must not mix with any other society of a different species or variety. This statement showed one danger of an uncritical application of a nomothetic logic to human affairs. When you see the average as being the normal, and both as being objective, you can begin to think of a mixture of one social type with another as leading to a loss in the purity of the normal. Racism can be attached to this system of logic much too easily. This shows the authoritarian potential of an abstract approach to logic.

4 - Rules For Explanation

Durkheim then outlined his rules for explanation and yet another level of abstraction was created. His chapter begins with the sentence: "The establishment of species is, above all, a means of grouping facts to facilitate their interpretation." Since Durkheim's idea of a social fact, of normal sociology, and of "social morphology", implied an ideological orientation, his interpretation of facts obviously will also. Taking it to a new level of abstraction did not change this; it only obscured it.

Durkheim clouded over his ideological orientation with his epistemology. He first distinguished between the use and truth of a fact. He stated that "To show how a fact is useful is not to explain how it originates or why it is what it is." The statement "why it is what it is" shows how Durkheim viewed facts in an essentialistic manner and that this reified view of facts and a formal logic are clearly related. Treating facts as "external things" and failing to understand one's ideological orientation can lead to the erroneous epistemologies which see facts as being true or false in abstract from their context.
Durkheim's explanation of explanation, that is, his way of establishing the truth of a fact, reflected his ideological orientation clearly. He accepted a causal determinism and rejected teleological explanations. He did not believe that his concern with human needs, related to his distinction between normal and pathological social facts, implied any teleology.

"Thus the fact that we allow a place for human needs in sociological explanations does not mean that we even partially revert to teleology. These needs can influence social evolution only on condition that they themselves, and the changes they undergo, can be explained solely by causes that are deterministic and not at all purposive." 45

Discussing the cause of a social fact, Durkheim claimed that "... we must seek separately the efficient cause which produces it and the function it fulfills." 46 The determination of the function of a social fact was referred to as a teleological or purposive interpretation because "... these questions of intention are too subjective to allow of scientific treatment." 47 Durkheim rejected a direct study of human intentions but did not reject a functional analysis of them. His preference for abstract, causal explanations related to his preference for what often goes with it: a belief in the maintenance of the social order. Thus he wrote "Consequently, to explain a social fact it is not enough to show the cause on which it depends; we must also, at least in most cases, show its function in the establishment of social order (my emphasis)." 48 A functional and causal analysis and a concern with a class of problems rooted in a commitment to the status quo were therefore related in Durkheim's logic.

The relationship between Durkheim's commitment to the social order and what I shall call his conservative rationalism was shown by the following statement:

"Similarly, in proportion as the social milieu becomes more complex and more unstable, traditions and conventional beliefs are shaken, become
more indeterminate and more unsteady, and reflective powers are developed. Such rationality is indispensable to societies and individuals in adapting themselves to a more mobile and more complex environment."49

From this we can conclude that Durkheim's "normal sociology" was supposed to help replace the function of traditions in the maintenance of the status quo. Durkheim was not talking of using reason to democratically control change, but of using rational techniques to help control, that is, adapt, people to the social order.50 Marcuse's critique of positivistic social science, discussed in Chapter Nine, was rooted in the recognition of this conservative role.

Durkheim's conservative view of "society" and his rules of explanation were therefore complementary. But there is another way to show how his logic and ideology interrelated. Durkheim saw the individual as being subordinate to society and his rigid splitting of the disciplines of sociology and psychology reflected this belief. Here is a characteristic statement:

"When the individual has been eliminated, society alone remains. We must, then, seek the explanation of social life in the nature of society itself. It is quite evident that, since it infinitely surpasses the individual in time as well as in space, it is in a position to impose upon him ways of acting and thinking which it has consecrated with its prestige."51

Durkheim argued this position in a somewhat unexpected way: by using an anti-reductionistic argument. He argued that in the same way that organic phenomenon cannot be explained by reference to inorganic phenomenon social facts cannot be explained by psychological ones. "In a word, there is between psychology and sociology the same break in continuity as between biology and physicochemical sciences."52

Those who try to reduce social and historical events to psychological process are, of course, in error. Each subject matter must have its autonomy to
solve problems. I, therefore, accept Durkheim's non-reductionistic orientation. The consequence of this, however, should not be to mystify "society", but to understand how social processes arise from human activity. As we continue we shall see that Durkheim tended to personify society, rather than to approach this type of understanding.

Durkheim's idea of "collective consciousness" reflected this personification of society. He developed this concept (though he'd have had to call it a "thing") in the following manner: "Individual minds, forming groups by mingling and fusing, give birth to a being, psychological if you will, but constituting a psychic individuality of a new sort."\[53\] He commented on this in a footnote: "In this sense, and for these reasons, one can and must speak of a collective consciousness distinct from individual consciousness."\[54\] From this we can see how Durkheim accepted a view of the "individual" as being autonomous and separate; yet, realizing that sociological forces do exist, he had to postulate a social being. He failed to see that the very core of the experience of the individual, as mediated by language and institutionalized behaviour, is social in nature. His splitting of the individual and society was, therefore, rooted in a false understanding of the nature of human experience itself.

The degree to which this distortion went in Durkheim's work can be shown by the following statement: "Moreover, as all societies are born of other societies without a break in continuity, we can be certain that in the entire course of social evolution there has not been a single time when individuals determined by careful deliberation whether or not they would enter into the collective life or into one collective life rather than another."\[55\] The fact that Durkheim even considered the possibility of "individuals deliberating on entering collective life" showed
his tendency to accept the view of the individual as an autonomous, rational agent. This view of the individual is rooted in liberal social theory. Yet, Durkheim's concern with sociological problems provided him with a conflicting orientation. He thus wrote that "... collective ... tendencies are caused not by the consciousness of individuals but by the conditions in which the social group in its totality is placed." 56

I do not disagree with the orientation of this last statement. It is over the question of logic that I diverge from Durkheim. In searching for abstract causes and in relying on a nomothetic logic as if it reflects an independent causal reality, Durkheim was unable to see that his own (or other's) logic acted as a pragmatic tool useful for developing some forms of knowledge for some kinds of problems. Durkheim ended up believing in his own creation: his "normal, social facts". His "normal, social facts" existed over and above him also, almost serving the function that "god" does for theological beliefs. An absolute or a priori, outside inquiry, was implied by his sociologism.

His debate with psychology is a debate with his own assumptions about the nature of the individual. When he stated his causal principle as "The determining cause of a social fact should be sought among the social facts preceding it and not among the states of the individual consciousness," 57 he polarized the existence of social facts and "the individual". One could suggest that Durkheim was trapped in the perennial idealist dilemma of whether a person creates reality or whether it exists independently. He had not considered the possibility that because a person does not create reality it does not follow that a person sees it as an alien, superior force. This idealist dilemma fails to distinguish between types of reality (e.g., institutional reality, sexual reality) and thus leads to a reified notion of experience.
Durkheim's commitment to the social order and his related logic led him to hold an abstract view of society and to abstract the process of explanation as well. Yet, he claimed that his method did not seek "the sources of life outside the living being". Let us deal with this apparent contradiction by looking at the "conception of society he himself said emerges from his group of rules".

Durkheim stated that he accepted neither the doctrines which see a "break in continuity between the individual and society" nor those of natural law. I think he was correct in this regard; but, rather than creating an original approach, he combined the worst of the two doctrines. Two quotations support this interpretation. First: "... the individual finds himself in the presence of a force which is superior to him and before which he bows; but this force is an entirely natural one." Second, he stated:

"Since the superiority of society to him is not simply physical but intellectual and moral, it has nothing to fear from a critical examination. By making man understand by how much the social being is richer, more complex, and more permanent than the individual being, reflection can only reveal to him the intelligible reasons for the subordination demanded of him and for the sentiments of attachment and respect which habit has fixed in his heart."

This split between the individual and society is clear. The individual is subordinate and a naturalness is attributed to such subordination.

Durkheim's rules of explanation are really a justification for the social order; potentially, any form of social order. In creating his normal sociology, in taking the person out of social science and replacing the study of "man in society in history" with the study of "social facts" as things external to the person, Durkheim created a "collective being which is, itself, a being in its own right". The subordination of the person to this "being" was natural in
his sociology. It is a sociology which, in Durkheim's own words, "... sees in the spirit of discipline the essential condition of all common life ..." With Durkheim's version of scientism, science was not only metaphysical, but potentially authoritarian, as well.

5 - Rules For Establishing Proof

Durkheim then discussed rules for establishing sociological proof. Here, he showed the reliance of his sociologism on traditional logic. Showing how he reduced logic to experimental methodology, Durkheim started the chapter with the sentence: "We have only one way to demonstrate that a given phenomenon is the cause of another, viz., to compare the cases in which they are simultaneously present or absent, to see if the variations they present in these different combinations of circumstances indicate that one depends on the other."65 In effect, he manipulated logic to reinforce his causal theory. He believed that "a given effect has always a single corresponding cause".66 Rather than discussing this causal assumption in a critical manner, Durkheim stated that "... only philosophers have ever questioned the logic of the causal relation. For the scientist there is no question about it; it is assumed by the very method of science."67 Kuhn's analysis argued the exact opposite. He pointed out that "cause" is a term given abstract meaning by philosophers (like Durkheim, in this regard). In Chapter Sixteen, we shall see how the notion of cause is unintelligible unless approached pragmatically.

Durkheim's belief in causal theory and his treatment of facts as things were related. He believed in treating facts exclusively and in determining structural causal relations among them. As a technique, this is of some value, for
some problems. But to believe that a fact derived from this technique is an external reality is quite different. And this is what Durkheim believed.

For instance, of the method of correlation, he stated: "Its validity is due to the fact that the concomitant variations display the causal relationship not by coincidence ... but intrinsically." Later, he wrote: "As soon as one has proved that in a certain number of cases, two phenomena vary with one another, one is certain of being in the presence of a law." Such mystification of experimental method has nothing whatsoever to do with the development of a self-critical social science. An abstract nature, an "essence", is attributed to the ideas of "cause" and "laws" and, as such, the role of method in science was ignored. One wonders why Durkheim undertook a study of logic at all, except to justify the absolutes that he accepted beforehand.

It is important to see how this mystified view of truth parallels Durkheim's personification of "society". His logic had the same assumptions as did his view of society. For example, discussing his data on suicide, Durkheim wrote:

"Since each of these figures contains all the individual cases indiscriminately, the individual circumstances which may have had a share in the production of the phenomenon are neutralized and, consequent-
ly, do not contribute to its determination. The average, then, expresses a certain state of the group mind ..." This is an interesting logic. In the process of manipulating figures, individual experience was abolished. Durkheim's logic was one that ended up believing that general facts have more reality than human behaviour. In the process a new reality ("group mind") is created to complement his abstract, mystified logic.
Scientism and Authoritarianism

Durkheim ended his study with three conclusions. First, he claimed his method "is entirely independent of philosophy".71 This is the case because "the principle of causality" is "applied to social phenomena".72 But as our critique has shown his "principle of causality" was really an expression of his view of society. The problem of logic was ignored in the process and his logic became rules for documenting and maintaining the status quo.

His claim was to have created a value-free methodology which was superior to "... individualistic, communistic and socialist doctrines ... (which tend) ... not to describe or interpret, but to reform social organization."73 But we have seen how his nomothetic logic itself paralleled a commitment to the maintenance of the social order. A commitment to the status quo, no matter how much it is sophisticated with social theory, which in Durkheim's case tended toward natural law, still reflects values. Again we see the impossibility of a value-free science or logic.

For Durkheim duty or discipline was equated with "good". In his own words:

"Discipline has its justification in itself. It is good that man should be disciplined."74

This ideology pervaded all of his work, including his logic. He did admit that

"... our reasoning is not at all revolutionary. We are even, in a sense, essentially conservative."75

Even so, he seemed unaware that the logic he used, as distinct from the one he formalized (his "rules"), included his conservative reasoning.

Reasoning (i.e., logic) can be revolutionary or conservative. It is not a method independent of one's overall perspective or commitments. Durkheim remained
unaware of this and tried to give his "reason" an autonomous status. Discussing his distinction between the normal and the pathological he wrote: "It is yet possible for us to vindicate the legitimate rights of reason in the solution of the problem just stated, without reverting to ideology."76 Durkheim treated the problem of ideology in the way that Mannheim labelled "particular". He showed no awareness of how ideology constitutes an intellectual problem in itself; one that was implied in his own work.

Durkheim's claim to be value-free cannot be accepted. Since his "rules" and their rationales depended on this claim, his second conclusion that his method is objective must also be rejected. We saw how his idea of objectivity was really a mystification of methodology. The following statement clearly shows this tendency: "We have shown how the sociologist has to disregard the preconceptions which he had of facts, in order to face the facts themselves; how he has to discriminate among them according to their most objective characteristics; how he must seek in the facts themselves ..."77 Facts are treated as externals, external even to methodology. According to Durkheim, we must "face the facts themselves ... according to their objective characteristics ... and must seek in the facts themselves ..." their meaning. The fact that it was Durkheim's own logic that led him to see facts in this way, as things, is totally ignored. It was his logic (the term "rules" reflects his attempt to represent his logic and method as being objective, per se) that led to this reified view of facts. It was his adherence to conservative rationalism that led him to personify social facts; to give his own creation more reality than human experience.

His last conclusion was that his method was "exclusively sociological".78 By this he meant "... that a social fact can be explained only by another social
fact. 79 This exclusiveness is one way of keeping the study of society in the abstract. His ideological orientation, his rationalism and his formal logic led to a "sociologism": a sociology without people; one that justifies the social order, per se, and hence one that can act as a scientistic rationalization for authoritarianism.

The task of Durkheim's sociology was

"... no longer a matter of pursuing desperately an objective that retreats as one advances, but of working with steady perseverance to maintain the normal state, of re-establishing it if it is threatened, and of rediscovering conditions if they have changed. The duty of the statesman is no longer to push society toward an ideal that seems attractive to him, but his role is that of the physician: he prevents the outbreak of illnesses by good hygiene, and he seeks to cure them when they have appeared." 80

Catlin, who wrote the Introduction to the Free Press edition of Durkheim's book, also noted that Durkheim's sociology has an authoritarian potential in it. This is far different than saying it can be used for authoritarian ends. The very mode of reasoning, not just the kind of knowledge resulting, implies authoritarianism. Catlin ended his Introduction: "If, with one hand, Durkheim as sociologist has built the structure of popular dictatorship, with the other he has indicated to us the deeper volcanic forces that must destroy in time, by a certain law of human seismology, every tyranny that does violence to our substantial natures." 82

Durkheim's contribution was not as a logician, aware of the problem of ideology; it was, as Catlin said, one of renewing our interest in natural law. 83 But what has this to do with social science? It is the tendency to reify general facts into natural laws which underlies the authoritarian potential in his sociology. His "sociological rules" ended up being means to enforce social rules, not means whereby our understanding of human experience and behaviour is enhanced.
Another tendency exists within Durkheim's logic. In places he seemed almost aware that his logic was pragmatic and not intrinsic. We have shown that its ideological function - making social facts appear as natural laws - was fundamental to any methodological value it had. In places Durkheim talked of how "facts must be treated as things", as if he knew he was creating a methodology most appropriate to his conservative commitments. Had he not left his discussion of "conceptions of society" until the end of the book perhaps he might have recognized that his logic and type of knowledge paralleled his own ideology about society. Then he would have been in a better position to be self-critical and to recognize the authoritarianism that his sociologism implied. We could only speculate where such an awareness on his part might have led.

Footnotes

1 Emile Durkheim: The Rules of Sociological Method. New York, The Free Press (1966). By sociologism we refer to theories that tend to reduce human experience and behaviour to sociological explanations. They are ignorant of what Sartre called "mediations" and do not situate their knowledge in ongoing human praxis. They are potentially authoritarian because abstract, reductionistic ideas can easily function in the interests of those who control centralized power. Sociologist ideas do not specify the meaning of existence for people within a certain set of social relations, but rather tend to rationalize the function of those social relations, and, as such, can help in the maintenance of them regardless of their consequences. For a discussion of Durkheim's sociologism, which recognizes its reductionism, but not its authoritarianism, see Edward A. Tiryakian: Sociologism and Existentialism. Englewood Cliffs, N.J., Prentice-Hall (1962).

2 Ibid., p. xliii.

3 Ibid., p. 13.

4 Ibid., p. 10.

5 Ibid., p. 1.

6 Ibid., p. 2.
Logical theories which fail to note the relativity of propositions to the given stage of inquiry attained, erect the distinction of empirical and rational into a rigid difference in the ontological natures of their respective subject-matters."

John Dewey: *Logic: The Theory of Inquiry*. New York, Holt, Rinehart and Winston (1938), p. 305. In Chapter Twenty, I shall criticize the tendency of academic, formal logicians to treat their dichotomies ontologically, i.e., as though they are rooted in the character of Being. I am using the term "ontology" in this general sense, not in the specific philosophical sense of Sartre, Heidegger and other existentialists and phenomenologists.

John Stuart Mill: *Auguste Comte and Positivism*. Ann Arbor, University of Michigan Press (1961). Mill's view of knowledge as the study of "successions and co-existence of phaenomena" (Ibid., p. 7) and his treatment of logic, laws, causes, etc. in terms of this is similar to the mechanistic approach of Durkheim.

Durkheim, op. cit., p. 47.

Ibid., p. 48.

Ibid., p. 49.

For a discussion of Gurvitch's sociology see P. Bosserman: Dialectical Sociology. Boston, Porter Sargent (1968). Gurvitch saw Weber as a "radical nominalist" who denied the existence of human collectivities, and saw Parson's sociology as an extension of this error. But, unlike Durkheim, he approached the study of collectives in a dialectical way.

Durkheim, op. cit., pp. 54-5.

Ibid., pp. 55.

Ibid., p. 61.

Ibid., p. 64.

Ibid.

Ibid., p. 74.

Ibid., p. 75.

Ibid., p. 76.

Ibid., p. 80.

C.W. Mills: Images of Man, op. cit.

Durkheim, op. cit., p. 87.

Ibid., p. 89.

Ibid., p. 90.

Ibid., p. 93.

Ibid., p. 95.

Ibid.
When people are not able to evaluate different alternatives and have no choice nor control over both the ends and means of social change we can refer to such control as authoritarian.

Durkheim, op. cit., p. 102.

Ibid., p. 104.

Ibid., p. 105.

Ibid., p. 106.

Ibid., p. 110.

Ibid., p. 121.

Ibid.

Ibid., p. 123.

Ibid.

This phrase was used often by C.W. Mills.

Durkheim, op. cit., p. 124.
73 Ibid., p. 142.
74 Ibid., p. xxx.
75 Ibid., p. xxxix.
76 Ibid., p. 49.
77 Ibid., p. 144.
78 Ibid.
79 Ibid., p. 145.
80 Ibid., p. 75.
81 Ibid., p. xxvii.
82 Ibid., p. xxvi.
83 Ibid., p. xxxiii.
Chapter Fifteen

A Polemical Logic: Popper

Karl Popper's ideas could be seen as a step towards a logic that accounts for the problem of ideology or as a step away from the logics that could not handle questions arising from this problem. His almost pragmatic understanding of methodology supports the former interpretation, while the formalism of his argument supports the latter. Because of the marginal and ambiguous character of his approach, an examination of Popper will help us make the transition from blatantly inadequate theorists, like Durkheim, to theories that can deal with logical problems in an ideological context.

Formal and Pragmatic Criticism

Though Popper's ideas on methodology come close to a pragmatic understanding of logic, his method of criticism did not. He often seemed to be basing his argument on disagreements with his own vulgar creation ("historicism") rather than representing fairly the views with which he claimed to disagree. In comparing and criticizing theories of logic, Bentley outlined what a pragmatic method of criticism entails: "Our purpose is not so much to debate the rights and wrongs of these procedures, as it is to exhibit the differences in materials and workmanship, and to indicate the types of results thus far offered." Popper's method of criticism was too formal to even approximate this approach. He admitted that he had constructed arguments in support of historicism that were not brought forward by the so-called historicists themselves. He also admitted that he had "... tried to
perfect a theory which has often been put forward but perhaps never in a fully
developed form."² As our analysis will show, this method compounds confusion.
Popper ended his introduction with the statement: "By introducing (the some-
what unfamiliar label 'historicism') I hope I shall avoid merely verbal quib-
bles ..."³ Yet, because the "perfect theory" and the arguments against it were
his creation, there was a tendency for debate about "historicism" to become no
more than verbal quibbling.

I will attempt to show that the few relevant ideas raised by Popper can
be organized and articulated in a way that avoids his formalism. As we shall
see, the "fully developed form" of historicism of which Popper spoke did not
really clarify the problem of logic, nor of ideology, though both have much to
do with the questions with which he was concerned.

Popper's book was organized in four sections that combine what he called
pro and anti-naturalistic positions. Popper outlined both the "pro and anti-
naturalist doctrines of historicism" and then criticized each. In his own terms
we find that Popper is an anti-historicist and a pro-naturalist.

By historicism Popper meant "... an approach to social sciences which
assumes that historical prediction is their principle aim, and which assumes
that this aim is attainable by discovering the ... 'laws' or 'trends' that under-
lie the evolution of history."⁴ He included Marx, J.S. Mill, Comte and others
in this classification. His main point, an important one, was that social
scientific laws are not historical predictions. We shall see, as we proceed,
that the general theory to which this main point was attached was far less
credible than the point itself.
Antoni-Naturalist Historicism: Methods in the Social and Natural Sciences

Popper's first section was an articulation and refutation of what he called the anti-naturalist form of historicism. This "Historicism asserts that the historical relativity of social laws makes most of the methods of physics inapplicable to sociology." Such a historicism sees no possibility of scientific generalization or experimentation in the social sciences because "... social uniformities are not laws of nature, but man-made ..." and, furthermore, because "... artificial isolation would eliminate precisely those factors in sociology which are most important." The emergence of novel and unique conditions, the complexity of societies and the "inexactitude of prediction" resulting from this are also used as arguments against the relevance of the methods of physical science for problems in the social sciences.

In addition, "... the influence of predictions upon predicted events" is stressed by these historicists. Describing this position, Popper wrote "We are faced, in the social sciences, with a full and complicated interaction between observer and observed, between subject and object." The "interaction between observer and observed, between subject and object" undermines a naturalistic form of objectivity in the social sciences.

"The social scientist may be striving to find the truth; but, at the same time, he must always be exerting a definite influence upon society. The very fact that his pronouncements do exert an influence destroys their objectivity."

Remember that this was Popper's representation of the "perfect theory" of historicism. He warned that it may lead "... to that extreme form of relativism which holds that objectivity and the ideal of truth, are altogether inapplicable in the social sciences ..." He also warned that it may lead to the "sociology of knowledge" position that "Social science may thus function as a midwife, help-
ing to bring forth new social periods; but it can equally well serve, in the hands of conservative interests, to retard impending social changes."\textsuperscript{11}

This latter statement, in general, represents my own argument. In the last chapter I criticized Durkheim's rules of sociology because they tend to fulfill conservative interests, yet were presented as though they were value-free. The way a class of problems, methods and theories function within the social and political system constitutes the main problem of ideology for the social sciences. Yet I have not built my argument on what Popper called an anti-naturalist position. A clarification of why the sociology of knowledge thesis and an anti-naturalist posture need not be combined will go a long way to show why Popper's creation of "historicism" failed to further our understanding of the problem of logic.

According to Popper a belief in holism also underlay the anti-naturalist form of historicism.\textsuperscript{12} In addition, a belief in intuition related to this form of historicism. This is the view that whereas "Physics aims at causal explanation: sociology (aims) at an understanding of purpose and meaning."\textsuperscript{13} Popper outlined "three variants" of this belief. "The first asserts that a social event is understood when analyzed in terms of the forces that brought it about."\textsuperscript{14} The purposes or interests of individuals and groups are the key to this kind of understanding. The second goes beyond this "teleology" to account for the "significance" or "meaning" of an event. The third goes beyond both of these to "... an analysis of (an event's) genesis, effects and situational value."\textsuperscript{15} This third variant concerned itself with historical trends, the subject around which Popper based much of his analysis.

Popper argued that these historicists did not believe that quantitative
methods were applicable in sociology in the way that they are in physics. For them, sociology "... tries to understand historical development more in qualitative terms ...". According to this line of thinking, causal explanations of historical trends cannot take a mathematical form.

2 - Essentialism versus Nominalism

Popper then came to his main point: the dispute between essentialism versus nominalism. This is a conflict resulting from "the so-called problem of universals", something which I will discuss in depth when analyzing Toulmin and Dewey's theories of logic. According to Popper, this problem "... is usually interpreted as a purely metaphysical problem; but like most metaphysical problems, it can be reformulated so as to become a problem of scientific method.".

Nominalists see a "universal term" as "a label attached to a set of many different things". Essentialists (sometimes called realists) "believe in the existence of universals" and argue that "Science must strip away the accidental and penetrate to the essence of things (and) ... the essence of anything is always something universal." In contrast, "Methodological nominalists ... regard words merely as useful instruments of description." This latter methodology, claimed Popper, "... has been victorious in the natural sciences." He therefore concluded:

"Thus in the social sciences, we should expect methodological naturalists to favour nominalism, and anti-naturalists to favour essentialism. Yet in fact (in the social sciences) essentialism seems to have the upper hand ... It has been suggested that while the method of the natural sciences is fundamentally nominalistic, social science must adopt a methodological essentialism.".

Popper argued that all historicists "... will be inclined to side with essentialism and against nominalism so far as the methodology of social science is concerned." According to him, this tendency relates to the problem of
"detecting an identity in things that change". Historicists are mainly concerned with change. Yet, "Even if nothing remains unchanged, we must be able to identify what has changed in order to speak of change at all." Sociology faces a particular problem regarding the identification of change in social institutions. Developing a historicist approach to social change, Popper stated that

"A naturalistic description of contemporary institutions of government ... might have to present them as entirely different from what they were four centuries ago. Yet we can say that, in so far as there is a government, it is essentially the same, even although it may have changed considerably. Its function within modern society is essentially analogous to the function it then fulfilled."

Popper thus argued that historicism is a form of functionalism with a bias towards essentialism. This association of essentialism and historicism reflects Popper's overall argument. Our discussion of Marx and Engels showed that they rejected the essentialist notion of knowledge. For them, giving ideas an "essence" was the ideologist's profession. Popper's placement of Marx (and Engels) in his classification of historicism was not justifiable. In one sense, they were functionalists since they analyzed how our ideology and social structures functioned in the division of labour and political economy, but their emphasis on the "historical specificity" of events ruled out the kind of trans-epochal functionalism of which Popper spoke. Popper was clearly arguing more with a vulgar marxism - a naive Hegelianism - than with the sociology of Marx.

Pro-Naturalistic Historicism: The Problem of Historical Prediction

Popper claimed that historicism was "fundamentally anti-naturalist". But a pro-naturalism can also underlie historicism, and with many of its assumptions Popper agreed. He agreed that "... sociology has to explain and to predict..."
events, with the help of theories or of universal laws (which it tries to discover)."^{28} He disagreed, however, that these laws are historical in nature.

The "historicist", even if a "naturalist", maintained his belief in historical laws. According to Popper, the historicist "... claims that sociology is theoretical history"^{29} with history providing the laws that help "explain and predict" events. The historicist believes in "... laws of historical development which determine the transition from one period to another."^{30}

It is with this characteristic of historicism, whether rooted in an anti or pro-naturalistic posture, that Popper fundamentally differed. Popper's idea of scientific prediction differed fundamentally from that he attributed to historicism. He distinguished two kinds of prediction: "prophecy" and "technological". The former prophecizes events; the latter "... are, so to speak, constructive, intimating the steps open to us if we want to achieve certain results."^{31}

In this regard, Popper was apologetic for sounding like a pragmatist. He wrote "I do not wish to be taken as implying that all sciences, or even all scientific predictions, are fundamentally practical ..."^{32} He continued "I certainly wish to hint at a feature they exhibit if looked at from the pragmatic standpoint; but my use of this terminology is neither intended to mean that the pragmatic point of view is necessarily superior to any other, nor that scientific interest is limited to pragmatically important prophecies and to predictions of a technological character."^{33} Then he summarized his argument: "... historicists, quite consistently with their belief that sociological experiments are useless and impossible, argue for historical prophecy - the prophecy of social, political and institutional developments - and against social engineering, as the practical aim of the social sciences."^{34}
According to Popper, "This kind of history with which historicists wish to identify sociology looks not only backwards to the past, but forwards to the future." With this historical idea of science, Popper disagreed. In opposition to it, he advocated "... a methodology which aims as a technological social science. Such a social science would be anti-historicist, but by no means anti-historical. Historical experience would serve as a most important source of information." After advocating an ahistoricist social science or what Popper called a "technological social science", he returned to his criticism of the historicist argument that "Social midwifery is the only perfectly reasonable activity open to us, the only activity that can be based upon scientific foresight." An examination of this point will show that Popper's "perfect theory" was really a reflection of his own ideological orientation.

Popper saw a contradiction between ideas of freedom and ideas of necessity in the historicist's notion of social midwifery. He wrote that historicist doctrines "... teach that the transition from the realm of necessity in which mankind at present suffers to the realm of freedom and reason cannot be brought about by reason but - miraculously - only by harsh necessity by the blind and inexorable laws of historical development, to which they counsel us to submit." On the basis of one quotation from the preface to Capital he then took Marx as a representation of this theory.

"When a society has discovered the natural law that determines its own movement, even then it can neither overlap the natural phases of its evolution, nor shuffle them out of the world by a stroke of the pen. But this much it can do: it can shorten and lessen the birth-pangs. This formulation, due to Marx, excellently represents the historicist position." Taking this as, that is, making it into a tenet of historicism, rather than a phrase at one stage of the development of Marx's thought, Popper believed he
had exposed a logical contradiction between the "peculiar variety of fatalism" and what he called the "activist exhortation" of historicism. He took another quotation from Marx; the statement that "The philosophers have only interpreted the world in different ways: the point, however, is to change it ..." and, on the basis of the fatalism he earlier attributed to Marx, reinterpreted the statement to mean: "The historicist can only interpret social development and aid it in various ways; his point, however, is that nobody can change it."

Here we see the peril of a formal, academic approach to criticism. Popper talked about "a pure historicist" and "the consistent historicist", as though any attempt to make social events intelligible must be a perfect, logically consistent, abstract model. In fact, his creation of a pure, consistent historicism served his own purposes: that of presenting his ideological orientation in the language of logic. It in no way provided a clarification of the sociology of Marx.

In the Thesis on Feuerbach, there are statements that make it abundantly clear that Marx was not a fatalist. There he talked of how "practical-critical activity" is the basis of scientific problem solving. His eighth point is worth quoting:

"All social life is essentially practical. All the mysteries which urge theory into mysticism find their rational solution in human practice and in the comprehension of this practice."

From this it is quite clear that Marx did not see fatalistic laws as the force of history. It is possible for people to interpret some statements from Marx's latter work, where his hypotheses about historical materialism were more thoroughly developed, in such a vulgar way. And vulgar marxism has been rampant since the Stalinist counter-revolution in the Soviet Union. But no where did Marx talk of having "... to submit to the existing laws of development, just as
we have to submit to the law of gravity." Popper's manufactured critique of Marx, rooted in his formalistic approach to criticism and logic, stands in sharp contrast to Sartre's pragmatic and progressive criticism of vulgar marxism.

In concluding the second part of his study, Popper stated that "... from the standpoint of history, though not of logic, methodologies are usually by-products of philosophical views." This is an absurd statement. History and logic were placed in different realms, yet methodology related to both. How can this be? It is impossible to split a study of logic from a study of history once the relevance of ideology to logic is acknowledged. Popper's mis-handling of the sociology of knowledge related to the polemical uses to which he put his formal logic. In creating an abstraction called "historicism", and under the pretense of dealing with historicism "only in so far as it is a doctrine of method," the ideological underpinnings of Popper's own creation were obscured. But with his criticisms of his creation "historicism" they begin to become explicit.

Criticisms of Anti-Naturalist Historicism: 1 - Scientism and Historicism

Popper began his criticism of anti-naturalist historicism with a discussion of the relationship between theory and practice. He argued that "The more fruitful debates on method are always inspired by certain practical problems ... and nearly all debates on method which are not so inspired are characterized by that atmosphere of futile subtlety which has brought methodology into disrepute with the practical research worker." On the basis of this statement, he then developed his "technological approach to sociology". This approach rested on "... an analogy between the methods of the social and the natural sciences ..." But it was not to be "a dogmatic methodological naturalism" or what Popper called
"scientism". Rather it is an analogy that stressed the "... fundamental simi-
larly between the natural and the social sciences."  

Awareness of this fundamental similarity can be a challenge to scientism. 

Scientism, to Popper, was "... the imitation of what certain people mistake for 
the method and language of science." As he said: "... we can hardly offer a 
stronger argument against these dogmatic naturalists than one that shows that 
some of the methods they attack are fundamentally the same as the methods used 
in the natural sciences."  

The "pursuit of the analogy between natural and social science" was 
Popper's strategy for attacking the historicist's belief in holistic or "utopian 
engineering". It was the way he developed his argument for what he called "piece-
meal tinkering" with social institutions. It is a strategy that combined two sep-
parate issues: first, a specific analogy between the natural and social sciences; 
and, second, a "theory" about the nature of social institutions. The two must be 
dealt with separately to avoid confusion. Such a separation exposes the fallacy 
in Popper's thought. 

Popper's view of social institutions was shown by the following statement: 

"The term 'social institution' is used here in a very wide sense, to include 
bodies of a private as well as of a public character. Thus I shall use it 
to describe a business, whether it is a small shop or an insurance company, 
and likewise a school, or an 'educational system', or a police force, or a 
Church, or a law court."  

This is a formal concept without any historical reference or social analysis. 

Popper's claim "... that the technological approach is quite independent of all 
questions of 'origin" does not invalidate the need to know, in a specific way, 
the historical development of institutions to understand how they function. With-
out this kind of knowledge one ends up with an abstract functionalism that approxi-
mates the essentialism ("social institutions") that Popper earlier tried to associate with historicism and marxism.

Popper contrasted his piecemeal tinkering with the "holistic" view of social science that he attributed to the historicists. He argued that the whole, i.e., society as a whole, "... can never be the object of scientific inquiry." Instead

"If we wish to study a thing, we are bound to select certain aspects of it. It is not possible for us to observe or to describe a whole piece of the world or a whole piece of nature ..." The historicists, who, for Popper, saw the task of social science as developing historical laws to explain and predict changes in the whole society, have therefore taken on an impossible task. So "... in practice they always fall back on a somewhat haphazard and clumsy although ambitious and ruthless application of what is essentially a piecemeal method without its cautious and self-critical character." We need to look at Popper's view of methodology in the natural sciences to see how his piecemeal or technological social science related to his belief in the unity of method of all science. Our analysis of the fourth and last section of his study will best allow us to do this. For now, it is important to note that Popper defined the anti-naturalist historicism as "utopian"; as wanting to grasp the whole development of society, and to "... control all, or 'nearly' all, these relationships ..." And he saw this as a "logical impossibility" rooted in a misunderstanding of the scientific method.

Popper described the scientific method as:

"We try; that is, we do not merely register an observation, but make active attempts to solve some more or less practical and definite problems. And we make progress if, and only if, we are prepared to
learn from our mistakes: to recognize our errors and to utilize them critically instead of persevering in them dogmatically. Though this analysis may sound trivial, it describes, I believe, the method of all empirical sciences.\textsuperscript{64}

According to Popper, the holist view of social science failed to understand "... that all knowledge, whether intuitive or discursive, must be of abstract aspects, and that we can never grasp the 'concrete structure of social reality itself'\textsuperscript{65}

2 - Popper's Politics

This criticism of what Popper called "holism" is justified. Any approach to social science that seeks to understand historical laws and to control all social relationships implied by them is not only dogmatic, but psychotic. Such a so-called "social science" would be closer to theological thought than pragmatic, empirical thought. But Popper was implying more than this general critique of scientism. For one thing, his own politics pervaded his argument. When he wrote that the historicists "... tell us that we are forced ... to regulate the whole of social life ..." and that this "... is merely a typical attempt to threaten us with 'historical forces' and 'impending developments' ..."\textsuperscript{66} there is a touch of anti-communist paranoia implied. Who are the historicists that want to do this? Popper admitted that "historicism" is his perfect theory. Yet he clearly saw "them" as a political enemy. In this regard his methodological discussion seems to be more a polemic than a committed attempt to clarify problems in logic. Since Popper's ideological orientation was implicit, not explicit, in his discussion he failed to connect the problem of logic to the problem of ideology.

If Popper had been more specific in his polemic, some of his more valuable ideas might have been better articulated. For example, when he stated that: "The holistic planner overlooks the fact that it is easy to centralize power but impossible to centralize all that knowledge which is distributed over many individual
minds, and whose centralization would be necessary for the wise wielding of centralized power," he was touching on the important relationship of political power and social knowledge which greatly underlies the problem of ideology. In a footnote, he speculated on the relationship as follows: "... the progress of science depends on free competition of thought, hence on freedom of thought, and hence, ultimately, on political freedom." In contrast to Popper, however, Bronowski made this matter (discussed in Chapter Twelve) central to his approach to logic. Because of his formal approach to logic, the relation between politics and science was only of a secondary importance to Popper. He was more concerned with building a polemic against the politics with which he disagreed than with analyzing how politics and science generally interrelate.

Popper's concern about centralized power certainly applies to Stalinist communism (in contrast to socialist humanism) and to corporate capitalism. In both systems those with power make policy decisions affecting the mass of people without real knowledge about the many consequences. This does not mean that they don't achieve the specific consequences (e.g., profit, control, etc.) that concern them, but this is not the same as considering the many consequences. For example, in both cases, the people are without self-determination, i.e., real control over the decisions that affect them. Had Popper discussed, specifically, how and why this happens, and gone on to propose more liberating ways of relating power and knowledge, his point might have been of some value. As it stands, his blanket association of historicism, marxism and Stalinist communism is a poor polemic based on a poor argument. Because of his failure to deal with his own ideology, under the pretense of being a value-free logician, Popper ended up being "ideological" in a crude, non-intellectual way.
3 - A Priori Arguments and Scientism

Popper went on to criticize the historicist's belief that "... social experiments are useless because it is impossible to repeat them under precisely similar conditions." He argued that this "... contention rests upon a gross misunderstanding of the experimental methods of physics."

He wrote that "The striking differences with which the historicist is so much preoccupied, that is to say, the differences between the conditions prevalent in various historical periods, need not create any difficulties peculiar to social science." This is the case because the "... physicist knows that very dissimilar things may happen under what appear to be precisely similar conditions." Therefore, the task of an experiment is "... to find what kind of similarity is relevant and what degree of similarity sufficient." Popper declared that "It is impossible to decide a priori about any observed difference or similarity, however striking, whether or not it will be relevant for the purpose of reproducing an experiment."

If one is consistent in his or her rejection of a priori analysis, this will lead to a pragmatic understanding of logic and of knowledge generally. To the extent that he did this, we are in agreement with Popper. A mystified understanding of natural science, which we criticized in Chapter Six, definitely is the basis of much of the anti-naturalist tendencies among social scientists. But as before it is Popper's misuse of this point to build an a priori, anti-historicist case that demands our criticism. We can accept that science, as an approach, is not fundamentally different for the study of society than for the study of so-called nature. In both areas, science acts as a human tool.

As we saw with Durkheim, there is the danger of making the analogy between the natural and social sciences into a rationale for conservatism, and, if this is
pushed, into one for authoritarianism. The fact that science can be used as a tool for many different ends often gets forgotten and the dominant, contemporary use of science gets mystified. Criticism is lost and the "authority" of science and the established political system become the basis of belief in it. This is what Bronowski's pragmatic view of science pointed out. Though Popper warned us against this "scientism", his own personification of historicism and his poor polemic against it cloaked over this general and important problem. For example, about the historicist's skepticism about the human's ability to adapt to new "bewildering conditions", Popper said "Such fears seem to me part of the historicist hysteria - the obsession with the importance of social change ..." It is not easy to see what the point is, though his dislike for "historicism" is clear. Popper certainly was not dealing with the problem of scientific and social stasis and change in an intellectual manner.

Popper's discussion progressed to the important question: are generalizations confined to historical periods? It is this sort of question that makes the sociology of knowledge thesis and hence the problem of ideology relevant to the discussion of logic. Though Popper failed to understand the implications of his own question, my own discussion can draw them out.

First, Popper stated that he did not believe that "... observations and experiments are ... logically prior to theories." He continued "... that theories are prior to observation as well as experiments, in the sense that the latter are significant only in relation to theoretical problems." He clearly rejected the idea of induction as a general theory of logic. As he said: "I do not believe, therefore, in the 'method of generalization', that is to say, in the view that science begins with observations from which it derives its theories by
some process of generalization or induction."79

But Popper avoided the important question: where do our theories come from?; or, better stated: what experience shapes the nature of our theories? Instead of discussing this, he jumped to two related "conclusions" that prove to be unargued assumptions. First, he said: "... the historicist overrates the significance of the somewhat spectacular differences between various historical periods ..."80 and, second, he said: "... there seems no reason why we should be unable to frame sociological theories which are important for all social periods."81 Clearly this is a matter for inquiry. It is not enough to state these points and build an argument from it. Interestingly, in doing this, Popper approached his own historicism. Though he saw laws rooted in theoretical sociology in a pragmatic way, he still ended up believing in an essentialism and a kind of historicist philosophy. For instance, he wrote that "... the significance of the alleged changes of human nature is dubious, and very hard to assess."82 I can agree with the latter part of the statement, but the first part suggests that Popper's anti-historicism reflects his allegiance to the established order more than a commitment to clarifying the logical problems involved in evaluating social events.

It is indeed difficult to begin to disentangle ideology from logic in Popper. His part-polemic against historicism and part-clarification of the analogy between the natural and social sciences did not lead to a clear statement of problems. Instead it leads to a premature statement of belief. Though he rejected scientism, he ended up with a view of science that can easily turn into this doctrine.

To show this, let us look at Popper's statement that
"... it is an important postulate of scientific methodology that we should search for laws with an unlimited realm of validity. If we were to admit laws that are themselves subject to change, change could never be explain-
ed by laws." 83

First, according to this, science has an a priori postulate; something that easily leads to the uncritical approach typical of scientism. And, second, while I accept that the notion of "law" is useful in anchoring observations and interpretations - in guiding inquiry - the laws do not have to be placed outside inquiry. This, also typical of scientism, is what Popper's statement implies. His criticism of scientism, utopianism and historicism ended up with as many a priories as he attributed to the doctrines around which he built his own case.

Criticism of Pro-Naturalistic Historicism: 1 - Laws, Trends and Causes

Popper continued his discussion of laws in the social sciences by criti-
cizing pro-naturalistic historicism. From it, we can gleam some insights, but an overriding confusion prevailed. Popper first lumped pro-naturalistic historicism into the category of "scientism". Since I have already suggested that Popper's thought process could lead to a form of scientism, we must be more careful with the term. It is worth considering the possibility that since "historicism" is Popper's "perfect theory", the scientism he attributes to "it" could also be his own. Because formal logic takes statements out of their initial context and, in this sense, nurtures an eclectic form of criticism, it is easy for a theorist util-
lizing this method to project his or her own ideas into the argument of those being criticized. Real theoretical dialogue is impossible unless the logical categories being used are explicitly related to the ideological orientation of an author. Popper consistently failed to do this in his study of so-called historicism.
Popper argued that a belief in a law of evolution underlay pro-naturalistic historicism. He wrote that "Indeed, the recent vogue of historicism might be regarded as merely part of the vogue of evolutionism - a philosophy that owes its influence largely to the somewhat sensational clash between a brilliant scientific hypothesis concerning the history of the various species of animals and plants on earth, and an older metaphysical theory which, incidentally, happened to be part of an established religious belief." Then, again treating theory in a quasi-pragmatic fashion, he argued that the distinction between hypotheses and laws must be kept clear if we are to avoid such metaphysical beliefs about science: "... the fact that all laws of nature are hypotheses must not distract our attention from the fact that not all hypotheses are laws, and that more especially historical hypotheses are, as a rule, not universal but singular statements about one individual event, or a number of such events." On the basis of this, he rejected the possibility of any evolutionary law. "The idea that any concrete sequence or succession of events ... can be described or explained by any one law, or by any one definite set of laws, is simply mistaken."

Popper continued by warning us that tautological thought can result from a confusion of laws and hypotheses: "... once we believe in a law of repetitive life-cycles - a belief arrived at by analogical speculations, or perhaps inherited from Plato - we are sure to discover historical confirmation of it nearly everywhere." Here, Popper raised a question that ultimately takes us to the problem of ideology. The important question is how such a belief in universals as realities, rather than as pragmatic notions, develops? What form of socialization and training underlies such beliefs? The fact that Popper didn't concern himself with this implication does not alter the fact that his own statement can lead to such a question.
Popper continued by discussing the confusion that results from using notions from physics in sociology. For example, the idea of laws of motion in physics does "... not intend to imply that the body or system in question undergoes any internal or structural change, but only that it changes its position relative to some (arbitrarily chosen) system of co-ordinates." Yet, according to Popper, in sociology the idea is often used to imply a law by which a structural change occurs. For him, this was a form of metaphysical thinking and he concluded that "Since there is no motion of society in any sense similar or analogous to motion of physical bodies, there can be no such laws."

This line of argument has several implications. One is that a direct analogy between the natural and social sciences is inadequate. Rather than concluding that there can be no evolutionary or historical laws, one could argue that the notion of laws has a different function in the two realms of subject matter. This does not necessarily lead to a scientism or to the kind of historicism Popper articulated. It can lead to a use of universals as anchors for the study of social events. We must consider the radical proposal that the universals could be values; critical judgments about human social relations that would affect the class of problems with which social science deals. Our discussion of Berlin's approach to the problem of ideology in Chapter Seven already raised this point.

The other consideration is that basing an argument about laws of change on an analogy between the natural and social sciences is itself deceptive. Though the logic involved in an experiment in the natural and social sciences may be similar (e.g., assessing arguments in all their implications) the "subject matters" are not. Thus, though no experiments nor laws like that in physics are possible in sociology, "arbitrarily chosen" values (comparable to arbitrarily chosen "points")
by which to evaluate "internal and structural" changes in a social system could function to establish "laws". And in a way similar to how the natural scientist changes experimental conditions in an attempt to create and/or find a hypothesized relationship, so the social scientist could be involved in such "experimenting". The conservative social scientist may use techniques to help to keep the social system close to the values of the status quo. The radical may use techniques to try to change the system to be closer to other values. The form and content of the knowledge of the two will obviously be different.

Can revolutionary analysis and strategy itself be seen as an experimental "technique"? Once a rigid analogy between the natural and social sciences (whether of a "scientistic" or formal kind) is rejected, this idea becomes credible.

Popper "solved" the dilemma resulting from his formal analogy between the natural and social sciences with the distinction between "trends" and "laws". He wrote that "A statement asserting the existence of a trend is existential, not universal ... (while) a universal law, on the other hand, does not assert existence ..."^90 Within Popper's logic, a universal "asserts the impossibility of something or other".^91 Popper considered "existential" statements to be metaphysical in the sense of being unscientific. For him "... all knowledge, whether intuitive or discursive, must be of abstract aspects, and that we can never grasp the 'concrete structure of social reality itself'."^92 For him any belief in such "concrete knowledge of 'reality itself'" was a form of "mysticism".^93

For Popper, the confusion of trends and laws underlay most of the errors in doctrines of historicism. In his words: "There is little doubt that the habit of confusing trends with laws, together with the intuitive observation of trends (such as technical progress), inspired the central doctrines of evolutionism and
historicism - the doctrines of the inexorable laws of biological evolution and of the irreversible laws of motion of society.\textsuperscript{94} A misunderstanding of the character of causal explanation also related to this confusion. Popper described "cause" in the following way: "I suggest that to give a causal explanation of a certain specific event means deducing a statement describing this event from two kinds of premises: from some universal laws, and from some singular or specific statements which we may call the specific initial conditions.\textsuperscript{95} He continued: "Thus we have two different constituents, two different kinds of statements which together yield a complete causal explanation: (1) Universal statements of the character of natural laws; and (2) specific statements pertaining to the special case in question, called the 'initial conditions'.\textsuperscript{96} From the former, we "... can deduce, with the help of the initial conditions ..." a "specific statement" which "we may also call a specific prognosis". And "The initial conditions (or more precisely, the situation described by them) are usually spoken of as the cause of the event in question, and the prognosis (or rather the event described by the prognosis) as the effect ..."\textsuperscript{97}

Popper made two conclusions from this precise understanding of cause. They again show Popper's quasi-pragmatic view of science. First, he said: "... we can never speak of cause and effect in an absolute way, but must say that an event is a cause of another event - its effect - in relation to some universal law."\textsuperscript{98} It is important to note that a belief in absolute causes, rooted in an ignorance of the character of science, underlies what we have called scientism. The failure to deal with the problem of ideology, or its implications for logic, grows from this belief in absolute causes. Popper did not conclude this, though it is consistent with his view of "cause".
Popper's second point was that "... the use of a theory for predicting some specific event is just another aspect of its use for explaining such an event". And, as he said, "... whether we use a theory for the purpose of explanation, of prediction, or of testing, depends upon our interest ..." For our purposes, the thing to note is that theory has a pragmatic value and not an essential truth or falsehood. As Popper said: "Theories thus cannot contain either true or false information; they are nothing but instruments, since they can only be convenient or inconvenient, economical or uneconomical, supple and subtle, or else creaking and crude."

Popper's formalism, linked to his ignorance of how the problem of ideology established problems for logic, led him to neglect one vital problem about scientific theory. Take this statement: "... the formulation of the universal law which we try to explain has to incorporate all the conditions of its validity, since otherwise we cannot assert it universally ..." Now, if we must incorporate all the conditions underlying the validity of a law, we must, ultimately, account for the way values and ideology affect the class of problems with which we are dealing. The political context that underlies the priorities of research must be taken into account since the relevance of some problems over others is rooted in this. To ignore this is to imply that a "universal" has an a priori quality, which is what Popper's logic supposedly argued against.

Popper avoided this question by saying, in a formalistic way, that "... the causal explanation of a regularity consists in the deduction of a law (containing the conditions under which the regularity asserted holds) from a set of more general laws which have been tested and confirmed independently." This
just pushes the problem further back and, in the process, obscures it. What establishes the relevance of "these more general laws ... tested independently" for the problem at hand? In Kuhn's words, they constitute a paradigm, and, as we have argued, there is an analogy between the class of problems (and laws) constituting a paradigm and the way ideology affects scientific research.

From his discussion of laws, trends and causes, Popper concluded that 

"... historicists overlook the dependency of trends on initial conditions."

They thus "... believe that these tendencies (trends) can be immediately derived from universal laws alone ..." He concluded that

"This ... is the central mistake of historicism. Its 'laws of development' turn out to be absolute trends; trends which, like laws, do not depend on initial conditions, and which carry us irresistibly in a certain direction into the future. They are the basis of unconditional prophecies as opposed to conditional scientific predictions."

Were Popper to have tackled the problems of ideology I have outlined, he might have seen that his own use of this conclusion reflected an ideological orientation and, in addition, implied intellectual problems that make logic in the social sciences more complicated than he has suggested.

When Popper stated that "... we have all the time to try to imagine conditions under which the trend in question would disappear," he showed that he was unaware of this deeper level of problems. He argued that this use of imagination "... is just what the historicist cannot do." He stated that the historicist "... cannot imagine a change in the conditions of change." Yet, with his own conservative commitments, Popper could be criticized for this lack. Imagination definitely has something to do with the awareness that there are not absolute causes. It can also be argued that imagination and a commitment to work for conditions that fulfill an imagined potential leads to a radical social science. This
presents a problem for social science that no amount of formal logic or related polemics can abolish. It takes us right back to the question of "utopia" and thus shows that a different handling of utopian (which Popper related to historicism) than that of Popper is required.109

2 - Hypothetical-Deductive Models and Individualism

We now come to a summary statement of Popper's logic: what he called the "hypothetical-deductive method". I shall now show this conceptualization of logic is not adequate once (and if) the basic problems I have raised are acknowledged. Popper summarized his method as follows: "The methods always consist in offering deductive causal explanations, and in testing them (by way of predictions)."110 By testing a theory, Popper meant applying what is sometimes called the "null hypothesis". A prognosis is compared with experimental results or some other form of observation. "Agreement with them is taken as corroboration of the hypothesis though not as final proof; clear disagreement is considered as refutation or falsification."111 This emphasis on refuting or nullifying a hypothesis relates to the rejection of absolute causes and demands comparisons before any validity is assumed. As Popper said:

"Only if we cannot falsify them inspite of our best efforts can we say that they have stood up to severe tests. This is the reason why the discovery of instances which confirm a theory means very little if we have not tried, and failed, to discover refutations."112

Taken in a formal way, this method sounds convincing. But it leaves unanswered, let alone unasked, questions that affect the validity of methodology. For example, what are the origins of our theories? Popper's hypothetical-deductive method treated this question as irrelevant to methodology. He split the study of
the origin of a theory from the testing of a theory. The former, he wrote, "... relates ... to an entirely private matter."\textsuperscript{113}

We have already commented on Popper's superficial treatment of the sociology of knowledge. This separation of the origins of problems, methods and theories from the testing of a problem and theory by a certain method allows a tautology to operate within a class of problems. Unless the origin of the method itself is studied, rather than assumed to be "scientific" (which is what is typical), the word "science" (which has a powerful, magical quality) cloaks over the problem of ideology. Unless the relation between problems, methods and theories is studied, all can become treated in an a priori way. Popper wants no a priori but his own. This is typical of those who mix polemics and logic in such a way as to confuse us about the problems of ideology and logic.

Popper's approach to logic also led him to a belief in scientific models. Of models, Popper wrote:

"For most of the objects of social science if not all of them are abstract objects; they are theoretical constructions ... These objects, these theoretical constructions, used to interpret our experience are the result of constructing certain models (especially of institutions) in order to explain certain experiences ..."\textsuperscript{114}

What are the roots of these so-called models? Popper would answer that this is unimportant. I would reply that it has something to do with the problem of ideology and the sociology of knowledge, and, since Popper's hypothetical-deductive method relied on models, with the problem of logic. Wanting to keep the origin of theory in a "private" realm I doubt if Popper would be able to continue the discussion from there.
Popper believed that his hypothetical-deductive method and the idea of "models" destroyed the methodological essentialism which he earlier connected with historicism. In contrast to this approach, he advocated a "methodological individualism". He stated: "... the task of social theory is to construct and to analyze our sociological models carefully in descriptive or nominalist terms, that is to say, in terms of individuals, of their attitudes, expectations, relations, etc. - a postulate which may be called 'methodological individualism'."\(^{115}\)

It is hard to know how much of Popper's "methodological individualism" - which he contrasted with "methodological collectivism"\(^{116}\) reflected the dichotomy between the so-called individualism of capitalist societies and the so-called collectivism of communist societies. This possibility opens up several interesting questions. For example, Popper's splitting of the origins and the testing of theory into private and public realms parallels individualistic assumptions about human behaviour. According to this view, "the individual" has an essence separate from his or her past, present or future social experience. Here we have a clue about how ideology is thoroughly wed into Popper's logic.

Popper admitted that his "... interpretation of the methods of science was not influenced by any knowledge of the methods of the social sciences."\(^{117}\) In a sense, this meant that Popper developed his logic without any knowledge of the arguments which the logic was to assess. This is why he had such abstract notions about institutions and ended up treating them as models created by the scientist. Take this statement: "... social entities such as institutions or associations are (not) concrete natural entities ... (but) rather ... abstract models constructed to interpret certain selected abstract relations between in-
For Popper, "institutions" were not "concrete natural entities". Rather, they were "abstract models". The "relations between individuals" seem to be the proper subject matter, but these too were "abstract" for Popper. When this statement is examined critically, it proves to be quite nonsensical. Maintaining a split between the "private origin" and "public testing" of a theory, Popper could not recognize that our ideas about society are themselves rooted in our social experience. Having an ideology that stressed individualism, relations among individuals become the abstract creation of the scientist. A strange social theory underlay Popper's logic.

Popper's methodological individualism was completed by his rationalism. He assumed that people act "... more or less rationally ... for the attainment of whatever ends they may have ... and this makes it possible to construct simple models of their actions and interactions ..." This assumption and method can lead to some useful knowledge in the social sciences, but only some. Since it leaves the study of "ends" out of the process of inquiry it narrows the scope of inquiry immensely. This exclusion of the study of ends complements Popper's ignorance of the problem of ideology and his formalistic logic.

Popper wanted to make it clear that his methodological individualism and use of rational models did not imply "... in (his) opinion the adoption of a psychological method." His individualism and rationalism, however, did imply a psychology. Rather than dealing with his own orientation (of which he may have been ignorant because of his ignorance of subject matters in the social sciences), Popper pushed this issue to the background and a formal logic again dominated. For example, he created an arbitrary distinction between the "theo-
"Iretical" and "historical" sciences; the former being interested in "universals", and the latter in "facts". This split, like all of his, covers over the problem of the way we organize facts as universals - which relates to the problem of ideology. No amount of talk about "models" can make this problem go away. And, though the split may reinforce the split between the origin and the testing of theories (the former the concern of historical and the latter the concern of the theoretical sciences, according to Popper), the relevance of the relations between problems, methods and theories will remain.

Popper expanded on his distinction between the historical and theoretical sciences. Of the "classical historians", he wrote:

"Aiming at objectivity, they feel bound to avoid any selective point of view; but since this is impossible, they usually adopt points of view without being aware of them. This must defeat their efforts to be objective, for one cannot possibly be critical of one's own point of view, and conscious of its limitations, without being aware of it."122

Interestingly the same judgment can be applied to Popper. Throughout our discussion we have seen that Popper is not "conscious of his point of view or its limitations". To ignore the problem of ideology when discussing logic leads to an uncritical, formal argument.

3 - Objectivity and the Sociology of Knowledge

What was Popper's view of objectivity? He placed "objectivity" in the public realm of his dichotomy. He wrote that:

"... what is usually called 'scientific objectivity' is based, to some extent, on social institutions. The naive view that scientific objectivity rests on the mental or psychological attitude of the individual scientist, on his training, care, and scientific detachment, generates as a reaction the skeptical view that scientists can never be objective."123
But he erred in associating the view he criticized with the sociology of knowledge. Of this skepticism of objectivity, he said: "This doctrine, developed in detail by the so-called 'sociology of knowledge' entirely overlooks the social or institutional character of scientific knowledge, because it is based on the naive view that objectivity depends on the psychology of the individual scientist." We saw with our study of Mannheim that the sociology of knowledge perspective is not rooted in this psychologism, but in the problems that the relationship between socio-historical contexts and human world views present for logic. And, from this perspective, science becomes a world view - with its views of objectivity themselves having a foundation in certain forms of human and social relationships. If Popper had pointed out that Mannheim was caught between the old epistemologies and the new realization of how the socio-historical context affects world views, and hence was trapped with an epistemological pseudo-problem, he would have been raising a vital matter. But he did not state this. We can conclude that Popper's own formalism made it impossible for him to understand the problems with which Mannheim was grappling.

Popper's belief in the "social or public character of science" was related to his rejection of the belief in absolute causes. This latter belief and a sectarian view of objectivity - whereby some grouping is said to possess "the truth" (e.g., to understand reality) - are also related. But saying that "the sociology of knowledge overlooks ... the social or public character of science" shows the danger of dealing with problems in the philosophy of the social sciences without knowing about the underlying subject matter. In fact, the sociology of knowledge perspective, a social psychological one, fundamentally questions the dichotomy of science into "private" and "public" and looks for the
way a particular theorist's biography and historical trends intersect within a social structure. Its main concern is with the relationships between the character of an intelligensia, the scientific problems with which it deals, and its methods of dealing with them.

It is both ironic and indicative that Popper was willing to speak of the institutions of science as "concrete natural entities" and not as abstract models created by methodological individualism. I certainly agree. Popper needed to admit the reality of these social institutions to reinforce his argument. Since he rejected a belief in absolute causes and saw scientific theory as something instrumental, not true or false per se, he needed this social reality upon which to base his notion of truth. But as a result the "theory" of institutions which rationalized his hypothetical-deductive method was exposed. Scientific institutions exist but other ones are methodological creations. In view of this contradiction, it is interesting that Popper rejected the idea that scientific objectivity rests on training, etc. If it does not rest on this, then what? Even if he wished to reject absolute causes, Popper's confusion led him to postulate a type of logic, a formal logic, which existed independent of social relationships.

Popper's dichotomies cloak over important problems and underlie his ignorance about the problem of ideology and the problems it presents for logic. They led him (i.e., he leads himself) to talk of "the right man" being attracted to science. They led him to talk of "the human or personal factor" which he saw as "the irrational element in most, if not all, institutional social theories;" of "... the human factor" which he saw as "... the ultimately uncertain and wayward element in social life and in all social institutions." In other words, these dichotomies took Popper to a poorly conceived social and political
theory which is best called a grand theory. The institutional becomes the rational (hence his rational models) and the "human factor" becomes the "irrational - uncertain" aspect of social life. Human experience and behaviour gets carved up into simplistic categories to prop up formal logic. This crude method which is the real method in Popper's study (what he saw as his logic is only a part of his real logic, i.e., way of arguing or approaching problems) can be avoided by a conscious handling of logic in terms of the problem of ideology.

To further confuse problems of logic, Popper ended up admitting "... that the objectivity of science, and so science itself ... are both based upon ... freedom." As Bronowski argued, certain human and social relations facilitate and others frustrate these relationships. A thorough inquiry into this problem would expand on the problems with which I am here concerned. This recognition, which contradicts Popper's dominant point of view, can lead to an awareness of how values are part of (different than being related to) science; and how the problems of ideology and logic can be better understood. But we would need a different beginning point than that provided by Popper to undertake this inquiry.

Popper's motivation was not to make such a clarification. He ended his discussion with the statement: "It almost looks as if historicists were trying to compensate themselves for the loss of an unchanging world by clinging to the faith that change can be foreseen because it is ruled by an unchanging law." Here is psychological reductionism, par excellence. Popper negates the arguments of historicists with a polemical statement. Since most of the arguments were Popper's, he has mainly negated himself. In a way similar to MacRae, who I dis-
cussed in Chapter Three, Popper implied that the historicists were religious (e.g., "revelation", "clinging to the faith") in contrast to the rational logic of a mystified view of science. But this rhetorical dichotomy between science and religion cloaks over the problem of ideology and makes a reasonable inquiry into the problems of logic impossible. Our task now is to show the directions for such an inquiry.

Footnotes


3 Ibid.

4 Ibid.

5 Ibid., p. 6.

6 Ibid., p. 8.

7 Ibid., p. 14.

8 Ibid.

9 Ibid., p. 16.

10 Ibid.

11 Ibid.

12 Since Popper based his argument for a "technological social science" on a criticism of holism and historicism, I shall leave my examination of this until I discuss the fourth section of his study.

13 Popper, op. cit., p. 20.

14 Ibid., pp. 20-1.

15 Ibid., p. 22.

16 Ibid., p. 24.
17Ibid., pp. 26-7.
18Ibid., p. 27.
19Ibid.
20Ibid., p. 28.
21Ibid., p. 29.
22Ibid., pp. 29-30.
23Ibid., p. 30.
24Ibid., p. 34.
25Ibid., p. 31.
26Ibid.
27Ibid., p. 35.
28Ibid.
29Ibid., p. 39.
30Ibid., p. 41.
31Ibid., p. 43.
32Ibid.
33Ibid., p. 44.
34Ibid.
35Ibid., p. 45.
36Ibid., p. 46.
37Ibid.
38Ibid., p. 48.
39Ibid., p. 50.
40Ibid., p. 51.
Statements could be abstracted from Marx's writing that emphasize the primary role of political struggle in determining historical outcomes. For example, see Marx's statements quoted by Roger Garaudy: *Karl Marx: The Evolution of His Thought*. New York, International Publishers (1967), From Utopia to Class Struggle, pp. 169-77.

42 Popper, op. cit., p. 51.


47 Popper, op. cit., p. 53.


52 *Ibid.*. Popper's use of the term "scientism" differs from my own because, even if he rejected what he called "dogmatic naturalist" views of science, he maintained a formalized approach to science himself. My thesis argues that formal logic itself aids rationalize the ideology of scientism.


Socialist humanism or what is often called "libertarian socialism" differs from Stalinist communism in its commitment to abolish all forms of authoritarianism in society. The abolition of state bureaucracies, including an authoritarian police system, not only the abolition of an exploitative and alienating economy, is the revolutionary goal of socialist humanism. Now that the state has become thoroughly integrated into advanced and centralized industrial capitalism, and all the institutions in society have taken on a corporate nature (hence the term "corporate capitalism") it is absurd to think of using state bureaucracies for libertarian ends. Both centralized power and the form of knowledge useful to a centralized society would have to be replaced for humans to have any real self-determination.

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62 Ibid., p. 79.
63 Ibid., p. 80.
64 Ibid., p. 87.
65 Ibid., p. 78.
66 Ibid., p. 82.
67 Ibid., pp. 89-90.
68 Ibid., p. 90.
69 Socialist humanism or what is often called "libertarian socialism" differs from Stalinist communism in its commitment to abolish all forms of authoritarianism in society. The abolition of state bureaucracies, including an authoritarian police system, not only the abolition of an exploitative and alienating economy, is the revolutionary goal of socialist humanism. Now that the state has become thoroughly integrated into advanced and centralized industrial capitalism, and all the institutions in society have taken on a corporate nature (hence the term "corporate capitalism") it is absurd to think of using state bureaucracies for libertarian ends. Both centralized power and the form of knowledge useful to a centralized society would have to be replaced for humans to have any real self-determination.

70 Popper, op. cit., p. 93.
71 Ibid., p. 93.
72 Ibid., p. 94.
73 Ibid., p. 93.
74 Ibid., p. 94.
75 Ibid.
76 Ibid., p. 96.
77 Ibid., p. 98.
78 Ibid.
79 Ibid.
80 Ibid., p. 100.
81 Ibid., p. 101.
93 Popper's approach to "universals" was not pragmatic. For Dewey, whom I discuss in Chapter Twenty, "universals" were required as "directive concepts" for ongoing inquiry, but they must themselves be grounded in inquiry. The achievement of certain consequences, i.e., "end-in-view" within an existential situation, remains the goal of science. In that Popper ignored the role of universals in altering existential situations, his notions of universals tended to be metaphysical. Because he ignored the pragmatic nature of universals, he also ended up with a metaphysical notion of reality. Saying that it is mystical to suggest that we can know "concrete reality" separates the knower from the known and ignores the transactional character of inquiry. Because of this separation, there were only existential "statements" and not any existential situations for Popper. This shows why formal approaches to logic have difficulty situating knowledge in praxis.

82 Ibid., p. 102.
83 Ibid., p. 103.
84 Ibid., p. 106.
85 Ibid., p. 107.
86 Ibid., p. 117.
87 Ibid., p. 111.
88 Ibid., p. 113.
89 Ibid., p. 115.
90 Ibid.
91 Ibid.
92 Ibid., p. 78.

94 Ibid., p. 116.
95 Ibid., p. 122.
96 Ibid., p. 123.
97 Ibid.
98 Ibid., p. 124.
99 Ibid.
100 Ibid., p. 132.
From the stance of a formal logician, that is, the problems become more simple from a pragmatic stance.

Popper, op. cit., p. 129.

It is common for formal logicians and end-of-ideologists to be hostile towards utopian ideas. Reifying the facts of the established order, they are unable to deal with social and human relationships that go beyond that order. As Seeley wrote: "A sociology conceived as a science of society must, it seems, pride itself on its 'realism' unless it is to give up its scientific pretensions. The realism involved turns out - as with novelists and painters - to be a romanticism of the existent, and more particularly of that in the existent that is least evocative of the aesthetic joys. It is a romanticism because it evolves and perpetuates a romantic fiction: that the fossil of what is, is the only reality, or in any case more real than the forming flesh of the not-yet-realized. No more violent distortion of reality can be well imagined, and yet it is, or seems to be, the indispensable prologue for a 'science of society'. And that indispensable prologue neatly disposes, before it is well begun, with the heart and meaning of the human drama, which, whatever else it is, is a becoming. It is a becoming, moreover, in which it is of the very essence of its essence that what it will be is not fully in any intelligible sense implicit in what it is, so that, Marx to the contrary, the new society is never visible in the womb of the old. It is not visible in the womb of the old, in a society such as ours, because it is not there. It is not there to be seen because the new society is conceived by the old and not in it; and it is conceived in the large sense of conception which is the measure by which psychology exceeds biology and imagination outruns the possibilities of protoplasm." John Seeley: Mankind As Fact By Faith, in R. Ulich (ed.): Education and the Idea of Mankind. New York, Harcourt, Brace and World (1964), pp. 39-40.
The neo-Keynesian analytic economists develop so-called rational models in much the same way as Popper proposed. But they, like Popper, obscure the behaviorist or neo-Freudian approaches to psychology that complement their own specialized knowledge. The behaviorists emphasize the conditioning of behavior to dominant norms while the neo-Freudians emphasize the adaption of the individual to the dominant culture. Both ignore the consequences of such conditioning or adaption. The so-called "rational assumptions" of analytic economists are really formulations of the approaches in psychology that complement the same ideological orientation. For a critique of behaviorist psychology, see Norman Malcolm: Behaviorism as a Philosophy of Psychology, in T.W. Wann (ed.): Behaviorism and Phenomenology. Chicago, Phoenix Books (1964), pp. 141-54. For a critique of neo-Freudianism, see Herbert Marcuse: Eros and Civilization. New York, Vintage (1955), pp. 217-51.

C.W. Mills argued that biography, history and society are the "... co-ordinate points of the proper study of man." (The Sociological Imagination, op. cit., p. 143.) He believed that "Whatever else he may be, man is a social and historical actor who must be understood, if at all, in close and intricate interplay with social and historical structures." (Ibid., p. 158.) This orientation undercuts the dichotomy between the so-called private and public because it allows us to situate the very problems, methods and theories with which a theorist deals in a broader context.

"Rest on" are Popper's words. I prefer to talk of the relationships between the socialization of the scientist, the class of problems with which he or she deals, and the political function of science in any given social and historical context.
C.W. Mills considered "grand theory" to be the tendency which complemented "abstract empiricism". Grand theory does not stem from historically specific studies that situate events, but from formalistic and often reductionistic ideas that are fixed at a level of abstraction that ignores the specificity and context of events. Mills criticized grand theory when he wrote: "Unless one assumes some trans-historical theory of the nature of history, or that man is a non-historical entity, no social science can be assumed to transcend history." (The Sociological Imagination, op. cit., p. 146.) Mills was also critical of the notion of scientific laws or principles that complement grand theory: "We do not know any universal principles of historical change; the mechanisms of change we do know vary with the social structures we are examining. For historical change is change of social structures, of the relations among their component parts. Just as there is a variety of social structures, there is a variety of principles of historical change." (Ibid., p. 150.) The fact that Popper relied on grand theory to develop his critique of historicism shows how formal notions of logic and grand theory can become complementary.

Popper, op. cit., p. 159.

Ibid., p. 161.
Chapter Sixteen

Logic As Argument: Toulmin

It is not enough to criticize theories of logic from the stance of the problem of ideology. To understand the relevance of the problem of ideology for problems of logic and to develop an approach to logic that accounts for the problem of ideology, we need to undertake a critical examination of issues in the field of logic itself. Toulmin's work provides us with the basis for such a discussion. Through outlining his general ideas about the philosophy of science and his particular ideas about logic, we will be able to develop the relationships between ideology and logic in a specific manner. Toulmin's view of logic as a tool for evaluating arguments will be the basis for this development.

In contrast to Popper, Toulmin provides us with a clear and useful perspective on the philosophy of science. He did not mix polemics with logic - which is not to say that his discussion of logic does not have any implications for politics. It is a pragmatic perspective contrasting sharply with formalistic and metaphysical notions common in the philosophy of science. To show this I will outline and discuss Toulmin's understanding of scientific discovery, laws, theories and the notion of determinism, and then relate them to my general thesis.

Scientific Discovery: Toulmin's Rejection of Scientism

Toulmin saw the physical sciences as "organized common sense". By this he meant that "The novelty of the conclusion comes, not from the data, but from
the inference: by it we are led to look at familiar phenomena in a new way, not a new phenomena in a familiar way."\(^2\) This point, that the inference and not the data \textit{per se} underlies scientific discoveries, is fundamental to everything else Toulmin stated about science. It is the basis of his critique of epistemological theories and approaches to logic which see either inductive or deductive methods as the basis of science.

These new points of view, or discoveries, as Toulmin called them, are developed with new "inferring techniques". New technical operations allow the scientist to see "phenomena in a new way". New models which "fit the facts" arising from the new techniques are developed and new relationships become problematic. Referring to the set of beliefs, or doctrine, that develops with a new model, Toulmin wrote "The doctrine is, so to speak, parasitic on these techniques: separated from them it tells us nothing, and will be either unintelligible or else misleading."\(^3\)

This view of scientific discovery is incompatible with the belief in absolute causes and laws. There is no place for a metaphysical assumption about, that is, belief in, the nature of science once scientific discoveries are seen in this pragmatic way. Toulmin therefore concluded that a principle established through a new model, new techniques and new facts is not a "law" \textit{per se}. Instead "... one might almost as well call the principle a 'law of our method of representation' as a 'law of nature'."\(^4\)

Toulmin, like Kuhn, warned operations are the basis of any discovery and projected "law". Rather than treating "laws" in a scientific way and asking formal questions about their truth or falsehood of a law or its correspondence
with reality, Toulmin discussed the scope of a scientific principle or law. He pointed out that the socialization and training of the scientist is basic to the use of the methods, problems and theories related to a new model. "It always has to be remembered that the scope of a law or principle is not itself written into it, but is something which is learnt by scientists in coming to understand the theory ..." Because of Popper's dichotomy between the "public" (science as an institution) and the "private" (origin of problems), he was unable to understand this important relationship. Popper's formalism and his private-public dichotomy both contrast with Toulmin's pragmatic and dialectic approach.

Toulmin also rejected any formalistic interpretation of the inferences of science. He rejected the Aristotelian or traditional approach to logic when he stated that "... none of the substantial inferences that one comes across in the physical sciences is of a syllogistic type." Instead, inferences represent, in a specific manner, the relationships (e.g., facts) that new techniques open up for observation. "The heart of all major discoveries in the physical sciences is the discovery of novel methods of representation; and so fresh techniques by which inferences can be drawn - and drawn in ways which fit the phenomena under investigation." The widespread belief in traditional logic and developments from it is greatly responsible for the general ignorance among social scientists about the relevance of the problem of ideology to all aspects of their methodology.

Toulmin's awareness of the interdependence of technique, inference and the scope of laws led him to reject the notion of deductive logic as an adequate description of the scientific method. He argued that "theories and observations are not deductively connected" and furthermore that "models are not deductive".
Using an example from physics, he wrote: "To say 'Light travels in straight lines' is, therefore, not to sum up compactly the observed facts about shadows and lamps: it is to put forward a new way of looking at the phenomenon, with the help of which we can make sense of the observed facts about lamps and shadows." Theory is not deduced from facts because theory is neither rooted in inductive generalization nor in formal logic. It is, therefore, a pseudo-problem to argue whether a theory is true or false in terms of the facts. As Toulmin wrote: "For it is not that our theoretical statements ought to be entailed by the data, but fail to be, and so assert things the data do not warrant: they neither could be nor need to be entailed by them, being neither generalizations from them nor other logical constructs out of them, but rather principles in accordance with which we can make inferences about phenomena." Toulmin concluded that scientific discovery "... cannot be abstracted from experience but must be freely invented." Imagination, not metaphysics, is then fundamental to science.

Toulmin expanded his argument by contrasting the physical and the natural sciences. He argued that the former are "explanatory", while the latter are "descriptive". In contrast to biologists, Toulmin argued that "... physicists do not hunt out regularities in phenomenon, but investigate the form of regularities whose existence is already recognized." This helps clarify what Toulmin meant when he stated that physical "science is organized common sense". Similar to Dewey, in this regard, he believed that "... it is the notions of contemporary common sense which provide the background of ideas by reference to which phenomena are chosen for investigation." The physical sciences search for the form
and scope of common regularities. A scientific discovery leads to a new way of looking at regularities and with this new problems, methods and theories develop. "Reclassification of subject matter in the light of discovery is the rule in the physical sciences."\textsuperscript{13}

Toulmin recognized the interdependence of theory and facts in the physical sciences. "In physics, it is no use even beginning to look at things until you know exactly what you are looking for: observation has to be strictly controlled by reference to some particular theoretical problem."\textsuperscript{14} Like Kuhn, whose historical analysis of paradigms led to a similar conclusion, Toulmin concluded "... how different are scientific explanations of the physical type from anything we could ordinarily speak of as descriptions."\textsuperscript{15} The scientific belief that theories in the physical sciences describe sense-data - that generalizations from observations make up these theories - underlies much confusion in the philosophy of science. A metaphysical view of science develops because simplistic notions of "cause" and "truth" are projected into the explanatory processes of the physical sciences. The false notions are then applied to other areas of science (e.g., sociology) and the scientific rhetoric spreads.

Toulmin's approach to logic complements the above view of scientific discovery. His related criticism of traditional and formal logic also stems from it. The natural sciences, being more descriptive than explanatory, can find some value in formal logic. The inapplicability of formal (e.g., deductive) logic to all subject matter is what Toulmin's clarification of scientific discovery implied.
scientific laws: a pragmatic view of explanation

Toulmin's discussion of scientific "laws" emphasized the context of discovery. This emphasis has implications for our clarification of the problem ideology presents for logic. He stressed "... how necessary it is always to understand a physical principle in the context of its use," and again we see his pragmatic orientation. To understand laws, it is necessary to see how they are used to help us explain phenomenon. According to this view, it is the representation of phenomenon that constitutes an explanation. This is not the same as a generalization from observations. Laws, as representative statements, are conditional or contextual. They are not tautological; that is, they are not reducible to the observations. To emphasize his rejection of the tautological view of laws, Toulmin argued that "... the scope of a law is stated separately from the law itself." This pragmatic distinction allows us to understand how a law is related to the context of observations, but is not reducible or limited to this context.

Toulmin's discussion of "laws" emphasized the relationship between the theoretical problems and the experimental context. The need to realize these interrelations, or what Kuhn called a "paradigm", was basic to Toulmin's orientation to the philosophy of science. "If you understand the theoretical problem, the reasons for the conditions of the experiment will almost certainly be clear to you; unless you understand the problem they certainly will not." Toulmin continually stressed that "... unless your theoretical problem has been carefully thought out, experiments will be premature." According to this view, science is neither empirical nor theoretical. It is problematic. This conclusion about
the philosophy of science parallels the orientation of C.W. Mills when he argued that sociology can neither be rooted in "abstract empiricism" or "grand theory".

Through the consideration of theoretical problems "theoretical ideals" are established; that is, imagined, and "... it is by using these ideals that the physical sciences become, as they are sometimes called, exact sciences."20 The "exact sciences" do not have the mystified nature that social scientism attributes to them. For example, their exactness does not come from a theory being exactly true. Nor does it come from the mathematical character of much of the theory in the exact sciences. In contrast to these scientistic distortions of science, exactness comes from an adequate answer, in an experimental context, to the question: under what circumstances can you regard something as "x" (a theoretical ideal)?

Those who are searching for exactness in the social sciences, but misunderstand what this means, end up extrapolating what they take to be experimental rationales from the "exact sciences" without their contextual and theoretical relationship being made explicit. A confused scientism is inevitable when the relation of problems, methods and theories is not accounted for as part of the logic of any subject matter. Much of what now passes for "social science" research results from an "envy" of the exact sciences and a related myopia about problems rooted in the social relations of society.

Because of the representative nature of laws, the physicist will not ask: "Is the rule true?"21 The scientific truth of a theory is not something intrinsic but something pragmatic. In Toulmin's words:

"Suppose one says that laws of nature are not true, false or probable; that these terms are indeed not even applicable to them; and that scientists are accordingly not interested in the question of the 'truth' of
laws of nature - all of which might fairly be said: one does not thereby deny the obvious, namely that scientists seek the truth. One points out, rather, that the abstract noun 'truth' is wider in its application than the adjective 'true', that different types of statements need to be logically assessed in different terms, and that not every class of statement in which a scientist deals need be such as can be spoken of as 'true'/false'/probable'.

The way we use the term "true" will reflect an underlying orientation to epistemology. Formal logicians reify linguistics and thus talk of "truth" in abstract from a context. A pragmatic orientation to logic always situates the matter of validity in a particular context. Distinguishing "true" from "truth" can help clarify the implications of the problem of ideology for logic because it forces us to relate matters of validity to the context within which a class of problems, methods and theories have significance.

Laws have what Toulmin called an "ambivalent logic status". They are conditioned, but not tautological. Because laws function to aid and direct observations, as well as to open up new problems, Toulmin called them "middle-level propositions". "It is the middle-level propositions in the hierarchy of physics which alone are called 'laws', and they alone have an ambivalent logical status." Once this logical status of laws is understood, it becomes clear why the question "Is the law true?" has to be replaced with the question "Under what circumstances does it hold?" The distinction between laws as representations and statements about their application could be the basis of a humanistic, even existentialist, philosophy of science. Once we recognize the central role of human judgment in the creation and use of science, then we can begin to situate logical matters in the context of arguments about the ends we wish to realize with the aid of science. As Toulmin remarked: "The laws themselves do not do
anything: it is we who do things with them, and there are several different kinds of things we can do with their help."

Toulmin continued by asking whether laws are necessary or contingent. He rejected the value of this traditional question because it is rooted in a false understanding of laws. "In its way, to call laws of nature 'contingent' is as misleading as to call them 'necessary', for to do so is to focus too much light on a set of questions which never arise with reference to laws of nature, namely, questions about truth and falsity." The question is based on a confused notion of how facts and laws relate:

"Physicists never have occasion to speak of the laws themselves, either as corresponding or as failing to correspond to the facts. The logical relation between the laws and the facts is indirect: by talking as though they were connected any more closely than they are, one creates only confusion and misunderstanding."

This confusion is rooted in the failure to distinguish between laws as representations and the scope or application of laws. Seeing laws as being "necessary" can lead to a view of them as being "maxims". Socialization to theological and metaphysical thought in our society is sufficiently widespread that the scientific notion of necessary laws can turn science into religion. Science then becomes a search for truth; or, with the more liberal logicians who still believe in natural law, a search for probabilities that approximate "the truth".

In fact, laws are not maxims but have a restricted relevance or applicability. As Toulmin said: "... words like 'true', 'false' and 'probable' are applicable not to laws themselves so much as to the statements which constitute applications of laws ..." Science does not deduce its conclusions from laws.

"The conclusions about the world which scientists derive from laws of nature are not deduced from these laws, but rather drawn in accordance with them as applica-
Scientific Theories: Demystifying the Notion of Cause

Since scientific discoveries are not deductions from laws, all mechanistic logical analogies must be abandoned before an adequate "theory of theory" can be developed. Toulmin believed that the analogy between a map and a theory was useful as a replacement for traditional approaches to logic: "... whereas to treat laws of nature on the pattern of generalizations is positively misleading, and to think of them as rules or licences reflects only part of their nature, the analogy between physical theories and maps extends for quite a long way and can be used to illuminate some dark and dusty corners in the philosophy of science." Toulmin's view of theory was rooted in a criticism of deductive logic. He argued that "... only where premises and conclusion are comparable ... is there room for a deductive connexion." We shall see below that such comparability is unlikely even in the most syllogistic instance. More important, Toulmin recognized the need for scientific theory to be useful beyond its original context for it to allow for prediction. As he said: "... a science is nothing if its laws are never used to explain or predict anything." Laws that are useful for prediction and explanation, that is, laws that have a "middle-range" logical status, are developed with the aid of a certain form of observation. Discussing the physicist as a surveyor of phenomenon, Toulmin wrote: "... physicists prefer to make a limited number of observations covering a wide range of circumstances, rather than a larger number of observations covering a smaller range of circumstances." These observations do not lead to causal theories. The belief that they do is one of the major errors that underlies the
ideology of scientism. It is when the laws are being used in problem solving that the idea of "cause" develops. As Toulmin said: "... wherever the sciences are applied to practical problems, there one finds talk of causes and effects." We become concerned with "causes" when we are manipulating experimental conditions to try to obtain a hypothesized end or theoretical ideal. "Developments which we are interested in producing, preventing or counteracting - these are the typical sorts of thing about whose causes we ask."34

Toulmin's pragmatism is again evident. He treated "causes" as "diagnostic" and rejected any tendency to see causes in an anthropocentric way. Locating "causes" per se is not the aim of the physical sciences. Instead, it is representing regularities in phenomena in a way that allows for both explanation and prediction. The idea of causality comes only with this latter stage in science.

If the determination of causality is not the aim of science, why has the abstract debate over the notion of causality persisted? Criticizing Bertrand Russell,35 Toulmin rejected any equation of causality and the scientific method. Such an equation is based on an ignorance of the character of facts. The "facts" coming from scientific inquiry are treated as being essential rather than as being conditional.

Toulmin was critical of this reified view of facts.

"To talk, in the philosophy of science, of theoretical physics falsifying by abstraction and to ask for the facts and nothing but the facts, is to demand the impossible, like asking for a man drawn to no particular projection and having no particular scale. In epistemology, too, to argue that our everyday concepts falsify by abstraction or are necessary conditions of experience with the suggestion that one thereby points to a defect in our conceptional equipment or to an unfortunate limitation on our capacity for experiencing, is to evince a similar misconception. If we are to say anything, we must be prepared to abide by the rules and conventions that govern the terms in which we speak: to adapt these is
no submission, nor are they shackles. Only if we are so prepared can we hope to say anything true or anything untrue. It is unreasonable to complain, as philosophers have so often done, because we cannot tell the truth without talking.\textsuperscript{36}

An abstract view of causality and facts, not a concrete awareness of the methods of science, underlies all epistemology which searches for true knowledge \textit{per se}. This search always ends up distorting and mystifying the nature of science as a human endeavour. And, as we have continually emphasized, such a scientism functions to justify the established facts of the established order.

**Determinism: The Myth of Scientism**

Are so-called laws of nature universally applicable? Toulmin pointed out that philosophers from J.S. Mill to Bertrand Russell have accepted the need to postulate the uniformity of nature, but he rejected such a premise for two reasons. First, he believed it was necessary to make a distinction between laws and generalizations. "This difference between laws and generalizations is connected with ... the fact that natural historians are committed for the most part to the everyday classification of their subject matter, whereas it is open to physical scientists to reclassify theirs as they go along."\textsuperscript{37} From this, he concluded: "So it is not nature that is uniform, but scientific procedure; and it is uniform only in this, that is, it is methodological and self-correcting."\textsuperscript{38} If physical laws come from a continual reclassification of subject matter it is impossible to justify the notion of determinism or the uniformity of nature in terms of them.

Toulmin's second reason for rejecting the premise of the uniformity of nature was based on his critique of deductive logic. Since scientific discoveries are not based upon deduction, determinism cannot be deduced from scientific inquiry.
Toulmin believed that scientific inquiry was based on inference and argument and not on deduction and causal theory. Referring to chemical formula, he wrote:

"No experimental statements can be deduced from the ... formula; rather ... we can infer experimental conclusions by arguing in accordance with the formula." 39

The notion of determinism is itself dependent upon the methods of inference. The "must" or deterministic step in any theoretical deduction depends on the vital minor premise; the statement in the argument which declares a representation. This dependency makes the notion of determinism thoroughly conditional. This critique of deductive and formal logic led Toulmin to distinguish between "believing that ..." something exists and "regarding (something) as" something. Believing in the notion of determinism or the uniformity of nature, for example, is quite different than regarding phenomenon within a deterministic model. We could consider the former metaphysical determinism and the latter methodological determinism.

Toulmin argued that "... a model can only be used to explain the behaviour of things which are in fact distinct from it." 40 The scientist uses the model - a point of view which interrelates problems, methods and theories - as a conceptual and linguistic tool. The point of view is not intrinsic to the data. To believe this is to ignore not only the function of scientific paradigms but the existence and judgment of the scientist. The data doesn't tell the scientist something. The scientist does something to make sense of the data. A clarification of matters of logic shows that human praxis is the basis of science.

What the metaphysical notion of determinism ignores is the fact that the point of view or model that a scientist utilizes is itself learned. As Toulmin
"... the physicist learns as part of his training, to think and speak in terms of his theoretical models ... But to the outsider these theoretical models, however vivid, are neither familiar nor immediately intelligible and their role is itself something which he needs to have explained." 41

Those who don't recognize or admit this fail to understand the role of models, paradigms and ideologies as points of view that affect ongoing inquiry. Their confusion about the nature of scientific discovery, laws, theories and determinism is rooted in this ignorance.

Logic as Argument: 1 - The Justificatory Task of Logic

Toulmin's interpretation of science was rooted in his criticism of formal logic and his view of scientific theory as a map or metaphor. Let us now look at the approach to matters of logic that parallels this interpretation. As we proceed we shall see that Toulmin's ideas allow us to develop a very specific understanding of the relevance of the problem of ideology for logic.

Toulmin began his discussion by rejecting any analogy between logic and psychology, sociology, technology or mathematics. According to him, the first analogy sees logic as founded in the "laws of thought" and the logician's concern is with obtaining "normal thinking processes". 42 Toulmin took Dewey as an example of the second analogy; that is, the sociological approach to logic. According to him, this approach sees habits - manners of acting - becoming accepted as rules which in turn lead to habits of inference. 43 The third analogy or technological approach to logic is concerned with "the manner of inferring or with questions of technique" per se. 44
Toulmin rejected the first and second analogies. "If one thinks of logic as an extension of psychology or sociology, the notion of logical form remains impenetrably obscure - indeed, it can be explained only in terms of even more mysterious notions, being accounted for as a structure of relations between psychic entities or social behaviour patterns." He also rejected the third approach. For Toulmin logic was not primarily concerned with technique but "... its primary business is a retrospective, justificatory one - with the arguments we can put forward afterwards to make good our claims that the conclusions arrived at are acceptable, because justifiable, conclusions."

Toulmin argued that mathematics seemed to overcome the obscurity of the first two approaches, but that its form was not adequate for the "justificatory task" of logic. He chose another analogy more appropriate for these purposes.

"There is one special virtue in the parallel between logic and jurisprudence: it helps to keep in the centre of the picture the critical function of the reason. The rules of logic may not be tips or generalizations: they none the less apply to men and their arguments - not in the way that laws of psychology or maxims of method apply, but rather as standards of achievement which a man, in arguing, can come up to or fall short of, and by which his arguments can be judged."

This analogy avoids the pitfalls of a strictly cognitive, sociologistic, technical or mathematical approach to logic, but it still presents a problem for the sociology of knowledge. The "standards of achievement" of jurisprudence do not transcend the social and political function. To develop this idea, let us trace through Toulmin's analogy.

2 - The Layout of Arguments

Toulmin was concerned about the form that arguments take. He undertook an analysis of this form by developing pragmatic distinctions which formal logic
consistently ignores. His first distinction was between (a) the "claim or conclusions whose merits we are seeking to establish" and (b) the data or "facts we appeal to as a foundation for our claim".48

When we described Toulmin's approach to scientific theory, we argued that the facts do not "speak for themselves". An inference is required between the facts and a claim and Toulmin argued that logic must concern itself with "the nature and justification of this step".49 He therefore made a second distinction: that between (a) the data and claim and (b) the warrant.

Whereas the appeal to data is supposed to be made explicitly when we make any claim, the appeal to a warrant is usually made in only an implicit manner. We make a claim on the basis of data, or from data, since or because we accept more general hypotheses or warrants. These more general hypotheses "... certify the soundness of all arguments of the appropriate type, and have accordingly to be established in a quite different way from the facts we produce as data."50

Warrants in logic are analogous to laws in scientific theory. Both have a middle-range status. The failure to acknowledge the implicit appeal to such warrants or hypotheses, the failure to admit that a conclusion does not spring from "the facts" per se, underlies much confusion in logic. For one thing, the failure to recognize the role of warrants in logic allows the effects of the commitments of a scientist on his or her work to go unscrutinized. Processes that are in fact rooted in the social arrangement of science hence become mystified and idealized. Our awareness of the meaning and consequences of scientific work is hindered in the process.

As I proceed in this chapter, I will argue that the commitment of a scientist
to certain warrants is where ideology and logic fuse. Toulmin talked of commitments in the following way: "The data we cite if a claim is challenged depend on the warrants we are prepared to operate within that field, and the warrants to which we commit ourselves are implicit in the particular steps from data to claims we are prepared to take and to admit." Toulmin, like Kuhn, was aware that the warrants we use to argue a point are related to commitments that are not rooted in data.

Further distinctions are required to fully scrutinize the form of any argument. To evaluate an argument "... we need to add some explicit reference to the degree of force which our data confer on our claim in virtue of our warrant." This demands a qualifier which allows us "... to discuss explicitly the extent to which (a particular law fits the case under consideration ... whether it must be inevitably be applied ... or whether special facts may make the case an exception to the rule or one in which the law can be applied only subject to certain qualifications." Toulmin's third distinction, that between (a) the qualifier and (b) the claim made from the data in terms of the warrant, helps us to extend our logical assessment of any argument. But, in Toulmin's scheme, in addition to a qualifier, an argument also needs a rebuttal. The distinction between (a) the qualifier, and (b) the rebuttal was the fourth one Toulmin made to help understand the layout of arguments. The former "... establishes a presumption", while the latter, "... by setting aside one possible rebuttal tends to confirm the presumption thereby created." Argument is thus dialectical. It requires a hypothesis in accordance with which we argue a claim, but it also requires an understanding of what con-
sustutes the negation of that hypothesis. Once this is recognized the scientific notions of laws, causes and determinism are thoroughly demystified.

On the basis of these distinctions, Toulmin contrasted two sorts of questions that any evaluation of an argument must consider. First, there is "the applicability of a particular warrant" to an argument, and, second, there is "the result we shall get from applying the warrant". Toulmin contrasted the two questions because "... in asking about the correctness of the result we may have to inquire into both these things independently."\(^{55}\) Too often the correctness or truth of an argument is discussed by mixing the two questions together. The result is not only confusion about matters of logic, but also about the relevance of ideology to our theories.

Toulmin made a fifth distinction. Not only do we need (a) a qualifier and rebuttal for our warrant, we need (b) a backing for them. The backing gives authority to the warrant; the warrant has validity and value "on account of" the backing. An analysis of relations of the backing "to our data, claims, warrants and conditions of rebuttal"\(^ {56}\) will therefore clarify the layout of any argument.

The inclusion of the concept of backing takes us full circle in our evaluation of any argument. Warrants are "... hypothetical, bridge-like statements, but the backing for warrants can be expressed in the form of categorical statements of fact quite as well as can the data appealed to indirect support of our conclusions."\(^ {57}\) So argument goes as follows: direct data, hypothetical warrant, indirect data. Through analyzing the layout of arguments we can see that the particular data relevant to the problem at hand and the general data we refer to for backing are always related through hypotheses. It should be pointed out that
both the facts, as direct data, and as indirect data, and the hypotheses or warrants will be associated with a particular point of view, model, paradigm or ideology. Toulmin's clarification shows that the more specific and critical we become over matters of logic the more difficult it is to avoid the problem of ideology.

Toulmin's discussion could lead to skepticism or cynicism about knowledge; or it can lead to an awareness of the role of imagination in science. Those who want "the whole truth and nothing but the truth" will be disillusioned by an awareness of the levels of argument (e.g., data, warrant, backing) involved in making any claim. Those who want facts and theory to fit unambiguously and permanently will be disturbed by an awareness of these many levels. Such simplistic or naive expectations are often replaced with cynicism. Yet those who acknowledge the pragmatic nature of science, realizing that in the final analysis, regardless of the extent of our knowledge, human choice, creativity and imagination are fundamental, will develop new insights and an impetus to further humanize our knowledge.

3 - The Fallacies of Syllogistic Logic

This conceptualization of the form of argument allowed Toulmin to develop a thorough critique of syllogistic logic. The "internal complexity" of such an approach to logic is hidden because the kinds of pragmatic distinctions Toulmin made are not usually applied to syllogisms. To show this complexity, Toulmin insisted on disentangling "... two distinct things - the force of universal premises, when regarded as warrants and the backing on which they depends for their author-
This difference between "an inference-warrant and its backing" is usually concealed within syllogistic logic. The syllogism...

"... may have in use both the force of a warrant and the factual content of its backing, two aspects which we can bring out by expanding it in different ways. Sometimes it may be used, standing alone, in only one of these two ways at once; but often enough, especially in arguments, we make the single statement do both jobs at once and gloss over, for brevity's sake, the transition from backing to warrant - from the factual information we are presupposing to the inference-licence which that information justifies us in employing."59

This distinction between the force of an inference warrant and its backing shows that the syllogism has "... an exaggerated appearance of uniformity as between arguments in different fields ..."60 But even more confusing "... is its power of disguising also the great difference between the things traditionally classed together as 'premises'."61 The two-fold distinction between premises and conclusion that is made in syllogistic logic is insufficiently complex because one premise, what Toulmin called the singular premise, "... expresses a piece of information from which we are drawing a conclusion", while the other, the universal premise, "... expresses, not a piece of information at all, but a guarantee in accordance with which we can safely take the step from our data to our conclusion."62

This distinction helps clarify which issues rooted in a simplistic logic are pseudo-problems and which deserve our attention. For example, do "universals" have any existential implications or are they solely conceptual tools for the scientist? Toulmin argued that "No entirely general answer can be given to the question, for what determines whether there are or are not existential implications in any particular case is not the form of statement itself, but rather the practical use to which this form is put on that occasion."63 In different in-
stances, a universal statement can be "... construed as a permissive inference-warrant or as a factual report of our observations." When we replace the formal question, "Do universals have existential implications?", with the pragmatic question, "How is a universal used and intended?", we no longer need concern ourselves with pseudo-problems. The status of a "universal" will depend on the context of its use and the manner in which it functions in inquiry. A "universal" might be an attempt at a summary of already ascertained facts which are relevant, as backing, to an argument; or, it might be no more than what Dewey called a "directing conception" which facilitates experimentation in inquiry. I shall discuss the pragmatic approach to the problem of universals in depth in Chapter Twenty.

The "... syllogism tends to conceal from us (the) different sorts of backing which our general beliefs may require ..." Yet knowing of these is fundamental to the assessment of an argument. The syllogistic logician "... has in the past cramped all general statements into his predetermined form ..." He has failed to make the necessary distinctions between the character of his warrants and the character of his backing. "Warrants are one thing, backing another; backing by enumerative observation is one thing, backing by taxonomic classification another; and our choices of idiom, though perhaps subtle, reflect these differences fairly exactly." In other words, syllogistic, formal logic has ignored the use of different "idioms" in different arguments. Ignoring these differences it is unable to ask questions about the relations of language to praxis which is one way that the problem of ideology and its implications for issues in logic can be approached.

Toulmin's criticism of syllogistic arguments also implied a criticism of the related notion of "formal validity". "It is sometimes argued ... that the
validity of syllogistic arguments is a consequence of the fact that the conclusions of these arguments are simply 'formal transformations' of their premises." According to this view, once the universal premise is expanded into a warrant "... the parts of the conclusion are manifestly the same as the parts of the premises and the conclusion can be obtained simply by shuffling the parts of the premises and rearranging them." 

Toulmin could not accept this formal approach to validity. He argued that once "... we substitute the backing for the warrant, i.e. interpret the universal premise in the other way, there will no longer be room for applying the idea of formal validity to our argument." Once we examine the form of an argument and recognize the distinction between the force of an inference-warrant and its backing, we see that the quality of an argument is "... not really a consequence of its formal properties." As Toulmin stated: "Once we bring into the open the backing on which (in the last resort) the soundness of our arguments depends, the suggestion that validity is to be explained in terms of 'formal properties', in any geometrical sense, loses its plausibility."

The validity of an argument is then not formal but pragmatic. The use to which the statements within a syllogism are put must be determined before its validity can be evaluated. For instance, is the argument what Toulmin called a "warrant-using" one where the claim is made in accordance with a warrant; or, is it a "warrant-establishing" one where a "novel warrant" is argued with the help of an independently verified set of data and conclusion. The validity of the former depends on the applicability of the warrant and the validity of its backing. The validity of the latter depends on the way in which the novel warrant is developed from the data and conclusion. Neither form of validity can be determined by
restricting one's evaluation to the formal nature of the argument. In the same way that we must replace formal with pragmatic questions when we discuss "universals", we must do this when we determine the validity of an argument.

The notion of formal validity not only fails to examine the form of an argument it cannot account for the way warrants or general hypotheses are developed. "A general statement in physical theory, as Newton reminds us, must be construed not as a statistical report about the behaviour of a very large number of objects, but rather as an open warrant or principle of computation: it is established by testing it in sample situations where both data and conclusion are independently known, then rendered general by induction, and finally applied as a rule of deduction in fresh situations to derive novel conclusions from our data."73 The warrant does not come from a straightforward deduction or induction. An "open warrant" or "principle of computation" has a pragmatic function in inquiry. It represents adequately the way the relationship between data and claims are argued. The scope of the warrant is then generalized by so-called "induction", and deductive processes are used to broaden the application of the warrant. The only difference between induction and deduction is the stage of an argument which we wish to evaluate. These notions are themselves pragmatic. Formal logicians often argue that "the data and backing positively entail the conclusion".74 This is what deduction has come to mean to those who believe in formal validity. This belief, however, is based on an ignorance of the many levels of argument that need to be scrutinized for validity to be discerned.
Toulmin also criticized the analytical interpretation of logic. He argued that substantial arguments must be distinguished from analytical ones if logical theory is to account for the various forms of arguments developed in science. Substantial arguments involve a substantial or substantive step "... in passing to the conclusion from the information we have to rely on (datum and backing) ..." Such an argument produces "... as grounds for a conclusion statements of quite other logical types than the conclusion itself." For instance, in such arguments, people "... adopt moral positions, and pass aesthetic judgments, and declare support for scientific theories or political causes ..." Appealing or referring to these questions brings what Toulmin called "substance" into an argument which is different than that implied in the data and claim. In contrast, an analytic argument has a non-substantive relationship between the backing and the conclusion. That is, "... the backing for the warrant authorizing it includes explicitly the information conveyed in the conclusion itself."

An argument is often treated as if it was analytical when, in fact, substance beyond the information provided gives it backing. As Toulmin said: "... we have to bring out the distinction between backing and warrant explicitly in any particular case if we are to be certain what sort of argument we are concerned with ..." The reduction of all types of argument to the analytic forms accounts for the widespread ignorance among logicians of the problem of ideology. A substantial argument brings into its backing ideas having their basis in beliefs and related social practice which are not "scientific" in the narrow, analytic sense. When Toulmin discussed the need
to always assess arguments within a context, he was suggesting a similar point. He referred to the assessment of arguments in terms of their context as criticism. "Criticism of this sort is, in the widest sense of the word, ethical criticism: it treats an utterance as an action performed in a given situation, and asks about the merits of this action when looked at in the context of its performance." 80

Criticism, in its widest sense, must be based on an awareness of what we have called the problem of ideology. The relationships between the problems, methods and theories that constitute a paradigm or a model, the social and political function of the class of problems emphasized by such a model and the form and content of knowledge developed from it is certainly relevant for assessing substantial arguments. Furthermore, the concern with the context of an argument can lead to a sociology of knowledge orientation for assessing arguments. Toulmin recognized this when he talked of "... the field-dependence of the criteria we employ in the practical business of argument." 81 He touched on one of the implications of this orientation when he continued "... it is only natural to expect that inference-warrants in different fields should need establishing by quite different sorts or procedure." 82

Substantial arguments are clearly not ideology-free. But can we treat so-called analytic arguments as being ideology-free? Though his treatment of this question was not in terms of the problem of ideology, Toulmin's argument suggests that we cannot. He asked: "... upon what foundation (do analytic) arguments depend for their validity." 83 Does such an argument depend upon
itself, so to speak, for its validity? Or is an argument which makes a claim on the basis of its data and its backing always a tautology?

Toulmin believed that scientific argument should have some practical, predictive value and this led him to be skeptical of analytic arguments. "If the purpose of an argument is to establish conclusions about which we are not entirely confident by relating them back to other information about which we have greater assurance, it begins to be a little doubtful whether any genuine, practical argument could ever be properly analytic." A "genuine, practical argument" always involves a relationship between the "general" and the "particular". As we argued above, argument is dialectical. The general includes all the assumptions and beliefs that underlie or relate to any problem and method. The particular includes the data and the claim made from it. Only if we treat the language within which an argument is expressed as the particular and ignore the real meaning or significance of the words, that is, the relationships beyond the particular data and claim implied by them, can we even begin to argue that analytic logic is possible. Toulmin rejected this

"... rather limited doctrine about the nature and scope of logic. If the only principles of inference properly so-called are statements about the meanings of our words, then (some have argued) it is misleading to apply the title of inferring-rules to other sorts of general statement also, which are concerned with matters of substance and not simply with the meanings of our words: as a result, the whole notion of inference-warrants, as set out in this essay, has been pushed aside as confused."

The analytic or linguistic approach to logic is ignorant of the complexity and the form of arguments. It ignores the fact that warrants are always used, pragmatically, to help us argue. It ignores the relevance of the context (e.g., experimental, political, etc.) for assessing the validity of any argument. Its
simplicity may be attractive, but it does not help us clarify the problems
ideology and logic present for the social sciences.

On the basis of his discussion of substantive and analytic arguments,
Toulmin concluded "... that even analytic syllogisms are not valid in virtue
of the meanings of words alone ..." If we are to admit that arguments al-
ways involve "inference-warrants" which help us to make the jump from data to
a claim, and some such view of argument seems necessary if we are to avoid a
metaphysical scientism, then we also will have to abandon the scientistic di-
chotomy between "science" and "ideology". If "substance" beyond our data is
involved in all useful scientific claims and we therefore undertake a study
of the beliefs and related social practice that underlies certain "substance"
then we again come face to face with the problem of ideology. It is a problem
that a narrow, formal logic can ignore. It is not one, however, that a narrow,
formal logic can annihilate.

Toulmin's conclusions were more limited than my own. After examining
the analytical syllogism, he concluded that the "Principle of Syllogism enters
logic when the second premiss of an analytic syllogism is misinterpreted as
stating a datum instead of a warrant or its backing, and the argument is there-
upon (apparently) left without any authorizing warrant." My own argument does
not contradict, but builds upon, this analysis. Though Toulmin's rejection of
syllogistic and analytical, that is, formal logic was based upon a study of the
layout of arguments, my own argument that formal logic functions as part of the
ideology of scientism is reinforced by his analysis.
Formal Logic and the Scientistic Myth of Determinism

On the basis of his criticism of formal logic Toulmin warned us of the dangers of simplicity in matters of logic. "Many of the current problems in the logical tradition spring from adopting the analytic paradigm—argument as a standard by comparison with which all other arguments can be criticized." It is a mistake, he argued, to apply the "analytic paradigm" beyond its proper scope, which is far different from saying that this particular logical and ideological paradigm has been of no value. As Toulmin said: "... it would be quite another (thing) to treat this type of argument as a paradigm and to demand that arguments in other fields should conform to its standards regardless, or to build up from a study of the simplest forms of argument alone a set of categories intended for application to arguments of all sorts: one must at any rate begin by inquiring carefully how far the artificial simplicity of one's chosen model results in these logical categories also being artificially simple."

Several common errors result from this overuse of the analytic paradigm. For one thing, its over-application has led to the fallacious equation of the idea of "deduction" with that of "necessity". In an attempt to extend its control over contemporary social science, the ideology of scientism over-applies logical categories, and, as such, creates such mystifications. As we saw above Toulmin rejected the idea that necessity or determinism was deducible from the scientific method. He elaborated on this argument by contrasting his distinction between analytic and substantial arguments with four other common distinctions in logic. He pointed out that his distinction between analytic and substantial arguments was not the same as that between formally valid arguments
and other types. Any argument "... may be expressed in a formally valid manner, provided that the warrant is formulated explicitly as a warrant and authorizes precisely the sort of inference in question ...". He also pointed out that his distinction was not the same as that between "warrant-using" and "warrant-establishing" arguments. Though it is more difficult to state warrant-establishing arguments in a formally valid manner we cannot equate formally valid arguments with analytic ones.

Toulmin also pointed out that his distinction was not the same as that developed by analyzing the "sorts of words" appearing in an argument. He argued that "The task of identifying analytic arguments cannot ... be performed by looking for key words ... (but) can be done only by looking at the nature of the problem under investigation, and the manner in which we establish the warrants relevant to its solution." Lastly, and this is most relevant to us, he pointed out that his distinction was not synonymous with that between "... arguments whose conclusions can be inferred necessarily or certainly and those whose conclusions can be inferred only possibly or with probability." Rather than an argument being necessary or conclusive because it is analytic, it can only be treated as such "... when the warrant authorizes the step from data to claim unambiguously." This unambiguity would itself depend on a particular paradigm, model or ideology, so a deterministic conclusion, as the ideology of scientism treats "determinism", could never be justifiable.

Once these four distinctions are clearly distinguished from the one between analytic and substantial arguments, we can enhance our clarity about problems in logic. Referring to the confusion that results from confounding
these distinctions, Toulmin wrote: "Perhaps, indeed, it would be better to scrap the words 'deductively' and 'necessarily' entirely, and to replace them either by 'analytically' or by 'unequivocally' according to the needs of the example." 95

6 - Idealized and Working Logic

Toulmin believed that the assessment of practical arguments was the subject matter of logic. What he called "working logic", in contrast to "idealized logic", should be the concern of logic. The overuse of the analytic paradigm leads to such an idealized logic. But we have seen the pit-falls of "... the ideal of the subject (of logic) as a formal, deductive and presumably axiomatic science." 96 At this point it is useful to ask how the idealized version of logic has developed and persisted. I shall expand on this in Chapter Twenty.

Toulmin referred to the two views of geometry among Greek intellectuals and suggested that a similar division exists among those who presently believe in idealized logic. Some believed that the "... subject applied directly to the changeable objects of the material world, while others claimed that (it) referred rather to an independent class of change-free things ..." 97 In logic the former leads to a belief that "propositions are tenseless" and can be applied directly to a variety of subject matters. The latter view leads to a belief that the subject matter itself will prove to be made of "change-free, time-independent objects". 98 Though both these formal, mathematical-like approaches to logic have a place, they cannot fulfill what Toulmin called the "justificatory task" of a working logic.
"The trouble does not lie within the formal systems themselves: it would be pointless to argue that one could not have formal mathematical calculi concerned with the relations between propositions, since everyone knows what elaborate and sophisticated propositional calculi have in fact been built up in recent years. The objections turn rather on the question, what application these calculi can have to the practical assessment of arguments—whether the relations so elegantly formalized in these systems are, in fact, the ones which concern us when we ask in practice about the cogency, force and acceptability of arguments."  

Toulmin did not believe that a working logic could ever result from a reformed version of idealized logic. And the contemporary idea that logic is the study of the relationships among propositions is a reformed version of idealized logic. "A critic's business is to inquire how far certain statements cited as data support a conclusion or statement of claim; so that a formal logic of propositions will have to be transcribed so as to refer to statements before we can hope to apply its results." When I criticize Kaufmann's rule-centered logic in Chapter Seventeen, I will show the inadequacies of all approaches to logic which only reform idealized logic.

Toulmin recognized that our view of language affects our understanding of logic. And he rejected the static approach that idealized logic takes to language. "Certainly language as we know it consists, not of timeless propositions, but of utterances dependent in all sorts of ways on the context or occasion on which they are uttered." The particular context in which language is used will affect its meaning. Reforming formal logic into a logic of propositions does not situate language in praxis nor see the relevance of doing this for our approach to logic. In Chapter Nineteen, I shall argue that a pragmatic approach to logic and awareness of the relations of language and logic are complementary.

Toulmin expressed an interest in the "historical transition" from the
Greek's idea of geometry to the present views of formal logic. He asked: "Why should the medieval logic of statements have been abandoned, and displaced almost entirely by a propositional logic which relates not context-dependent utterances, but context-invariant propositions?" He suggested that the invention of printing may partly explain this change. With printing there came a permanent recording of statements, and language came to be thought of as "context-invariant". Before printing "... the transient firework-like character of our utterances would remain overwhelmingly obvious." The search for "forms" that represented the changes, or "forms" that were thought to be the reality behind the changes, characterized the logic in the period before the Guttenburg galaxy.

Toulmin also suggested that there was a revival of "Platonism" after the 17th century European scientific revolution. A concern with employing "mathematical methods and models in all speculations" expresses a Platonist view about the status of mathematical entities. Toulmin rejected this new Platonism. If we "freeze statements into timeless propositions before admitting them into logic", we cannot critically assess the layout of arguments. As he said: "... utterances are made at particular times and in particular situations, and they have to be understood and assessed with one eye on this context." A belief in timeless propositions does not allow us to assess the validity of an argument in terms of its origins, nature and consequences. Freezing statements into timeless propositions makes it impossible to study the relations of language and logic, of language and praxis, and of the relevance of the problem of ideology to issues in logic. Unless we believe in formal validity, which we have already criticized, or have a
metaphysical view of science, we have to undertake this thorough assessment of an argument.

Many who are anti-scientific in rhetoric still believe in and use formal logic. Their idealized logic has little relevance to the working logic of the scientist. Because of the irrelevance of idealized logic, and the scientific dichotomy between theory and practice that underlies this idealized logic, some logicians have tried to separate logic into "logical theory" and "logical practice". But this simply formalizes the underlying error. If logic is to critically assess the validity of arguments, then it must be rooted in the practice of inquiry. This includes the use of theory. My discussion of Toulmin's approach to the philosophy of science argued that theory and experimentation have a dialectical relationship in the practice of inquiry. There is no theory that is added to practice. So we must abandon, not reform, idealized logic and replace it with a logic that can assess arguments as arguments. Such a revolution in logic can help us go beyond the pseudo-problems of formal logic, and pave the way for an explicit consideration of the problems that ideology poses for the social sciences. Such a revolution in logic is fundamental to the task of humanizing the social sciences.

Toulmin's theory of logic is relevant to this task. He acknowledged that logic was a normative discipline and wrote that "... if logic is a normative subject, concerned with the appraisal of arguments and the recognition of their merits," we cannot expect to have a static science of logic that exists separately from the changing subject matters of the sciences themselves. Logic must be rooted in the changing subject matters of scientific inquiry. And, if logic is to be normative and judgmental, it cannot ignore how ideology affects the origin, nature and consequences of different forms of argument. Once a formal logic which
looks for the "internal consistency" of an argument is replaced by a practical logic that evaluates the "strength of arguments" there will be no way to avoid the problem of ideology.

7 - Comparative Epistemological Analysis

On the basis of his study, Toulmin made three conclusions. He first concluded that the fields of "logic" and "epistemology" require a rapprochement. He argued that "... the proper business of both is to study the structures of our arguments in different fields ..." There have been several detrimental effects from this dichotomy between logic and epistemology. The separation of the assessment of arguments, i.e., logic, from theories of knowledge, i.e., epistemology, has allowed our ignorance and confusion about the interdependence of science and ideology to go unchallenged. It has kept us without a language or the awareness to begin to clarify the problems entailed. Neither formal logic nor abstract theories of knowledge can help us to see how a class of problems, the methods and theories used to study them, and the social and political context and function of science at a particular time underlie and affect the consequences of our knowledge.

Toulmin's second conclusion was that the "comparative method" must be utilized in assessing arguments. Once absolutes are taken out of science and the notion of formal validity is rejected, we have no choice but to inquire and assess our arguments in a comparative way. Once we reject the notion of formal validity and situate logic in changing subject matters, we realize that the form of arguments in one field cannot provide a "universal standard of merit and validity". The validity of an argument must be determined by assessing it in
terms of the relevant subject matter at hand. The "... standards will be field-
dependent, and (the) merits to be demanded of an argument in one field will be
found to be absent ... from entirely meritorious arguments in another."^{109}

This means that we cannot reject certain problems as being irrelevant to
the social sciences because their logic does not appear to conform to the dominant
arguments in another field. Validity must be assessed in the concrete; in sub-
stance, not attributed because of abstract form. Doing this is an impossible task
for those who begin with fixed commitments to specific theories and a related class
of problems, equating these with "science" and all ideas that contrast with them
as "ideology". A comparative, not one-dimensional, method is required to assess
the worth of arguments and this demands a logic rooted in dialogue not dogmatism.
In Chapter Twenty-One I shall discuss how the fragmentation of research and teach-
ing makes the achievement of comparative logic nearly impossible at present.

Toulmin's approach to logic contrasts sharply with that of Popper. When
Toulmin stated that questions about validity of arguments must be asked "within
the limits of a given field", he was, in effect, rejecting Popper's formalism.
We saw how Popper developed a "perfect model" of "historicism" and then "arguing"
with his own model developed notions in logic (e.g., hypothetico-deductive models)
which he applied indiscriminately. He admitted that he developed his theory of
logic without knowledge of relevant subject matter in the social sciences. The
result was a confused mixture of poor logic, bad social theory and crude polemics.

Toulmin's third conclusion was that logic must cease to be an _a priori_
subject. This is the way Popper and all formal logicians treat it. He argued
that the study of logic must be both more empirical and more historical. "We
must study the ways of arguing which have established themselves in any sphere, accepting them as historical facts; knowing that they may be superseded, but only as the result of a revolutionary advance in our methods of thought."¹¹⁰ For Toulmin, this meant that "epistemological analysis" must replace "epistemological theory".¹¹¹ This study of the ideology and logic of scientism constitutes such an analysis. By outlining the problem of ideology and discussing issues in logic in terms of it I have attempted to bring about a rapprochement of logic and epistemology through a comparative analysis.

Footnotes


²Ibid., p. 20.

³Ibid., p. 30.

⁴Ibid.

⁵Ibid., p. 31.

⁶Ibid., p. 33.

⁷Ibid., p. 34.

⁸Ibid., p. 41.

⁹Ibid., p. 42.

¹⁰Ibid., p. 43.

¹¹Ibid., p. 44.

¹²Ibid., p. 46.

¹³Ibid., p. 51.
Recognizing the distinction between laws as representations and statements about the application of laws complements an awareness of the centrality of judgment in science. As Toulmin said: "It is by recognizing the nature of this division that one comes to see how physicists steer their way between the scylla of fallible generalization and the Charybdis of empty tautology." (Ibid., p. 89.)
Russell's simplistic understanding of the philosophy of science and logic was paralleled by his superficial understanding of the social arrangement of science. For example, in Bertrand Russell: The Future of Science, New York, Philosophical Library (1959), there is no mention of the problem of ideology vis-a-vis science.

Toulmin, op. cit., p. 129.

Ibid., p. 145.

Ibid., p. 148.

Ibid., p. 157.

Ibid., p. 165.

Ibid., p. 168.


In Chapter Twenty, we shall see that Toulmin was in error describing Dewey's approach to logic in this way. In no way was Dewey's approach to logic based on a sociologism. Rather than reducing inference to habits, Dewey argued for the widest flexibility in the scientific abstractions utilized in inquiry.

Ibid., p. 6.

Ibid., p. 43.

Ibid., p. 6.

Ibid., p. 8.

Ibid., p. 97.

Ibid., p. 98.

Ibid., p. 100.

Ibid.

Ibid., p. 101.

Ibid.

Ibid., p. 102. The Winston Dictionary, College Edition (1957), defines presumption as "a going beyond due bounds; bold forwardness ... a taking for granted; acceptance and belief of something not fully proved ... that which forms a logical basis for acceptance and belief, without actual proof: Law, the inference that an
act has been committed, or that a fact exists: Based upon circumstances that usually attend an act or fact ...” Argument always goes "beyond due bounds", or it is not of any value. And that is why argument cannot be reduced to deductive, analytic forms. Validity comes not from a deductive inference but from the quality (e.g., backing) of an argument.

55bid.
56ibid., p. 103.
57ibid., p. 105.
58ibid., p. 108.
59ibid., pp. 111-12.
60ibid., p. 113.
61ibid.
62ibid., p. 114.
63ibid., p. 115.
64ibid.
65ibid., p. 116.
66ibid., p. 117.
67ibid.
68ibid., p. 118.
69ibid., p. 119.
70ibid.
71ibid., p. 120.
72ibid.
73ibid., p. 122.
74ibid.
75ibid., p. 125.
76ibid.
If we treat language *per se* as if it is the argument and fail to treat language as an attempt to conceptualize real relationships and events from past, present and even future situations, then, in effect, we are denying the possibility of inference and discovery. A semantic approach to the meaning of language abstracts words from context, and though it can make some important points about language forms, it cannot account for the way language is used to deal, abstractly, with the significance of experience through time and events. The theorist who analyzes language in a semantic way is conceptualizing and hence cannot deny that the person who wrote what is being read was also attempting to use language to this end.
With printing it became feasible to create language that had an independent, material reality. This was fundamental to the spread of scientific inquiry, but it also partially underlies the modern tendency to reify language. If we remember that unless language is situated in praxis it cannot be used to create knowledge, then the independent, material reality of language (e.g., books) should not create any problems for logic.

Toulmin's concern with the scope of theories, the context of their use and the field-dependence of the criteria we employ in evaluating them all reflect his justificatory, pragmatic view of logic. The formal orientation to logic disregards the contemporary and/or historical rooting and functioning of any propositions, statements and language, and therefore lacks this concern. Yet, to make good our claims, as Toulmin puts it, it is always necessary to argue in accordance with standards which have a field dependency. The force of the universal warrant, for example, as backing for a particular claim, is dependent on a field — a situation within which a theory can be shown to have relevance (e.g. have predictive validity in terms of a problem and related ideal). The field and related criteria must be relevant to the subject matter at hand, and, since both the field and subject matter are changing (though structured) through time, this means that a dialectic logic is required to make this judgment. The grounds for a claim, according to Toulmin, are of a different logical type than the claim itself, and can entail, for both force and backing, normative matters like the appeal to a political cause. To assess an argument, then, is ultimately to assess the situation(s) within which a warrant, which can be an ideological matter, gains significance. Pragmatic distinctions between kinds of fields, say "experimental-educational" and "political", are necessary for clarity. The difficulties of establishing these, especially when the pragmatic orientation to logic is not generally established, does not reduce the need for them. The need to understand the field-dependence of criteria we use to clarify how the inference-warrants in different fields are established by different procedures is indispensable for developing a pragmatic, self-critical social inquiry. When the formal orientation to logic is criticized and rejected in this thesis this means that a paradigm of logic, one which idealizes the formal, deductive and axiomatic, and ignores logical problems related to the scope, context and field criteria of different subject matters, must be surpassed. As I have stated in several places,
this does not entail the rejection of the conceptual technique of determining the formal validity of arguments, but it would involve the rejection of the narrow, established formal logic which obscures and/or ignores the problem of ideology. The relations of language, as an aspect of praxis, and logic need to be studied as part of this intellectual project. The discussion of "Rules and The Generalized Other", and "The Social Field of Science", in Chapter Nineteen, is only a beginning.

(F. Collinge, thesis supervisor, introduced me to Toulmin's work with the following memo: "On reflection, it would seem to me that if you are going to put any respectable philosophical conceptual clothes on your naked sociology of knowledge-type impulses, it will have to be done in terms of epistemology. Now in conventional positivistic epistemology (or any other) there is no hope -- as poor Mannheim so adequately shows. This, I think, is for the reason that conventional epistemology is all hung up on what is in fact a hoary assumption about logic: that any knowledge claim, to be really good, must fit that form known as the analytic form wherein explanations can be straightforward deduced from premises. But some contemporary work on logic shows this to be quite probably a bad way to look at logic -- that, briefly, there is no such thing as a 'simple' deduction of explanations; that what appears to happen is that explanations are produced by arguments that look deductive but are not -- explanations that in fact depend on a form of inference which is 'field dependent'. This means, or could mean, that there is in effect not one but many logics, that there is no such thing as the explanation, that logic and epistemology are really the same thing in that both have to do with the way each conceptually distinct language organizes its experience and its linguistic metaphor-models to deal with its subject-matter. When you break down logic this way, and when you make explanation, language and context - dependent, you have precisely given a foundation for talking about a sociology of knowledge. Even an anthropology." - March 21, 1968)

105 In Chapter Twenty I will criticize the scientific dichotomy between theory and practice and discuss how it is rooted in a reified approach to logic.

106 Toulmin, op. cit., p. 187.

107 Ibid., p. 255.

108 Ibid.

109 Ibid.

110 Ibid., p. 257.

111 Ibid., p. 258.
Toulmin's rejection of formal, deductive logic and his thesis that the proper study of logic is the assessment of practical arguments are closely related. Before we expand on this thesis by discussing how the relationships between ideology and logic can be approached in terms of language, it is useful to discuss a sampling of theories of logic that only appear to be free of the fallacies of Weber, Durkheim and Popper. I have selected the work of Kaufmann and Winch since in differing ways they both base their argument on a discussion of rules.

Approaching logic in terms of rules is a widespread but inadequate tendency in contemporary social science. Like all formal approaches to logic it restricts our awareness of how ideology and logic interrelate. Though Kaufmann rejected traditional ideas of logic, his discussion of "rules" is only a more sophisticated attempt to keep logic and ideology separate. Kaufmann can therefore be seen as a reformer, not a revolutionist (as we can call Toulmin and Dewey) in the field of logic.

Matters of Fact and Matters of Meaning

Kaufmann built his discussion around the distinction between "matters of fact", which he called "synthetical propositions" that deal with a causal analysis, and "relations of meaning", which he called "analytical propositions". This dis-
tinction between meaning and fact contrasts sharply with Dewey's logic which I will discuss in Chapter Twenty. Though affected by Dewey, Kaufmann wrote:

"I could not accept this theory of meaning. This led me to a reconsideration of the problem how the logical analysis of scientific procedure (methodology) is related to deductive logic. I came to the conclusion that methodology must be clearly distinguished from deductive logic and recognized as an autonomous rational discipline."

Kaufmann treated "methodology" as "an autonomous rational discipline" which differs from deductive logic. This amounted to a rejection of "epistemology". Kaufmann thus wrote: "We shall not assume that the conflicting epistemological doctrines 'behind' the methodological controversies lead to the core of these issues." But does this re-definition solve anything? Does the creation of a new "discipline" solve the problem (e.g., abstracted views of knowledge) with which the older discipline left us? To clarify this let us see how Kaufmann applied his discipline of methodology, and the distinction between fact and meaning, to general issues in the philosophy of science.

Kaufmann applied his distinction to a discussion of the relation of "knowledge and reality". We have seen throughout this study how one's approach to this question will underlie one's orientation to epistemology and logic and determine whether the problem of ideology is treated problematically or in a superficial way. Our discussion of Mannheim showed that even asking how reality and knowledge are related is an error. Kaufmann's orientation to this question was one of seeing "philosophy ... (as the) analysis of experience". "Philosophy" and "experience" get placed in different realms with the former associated with knowledge and the latter with reality. Consistent with this orientation, Kaufmann talked of the "genetic fallacy", that is, "... confounding (the) analysis of meanings with
causal explanation. In this view, knowledge and meaning become abstracted from experience and causation. For Popper, the so-called genetic fallacy confounded questions about the origin and those about the validity of ideas. Both theorists arbitrarily separated meaning from fact and in doing this rationalized the narrowness of their perspectives on logic.

Kaufmann also applied his general distinction to the relation of "language and meaning". He came very close to what Whorf called the "natural logic" theory of linguistics since he saw language solely as a logical tool and failed to situate language in human praxis. He believed that language can be used to do an abstract analysis of meanings. In his words, the "... logical analysis of the meaning of synthetic propositions does not imply any reference to their validity (truth or falsity)." In a sense, language was seen as being value-free by Kaufmann.

Kaufmann's notion of an "elliptical formulation" was related to this distinction between analytical and synthetical propositions. An elliptical formulation is one that "... does not take account of all their dimensions of relationality." This idea certainly can be useful since, as we saw with Toulmin, many arguments do not explicitly formulate all the relationships that are being implied for their backing. But to treat this question of "relationality" in a formal way minimizes, even obliterates, its usefulness. For instance, Kaufmann talked of how a synthetic proposition restricts the "frame of possibilities" to allow "empirical control", and then contrasted an elliptical formulation with this. "It is therefore elliptical to speak simply of an external relation between two propositions, without mentioning the third proposition that is implicitly referred to."
There is clearly the need to restrict one's statements (e.g., hypotheses) to a form that is empirically testable. Toulmin's discussion of the layout of arguments also implied this need. As long as we recognize that our warrants and backing ultimately involve beliefs that are beyond the scope of direct inquiry, this empirical orientation is justifiable. Kaufmann, however, did not recognize this. His idea of the "elliptical formulation" was used to maintain his formal distinction between meaning and cause, not to enhance our awareness about the layout of scientific arguments.

Kaufmann continued by contrasting pre-scientific and scientific thought. Again the view of "methodology" as an autonomous discipline dominated his analysis. For example he wrote that "... the definitions in a science are indicative of its method, and controversies ... over definitions usually reflect their disagreement about the methods to be employed." We can compare this view with that of Kuhn who recognized the primacy of method but also recognized that a paradigm of problems, methods and theories has its own logic. Kuhn's approach allowed a more inclusive handling of problems of methodology (including definitions) than one that removes methodology from a discussion of "paradigms" and, ultimately, ideology.

Kaufmann's idea of science stands between the "scientistic" one and the more radical, pragmatic one. For example, he did not accept the view of formal logic that Toulmin associated with the Greeks. He showed this when he agreed with Einstein's statement that "In so far as mathematics is about reality it is not certain, and in so far as it is certain it is not about reality." He clearly rejected the notion that reality is essentially quantifiable. He wrote of "The
misleading expression that qualities are 'transformed' into quantities in taking such measurements is connected with the idea that quantities rather than qualities reveal the true nature of the universe." \textsuperscript{12} Kaufmann's concern with method made him skeptical of these vulgar "scientistic" notions. But his rigid distinction between "the logical order of meanings and the temporal order of inquiry" \textsuperscript{13} made it impossible for him to consider the relations of method and ideology. When we reduce matters of meaning to a timeless, formal method, we have no way to understand how our methods are themselves meaningful only when utilized in an ideological context.

In one place, Kaufmann showed some awareness of this alternative. When he wrote of the "methods (habits) of thought" \textsuperscript{14} and "habits" was his term, he indicated that methods and habits were related. If this relationship is expanded you quickly find that the way "science" is institutionalized affects the paradigm of problems, methods and theories with which it is concerned. Soon you confront the problem of the sociology of knowledge. The habits and methods of a scientist are related to his or her training (socialization to a paradigm) and this will relate to the social and political relevance and function of one paradigm over another. If we see that the meaning of science is related to the consequences of a particular form and context of knowledge, and this includes social and political consequences, then the distinction between causes and meaning breaks down. From this point of view, "meaning" is not something determined by a narrow, logical analysis. It itself involves social and political forces that affect the very workings of science.
Reforming Traditional Logic: Kaufmann's "Basic Rules"

Kaufmann's status between a crude scientism and a radical and pragmatic understanding of knowledge underlay his confusion about the nature (I would say function) of methodology or scientific "rules". He showed this confusion by asking the traditional question of whether or not rules or methods are a priori. Consistent with his reformist inclination, he answered "no" since

"... definitions ... do not make any assertions about reality at all. (Nor are they) derivable from the propositions to which they apply. But the rules are a priori in the sense that - again because they make no assertions about reality - they cannot be refuted by 'experience' (observation); and they are a priori for science because 'science' is defined in terms of them."15

On the one hand rules aren't a priori and on the other hand they are. We should not expect any clarity from a false question. The important question is not whether rules are a priori or not, but how they function. To ask this question, however, one has to see logic and methodology in a radical way: as the practical assessment of arguments.

Rather than replacing his false question, Kaufmann outlined what he called the "basic rules" of scientific procedure. His distinction between meaning and fact, rooted in his false understanding of language and logic, forced him to "reconcile" his dilemma about the question "Are rules a priori?" by postulating "basic rules". Kaufmann only appeared to be developing an argument. Rather than correcting his fundamental errors, he, like Durkheim, turned them into more abstract problems.

Kaufmann's static treatment of rules contrasted sharply with that of Kuhn's. He stated that: "... the rules of scientific procedure state the condi-
tions for an exemption from the general prohibition against changing the corpus of a science.\textsuperscript{16} Here, we see Kaufmann's conservative orientation to science. Summarizing Kaufmann's orientation, Bentley stated: "The correctness of scientific decisions in terms of basic rules depends solely on the knowledge established at the time, i.e. on previously accepted propositions which now serve as grounds for the acceptance of new ones."\textsuperscript{17} This conservatism contrasts sharply with Kuhn's concern with "scientific revolutions". Kaufmann's approach to "rules" was not rooted in an awareness of paradigms and paradigm anomalies. Such a concern with the dialectic between orthodox and radical ideas within science provides a more inclusive understanding of methodology.

Kaufmann also wrote that "... there are no rules of procedure that forbid a change in the corpus of science."\textsuperscript{18} We again see the confusion that was rooted in his attempt to treat methodology as "an autonomous discipline". If no rules forbid change, and Kuhn's analysis showed this to be the case because specific "rules" are related to specific problems and paradigms, then it becomes problematic how and why the norms of methodology change. But Kaufmann ignored this. He disregarded questions regarding the genesis of, or conditions that give rise to, methodological norms. Though he partially admitted that rules were not \textit{a priori}, he did not extend his study of logic to take the implications of this into account. He kept narrowly to methodology as "the logic of scientific procedure" and stated that "... the question of actual consensus (over scientific rules) is not one of the logic of scientific procedure."\textsuperscript{19}

Defining logic in this narrow way may rationalize the ignorance of formal logicians about how and why a particular consensus over certain rules
develops, but it does not reduce the importance of this problem. If we are to treat logic as the practical assessment of arguments, then we ultimately have to face this question. And this is the only real alternative to the abstract epistemologies Kaufmann rejected. But, in his assumptions, Kaufmann did not really break from traditional logic. We see this in his statement: "Since rational knowledge and empirical knowledge are different in kind, there is no way that leads from the conception of absolute truth to a genuine logical theory of empirical procedure ..."20 This shows that Kaufmann's distinction between meaning and fact related to his bifurcation of knowledge into the rational and the empirical. For him, "the conception of absolute truth" is rational and logical, and no empirical procedure can fulfill the appropriate criteria. Kaufmann therefore replaced the a priori rules of traditional logic with "basic rules". But the inadequacies of the underlying formal approach remained. In Chapter Twenty, I will discuss how an ontological, rather than pragmatic, treatment of the distinction between the so-called rational and the empirical underlies all formal approaches to logic.

The distinction between the rational-logical and the empirical led Kaufmann to write:

"To solve a logical problem is to explicate an implicit meaning. To solve an empirical problem is to perform a series of steps terminating in the verification of an answer to a question of fact."21

Here we see an excellent example of the dichotomy between what Toulmin called "idealized logic" and "working logic". If logic is to have some relevance to the practice of argument, it must be rooted in empirical problem solving. It cannot be separated from this, concerning itself with "implicit meaning". Implicit
meaning proves to be manufactured, academic meaning from a pragmatic perspective.

Kaufmann claimed that the scientific ideal was neither the search for "a prioristic interpretation" nor rooted in a belief in the "fallability of the human mind". Instead, it was concerned with the development of what he called "regulative principles". But we saw how Kaufmann still thought of logic in terms of a priori and "absolute truth". And his "regulative principles" or "basic rules" were abstracted from inquiry because of this. Kaufmann's understanding of science therefore remained orthodox, and, ultimately, scientistic.

Kaufmann's Scientism

An examination of Kaufmann's ideas about physical laws, causality, truth and probability shows his scientistic tendencies. His approach to these questions was related to his rejection of the idea of immediate knowledge. He quite rightly believed this notion was a fallacy of both rationalism and empiricism. Yet his own tendency to accept the traditional distinction between the two orientations affected his discussion of immediate knowledge. For instance, when he wrote that "Only understanding of meanings can be called 'self-evident' immediate knowledge," he accepted the belief that the logical analysis of meanings comes close to the notion of absolute truth in rationalism.

Though Kaufmann's handling of meaning was quite traditional, he did question traditional ideas about the so-called dichotomy between the objective and the subjective. "All the frequently advanced arguments in which conventionalism is contrasted, as subjectivism or idealism, with empiricism, as objectivism or realism, miss the essential methodological point." Kaufmann clearly rejected
the kind of objectivism we criticized when we discussed Bergmann in Chapter Five. The "essential methodological point" for Kaufmann was about the need for regulative principles to undertake any inquiry. Once the pragmatic nature of both method and theory is recognized, one cannot maintain a crude dichotomy between the objective and subjective.

We saw earlier how Toulmin rejected both the deductive and inductive theories of scientific inference. Kaufmann's interest in methodology also led him to a similar view. "It is not clearly enough recognized that results of inference (in the broadest sense) are implicit in all statements about facts, and that the observational test is interrelated with other controls." Both theorists agreed that inference does not come from observation and generalization alone. It is on the nature of what Kaufmann called the "other controls" that they diverged. Kaufmann's handling of this question, unlike that of Toulmin, was rooted in the distinction between analytic and synthetic propositions.

Kaufmann compared and contrasted four theories of truth in terms of their concept of inference. He argued that pragmatism and logical positivism (or "coherence theory") were in agreement about the issue of inference. We shall see in Chapter Twenty that this is an inaccurate claim based on Kaufmann's misunderstanding of the pragmatic theory of meaning. Kaufmann admitted that some aspects of "correspondence theory" remain in logical positivism, and it is just this fact that makes pragmatism and coherence theory so different. Pragmatism does not see inferences as representations of data (either making sense of data or corresponding to it) but as statements which are useful in the quest to unify some existential situation.
Kaufmann viewed probability theory as the fourth theory of truth. He argued that this theory applied to synthetic propositions, but not to analytic ones. He wrote that "... analytic propositions ... contain no assertions about reality ..."\(^{25}\) and that "Certainty is ... the mode of validity peculiar to analytic propositions."\(^{26}\) In contrast to this, Kaufmann argued that all synthetic propositions "are merely probable".\(^{27}\)

Kaufmann's approach to the problem of truth and inference was rooted in his fundamental distinction between meaning and fact. Probability theory applied to the latter, but not to the former. Kaufmann seemed to accept a variation of the positivist concept of truth for analytic propositions. The problem with this approach is that our view of inference and truth must take into account the total process of inquiry. The selection and stating of problems, the hypothesizing and testing of solutions and their comparative falsification and verification, which must include an assessment of the backing of an argument, all must be considered. Kaufmann's abstraction of "meaning" from inquiry and his placement of it in the realm of formal logic made him unable to do this. Because of his dichotomy between meaning and fact and his fragmented approach to matters of truth or validity Kaufmann could not even begin to understand the process of inference in science.

The Unity of Method

Kaufmann continued his discussion by bringing his distinction to bear on the problem of "life and mind". He argued that it is a "... failure to distinguish properly between matters of fact and relations of meanings has beclouded discussions of the relation between inanimate and animate nature and of that between
psychical and physical fact." Again we see a clear separation between questions of meaning and of genesis. Another study would be required to discuss this question adequately, but a comment on the question of logic is possible without doing this. For example, Kaufmann's distinction also led him to reject the polarity between "causal" and "teleological" approaches. He wrote that "It is misleading to contrast causal with teleological ... approaches, since teleology implies causality." One could state the reverse also and say that a causal interpretation of a system implies a certain teleology. The relevant point for our discussion of ideology and logic is not that Kaufmann rightly wanted to avoid an abstract debate over cause and purpose, but that his a priori separation of meaning and fact led him to reduce the latter to an erroneous notion of "cause".

To clarify this we need to look at Kaufmann's statement that the "Failure to distinguish between 'end-in-view' (Dewey's term) and 'real end' is responsible for the erroneous view that the temporal relation of cause and effect is reversed in the means-end relation and that the end is the 'creator' of the means." The pragmatic theory of logic sees an end-in-view as a means for directing inquiry. It not only rejects the scientistic notion of cause, it sees human judgment and evaluation as the core of inquiry. Kaufmann tried to maintain a causal, scientistic interpretation of knowledge even though he rejected the epistemologies that complemented this. If meaning can be determined by formal logic, and not in the social and human consequences of inquiry, then it is possible to believe in some "real end". But this approach ignores the affect of the ends of the established social order on inquiry. In short, Kaufmann was unaware that "cause" is a concept that is rooted in applied problem-solving.
and hence that it always implies means and ends. His idea that in the pragmatic understanding of logic the end "creates the means" is nonsense and fails to distinguish between the end, as the consequences of inquiry, and the end-in-view as a hypothesis.

Not only did Kaufmann fail to clarify the question of ends and means, but also the so-called "psycho-physical problem". He argued that four approaches (parallelism, causality, monastic materialism and spiritualism) have been developed to this problem, but that none have settled it. "Dualists as well as monists in dealing with this problem usually confound relations of meanings with causal relations."

His view was that "... methodological analysis leads to a settlement of the problem." It is one thing to argue that the problem of mind and body has been mis-stated. Both dualistic and monistic approaches do this and are reductionistic in their approach. But it is quite another thing to suggest that problems rooted in specific subject matters can be solved by an abstract methodological analysis. If logic is seen as having the task of evaluating ongoing inquiry taking place in specific subject matters, it can aid in solving these problems. But this is not what Kaufmann's methodological analysis was intended to do.

Kaufmann did not treat psychological and physical concepts as the behaviorists do; that is, in terms of so-called objective facts. Nor did he treat them in terms of "immediate apprehension". Instead, he pointed out that there was an analogy between the two kinds of concepts. He argued that "The first interpretation is refuted by an analysis of meanings by which it is made clear that psycho-physical terms are not reducible to physical terms ..." and the second
approach totally fails to account for the role of method. Kaufmann then argued that the "rules of procedure" involved in making analogies need to be made explicit. He concluded that:

"The preference rules of procedure concerning propositions about the psycho-physical world are not substantially different from those concerning propositions about the physical world. The ideals of unity, simplicity, universality, and precision are in both fields regulative principles of inquiry. But approximation to the ideals is less close here than in natural science."35

Kaufmann believed that the same regulative principles apply to the social and natural sciences. Again we have the argument that methods in the natural and social sciences are not fundamentally different. But what underlies the common function and credibility of these regulative ideals or principles? This question must be clarified to thoroughly investigate scientific methodology. In making the meaning of science a matter for formal logic and not a sociological problem, Kaufmann only developed a rhetoric about the unity of method. In this regard, he had more in common with those who use formal logic to contrast the methods of the social and natural sciences than those who use a pragmatic logic to show the unity of method in the two subject matters. We will see this when we discuss Winch's idealistic approach to logic in the next chapter.

Values as Analytic Statements

Kaufmann's treatment of value judgments was consistent with, and rooted in the same errors, as his overall analysis. Because values were related to the logical analysis of meaning in his scheme Kaufmann denied the possibility of valueless knowledge. However, though he rejected objectivism, he maintained one fundamental assumption of such an orientation: that method can be value-free. Like
Weber, he used every abstract argument available within his system to keep the
analysis of facts and values separate.

Kaufmann argued that "to regard value judgments as synthetic propositions
and to contrast them with value-free synthetic propositions is the problem proton
pseudos in value philosophy". Because of his formal, deductive approach to
meaning, he treated value judgments as analytic propositions. This approach to
values has all the limitations exposed by Toulmin's critique of deductive theory.
The reduction of aspects of an argument (e.g., values) to analytic forms does not
help us with the justificatory task of logic. Matters of logic become idealized
and, consequently, the problem of ideology is ignored. We cannot begin to analyze
the ideological functioning of different approaches to logic until the value-free
doctrine is discarded in total.

Placing values in a realm separated from facts is not the solution to the
"problem proton pseudos in value philosophy". Once we account for the primary role
of method in science, we can no longer treat "facts" in an abstract way. And if we
analyze the relation of method to a perspective, paradigm or ideology, we see that
values are related to method and therefore facts. So there can be no value-free
propositions. Because of his formal approach to meaning, Kaufmann was unable to
recognize this. Only if the analysis of meaning is put into the realm of direct
inquiry does the rejection of the fallacious idea of value-free synthetic proposi-
tions provide insight into the problem of ideology.

Issues in the Social Sciences: 1 - The Natural and Social Sciences

On the basis of his distinction and the argument he developed from it,
Kaufmann discussed issues specific to the social sciences. First, he discussed
the relationship of the natural and social sciences. His general handling of this question does not conflict with my own argument. Kaufmann recognized the centrality of this issue for other controversies over the logic of the social sciences. "The question of the relation between natural and social science is so important that in methodological controversies within the social sciences that it can be made the central point of methodological analysis in this field." My motivation for discussing ideology and the natural sciences in Chapter Six rested on this same assumption. And, as we saw, confusion over this "relation" underlay the errors of Durkheim, Popper and, as we shall see in Chapter Eighteen, Winch.

The general orientation of Kaufmann to this question does not seem to diverge from an analysis of logic which accounts for the problem of ideology. In one place he acknowledged Toulmin's point about the need for logic to always be rooted in and specific to certain subject matter. "Another factor responsible for persistent methodological controversies is the failure to realize that each of two apparently conflicting methods may have its proper place in the investigation of a particular subject matter and may yield significant results denied to the other." This general orientation, however, was not developed into an approach to logic that can account for the unity of method and the practicality of logic. As we proceed, we will see that a logic which is founded solely on an analysis of "rules" does not have the character or potential to do this.
Second, Kaufmann discussed the conflict between "behaviorism and introspectionism". On the basis of his study of "methodology", he concluded that both these approaches in psychology are in error because they try to justify their ideas on ultimate grounds. Both ignore the relevance of method. In his words:

"Both doctrines are intuitionistic. They hold in common the belief that a single, isolated act can provide ultimately valid knowledge of fact and that all mediate knowledge derives its validity from immediate knowledge." 39

We can agree with this general criticism, but not with the argument behind it. Any theory that purports to be scientific must include an analysis of the role of method in its conclusions. Once this role is recognized, a theory cannot be justified because its facts are ultimate, but rather because the argument relates to facts, warrants and backings in a more acceptable way than other arguments. The "in a more acceptable way" could be stated as "in a better way", since the significance and relevance of the argument, in terms of certain values or ends, will affect what is and is not acceptable as an argument.

Kaufmann did not consider this point. Instead, his distinction, which was partially responsible for his initial awareness, was made into an abstract principle to which all problems in logic were reduced. When Kaufmann wrote that "... it is particularly important to separate logical analysis of rules of procedure from psychological description of cognitive processes," 40 he implied that the regulative principles or "rules" and the subject matter (e.g., problem of cognition) are of two different orders. Because Kaufmann did not treat his distinction as a pragmatic one, in relation to specific inquiry, he contradicted
his own point that method and subject matter are interdependent. By separating "description" from "rules", he came close to implying that there could be such a thing as immediate knowledge. Yet this is what he based his criticism of behaviorist and introspective theories upon.

The separation of so-called scientific rules from scientific problems complemented Kaufmann's abstract approach to "meaning". Thus Kaufmann wrote that "... the meanings of the sentences to be verified in science are presupposed in the process of verifying them." It is true that a group of scientists who have been socialized to accept a paradigm "presuppose", and, unfortunately, rarely examine, the ideological meanings implied by their language. When paradigms come into conflict, disputes are usually expressed in terms of the usefulness of rules or methods to problems at hand. Kaufmann ignored the relationship between method-rules and ideology because his view of science and rules was static. When the analysis of meaning is abstracted from the realm of practical argument, the problem of ideology and its relevance for matters of logic cannot be understood.

3 - Social Facts

Third, Kaufmann discussed "social facts and their interpretation". We have already criticized the scientistic treatment of social facts in our discussion of Durkheim. Kaufmann's reformism made his approach more enlightened, but still one based on an abstracted view of knowledge.

Kaufmann admitted that terminological differences in social science imply differences in "applied" or "postulated" methods and in "political goals". But because of his formal logic he stated that "... a justification (of a political
Since he did not treat logic as the practical assessment of arguments, he was unable to deal with the relationships between the social and political relevance and function of knowledge and the problems, methods and theories that take priority at any time. He was also unable to assess the way a particular "political creed" relates to the warrant and backing of a particular type of argument in the social sciences.

Kaufmann made an arbitrary distinction between the logical analysis of any sociological study and the explanation and evaluation of social facts. Yet an adequate evaluation of a "social fact" depends on the sociological, and political concepts and beliefs that give it significance. Kaufmann did state that "... it is elliptical to speak of the objective meaning of a sign without indicating the implicitly presupposed scheme of interpretation," but he did not mean by this that ideology and logic are interdependent. The "scheme of interpretation" for Kaufmann did not include the social and political beliefs of a theorist, but supposedly transcended this. Kaufmann's "basic rules" were supposed to account for the logical analysis of implicit presuppositions, but without problems rooted in subject matter there can be no real presuppositions. Kaufmann's position thus becomes absurd.

Fourth, Kaufmann discussed "physical and social laws". We have already discussed how a false notion of physical laws underlies much confusion about so-called social laws. We shall see that this was the case with Kaufmann. He wrote that "The fact that the principles of the social sciences are less 'unified' than those in the natural sciences is largely responsible for methodological particu-
This is one way to approach problems rooted in the fragmentation of disciplines in the social sciences, but, once again, it is a formal, contentless approach. It implies that the "solution" to this problem is to have common regulative principles for all the social sciences. Yet the range and root of problems in the social sciences makes this impossible. The differing social experiences and political ideologies of humans - rooted in the fragmentary development and qualitatively different forms of development between and within different societies - means that the methods or rules (I would include values or ends) that regulate particular problems will remain varied. Differences in class and corollary differences in status, power and control in our society ensure that conflicting ideologies, logics and methods will affect social inquiry. For a viable social science with unified principles to develop, a social system that is not based upon these distinctions would have to be in existence. Only in "idealized logic" can Kaufmann's solution work; and thus it is irrelevant.

Kaufmann clearly valued the notion of the universality of method. I have argued that the disciplines of the social sciences can not fulfill the idea of unrestricted universality. In contrast to this formal question, is there any value considering how social theory, even utopian social theory, could provide the universal norms around which problems, methods and theories gain their significance? Marucuse has suggested that

"Social theory is concerned with the historical alternatives which haunt the established society as subversive tendencies and forces. The values attached to the alternatives do become facts when they are translated into reality by historical change. The theoretical concepts terminate with social change."
It is this latter perspective that clarifies why conflicting ideologies imply conflicting logics. When "methodology" is treated as an autonomous discipline, however, it is impossible to see how both utopia and ideology affect both the class of problems with which we deal and the method and rules by which we do this.

5 - Objectivity and the Sociology of Knowledge

Fifth, Kaufmann discussed "the objectivity of the social sciences". Here we see how he tried to avoid the problems raised by the sociology of knowledge by replacing "epistemology" with "methodology".

Referring to Mannheim's rejection of the dualism between the genesis and truth of an argument, Kaufmann stated: "The abrupt and absolute dualism between 'validity' and 'existence' - between 'meaning' and 'existence' - between 'essence' and 'fact' is, as has often been pointed out, one of the axioms of the 'idealistic' epistemology and noology prevailing today." He posed the dilemma resulting from this analysis as follows: Epistemology "... claims to be the basis of all science but in fact is determined by the condition of science at any given time ..." Surprisingly, he then argued that this dilemma has no bearing on methodology: "... we reject ... the thesis that this fact has any bearing upon methodological problems." He argued that "The sociology of knowledge is concerned with conditions for the existence of beliefs; methodology (which supplants the kind of epistemology criticized by Mannheim once we have emancipated ourselves from the idea of absolutely certain knowledge of fact) is concerned with the criteria of their correctness, i.e. with the validity of the
propositions under consideration.⁴⁹

According to Kaufmann, the "conditions for the existence of beliefs" and the "criteria of their correctness" have no relation. Yet if no "absolutely certain knowledge of fact" can exist then "criteria" themselves have to be examined critically. The belief in any particular criteria for correctness has something to do with other beliefs and both have something to do with the conditions for their existence. Though Kaufmann wanted to "supplant the kind of epistemology criticized by Mannheim", he did not want to take "criteria" out of an a priori realm for critical examination. Replacing "epistemology" with "methodology" without also replacing the ideology and logic of scientism is nothing more than a manipulation of semantics.

Kaufmann admitted that there was some value to the questions raised by Mannheim, but he misunderstood Mannheim's points. About the tendency to see causes as exclusive of one another, he wrote:

"Errors of this kind can often be explained sociologically by reference to the existential situation of the scientist, but they do not cease thereby to be errors ... Mannheim is certainly right in emphasizing that this will be easier for men who are less deeply rooted in tradition ..."⁵⁰

Kaufmann clearly wanted to keep the sociology of knowledge and questions of methodology separated. To say that "they do not cease thereby to be errors" showed his tendency to keep the question of truth or error abstracted from the question of the conditions of truth. However, his reformed, formal logic with its "basic rules" only obscures the conditional character of knowledge. A conservative scientism that works within narrowly consistent propositions may complement a
reformed, formal logic but once the relations are recognized between the con-
servative ideological context of such a "science" and the logic that justifies
it, in abstract, the attempt to separate matters of truth from conditions of
truth proves to be futile.

Kaufmann did not understand this so he turned Mannheim's point into an
abstract pseudo-problem. He argued that "Disagreement concerning the rules ...
is disagreement with respect to the meaning of 'scientific knowledge'," Though
he admitted that the rules a scientist accepts may relate to his "traditionalism",
disagreements over these rules relate only to the meaning of science. In Kauf-
mann's words: "... it is only the scientific situation - the body of established
knowledge - not the scientist's social situation in general that enters into ...
the control of propositions of social science." The scientist gets carved up
into the professional who has learned the "established knowledge" and the non-
professional affected by the "social situation". The problem of ideology is ig-
nored and therefore the problem of logic is ignored. Are we to believe that be-
cause a person is a scientist he or she has "immediate knowledge", unconfounded
by one's socialization, commitments and uses of language? Kaufmann's reformism
led him to scientistic metaphysics, not scientific methodology.

Kaufmann's approach shows how a formal approach to meaning, an abstract
treatment of rules, and a conservative definition of science can be interrelated.
These relationships validate the general thesis of the sociology of knowledge.
According to Kaufmann, meaning had only to do with the logical analysis of prop-
ositions. The "criteria" or rules of science were not related to sociology. And
"the body of established knowledge" is the final arbiter in the application of
these criteria for analyzing propositions. We see that Kaufmann took no account of "scientific revolutions" - nor could he as long as the meaning of science has nothing to do with the social significance of science.

Toulmin was critical of theories of logic that emphasized propositional analysis. He argued that this view failed to account for the layout of arguments and was rooted in a narrow, formal logic. Kaufmann's approach certainly had this tendency. His "propositions" remain abstracted from the backings implied by them and hence they misrepresented the nature of the argument being made. Toulmin was also critical of abstracted notions of "laws" and "causes". Kaufmann's methodology also reflected this tendency. For example, he saw the "laws" that were implied in causal propositions as being totally independent of the sociology of knowledge.

"Historical facts cannot speak for themselves as far as causal relations among them are concerned; they require an interpretation. This seems to involve subjectivity, but the interpretation has to be in conformity with presupposed theoretical laws, and these laws do not contain any reference to the historian and his perspective."53

If "interpretation" must be in accordance with "presupposed theoretical laws", how does science change? Again, we see how a conservatism underlay Kaufmann's rule-centered logic. And, furthermore, how and why did the "presupposed theoretical laws" develop and gain status? Kaufmann could not ask this kind of question because his distinction between meaning and fact inhibits inquiry into such questions.

6 - Value Problems

Kaufmann discussed "value problems in the social sciences". In my discussion of Weber and Bronowski, I argued that "values" are not something added to facts, but are the value we give to a class of problems and the effects on
humans of knowledge derived from them. Conflicting ideological orientations will affect science because different values are implied by them.

Kaufmann's approach contrasts sharply with this. He attempted to save the value-free notion of science with his formal distinctions. He did not treat "value problems" as the way values and ideologies affect the form, content and consequences of science, but as something arising from the consensus of scientists over axiological rules.

"The formulation of value judgments ... is usually elliptical; there is no explicit reference to the implicitly presupposed axiological rules. The complete formulation of a value judgment reveals that it is an analytic proposition. An appearance to the contrary is created by failure to distinguish between the value judgment proper and the statement that the object under consideration possesses the properties by virtue of which a value is to be assigned in conformity with given axiological rules."54

The assumption behind this treatment of values as analytic propositions is that objects under consideration have properties and their value is then assigned according to abstract rules. Durkheim thought of fact and value in a similar mechanical way, but we showed how the properties assigned are related to the perspective of the theorist and not derived from some sort of pure definition or pure technique of observation. By splitting fact and meaning, Kaufmann was implying that truth is both intrinsic and pragmatic. Yet you cannot have it both ways. We both describe properties and assign value in accordance with techniques, rules and ideologies that complement them.

It may be true that Kaufmann could create formal, value-free propositions, but this has nothing to do with creating a value-free social science. He talked of how we can "... reduce (our propositions) to value-free terms by making explicit the properties ..."55 of our definitions. He also wrote that a value-free
social science "... demands that the social scientist indicate the criteria of correct valuation which he implicitly presupposes when he makes use of value terms." This is just a re-statement of Kaufmann's general orientation. And, his orientation ignored things that were implied by the problems he raised. We do not remove the effect of values on science by abstracting them in terms of "criteria of correct valuation". This is just a "methodological trick". It formalizes the effects of values, but does not evaluate them. If idealized logic and its pseudo-problems is to be replaced with working logic, it has to fulfill the task of evaluating arguments.

Kaufmann disagreed with Weber's argument that science cannot decide on ends. First, he quoted Weber's statement that:

"There is no (rational or empirical) scientific procedure of any sort that could yield a decision here (questions of ends). Least of all can our strictly empirical science pretend to spare the individual this choice, and therefore it should not create the illusion that it can." He then concluded that the statement was elliptical. But making rules explicit and then formalizing them does not settle the question that Weber raised. Though I rejected Weber's individualistic notion of values and choice, once we recognize how ideology and science relate and a critical study of logic shows this, we see that commitments and choices are basic to science.

Kaufmann argued that the real issue is "... whether there can be an ultimate justification for choosing one system of axiological rules rather than another." In a formalistic way, Kaufmann was really asking whether we can find any ultimate justification for any particular ideology. Once the so-called rules of logic are de-mystified, once it is determined how rules relate to a class of problems, methods and theories, his question can be re-stated in this manner.
But is this really the vital issue? Asking whether there can be an ultimate justification seems to contradict Kaufmann's rejection of traditional epistemology. His formalism placed him in such a contradictory position. Unable to see "meaning" in terms of consequences, he ended up seeing conflicts over meaning and values as abstract, academic conflicts in axiological rules.

Kaufmann tried to maintain the classical separation between value and fact. His reformism was superficial, not fundamental. He admitted that non-theoretical goals "... determine the kind of knowledge to be sought after ..." but then claimed that "... they are not directly relevant for the question of how such knowledge is to be attained." According to this line of thought, methodology can remain an autonomous study. But the important point for a practical, working logic is how the so-called non-theoretical, e.g., ideological, goals affect knowledge, including methodology, and how they are implied as backing to the theory being developed. Whether you see ideology as being irrelevant or indirectly or "directly relevant" to science will greatly depend on whether the logic you utilize is narrow and formal or one that scans the total process of argument.

On the basis of his discussion of values Kaufmann argued for a clear distinction between the "is" and the "ought" in science.

"The reason why the value of an action (the 'ought') cannot be deduced from the properties of the action (the 'is'), though it is assigned by virtue of these properties, is that the 'ought' is defined in terms of specific (axiological) rules. This is also the reason why value cannot be deduced from existence." But Kaufmann agreed that the "properties of the action", e.g., the kind of knowledge, will be affected by non-theoretical goals. So he admitted that goals and knowledge were related. And goals are related to the so-called "ought". Only
if the "ought" is left in the abstract realm of Kaufmann's "rules" can one maintain a rigid separation of the "ought" and the "is". Clearly we cannot deduce meaning from existence, but for reasons differing from those of Kaufmann. Meaning is an aspect of ongoing existence. Once Kaufmann's association of values and so-called axiological rules is replaced with the association of values and goals, the "is" becomes the ought and the ought becomes the "is"; and we require a logic that accounts for this dialectic through time and events.

7 - Economic Theory and Science

Seventh, Kaufmann discussed "the principles of economic theory". I raised this topic when I criticized Schumpeter's value-free view of economic analysis. Kaufmann began by applying his abstract view of "value" to theories of human behaviour. I have already criticized this approach. In sum: it is not sufficient, though sometimes it may be necessary for purposes of clarification, to formalize rules of judging correct behaviour. The roots of the meaning (e.g., function) of behavioral norms in the actual social relations also must be examined. Part of this will involve an evaluation of the consequences of particular lived norms for a group of people. This might include a study of how behavioral norms (e.g., those of individualistic competitiveness) affect the quality and mode of relating among a group of people. This form of inquiry will give us some concrete ideas about meaning.

Kaufmann's rule-centered logic could not lead to this empirical approach to meaning. His belief that "the logical analysis of concepts is not relative to any conditions" (a very dogmatic and restricting belief) blinded him to
the potential of an approach to social science where logic was thoroughly inte-
 grated into problems and subject matter. Such a social science could help
 shift our focus from academic pseudo-problems to lived social and political
 problems. Such an involvement in lived social and political problems would
 itself have social and political implications, but so does Kaufmann’s formal-
 istic logic. For example, after applying his distinction between analytic and
 synthetic statements to classical and neo-classical, e.g., liberal economic
 theory, he concluded that these theories were "scientific". By formalizing
 the rules implied in these theories, he dissected matters of fact from those
 of meaning and concluded that "... there is no reference in economic theory
 to a peculiar normative validity or a normative method." 62

 We have already indicated the limitations of this form of logic.
 Splitting analytic and synthetic statements and placing values in the former
 category is more a diversion than a clarification of the problem of values
 and facts. It is important to note how this approach can be used to make
 certain types of economic theory, with definite social and political roots,
 appear to be "scientific". The logic then can have an ideological function,
 and once again we see how the problem of ideology and that of logic are in-
twined.

8  - The Dilemma of Kaufmann’s Methodology

Lastly let us look at some of Kaufmann’s "summary and conclusions".
Kaufmann’s distinction between analytic and synthetic propositions was rooted
in his attempt to reform traditional logic. It was based on his assumption
that there is a "... fundamental distinction between deductive reasoning ... and inference in scientific procedure ..."63 Our study suggests that these distinctions fail to clarify the problem of logic. Rather than developing a theory of logic or methodology from an analysis of arguments, Kaufmann tried to salvage deductive logic. Making deductive logic the tool for determining meaning and separating scientific procedure from this analysis of meaning does not clarify how we develop arguments. Instead it creates an abstract, rule-centered, formal logic which presents us with as many (though different) problems as traditional epistemology.

Kaufmann admitted that "There is no ultimate justification of these rules; we cannot go by them in discriminating between correct and incorrect scientific decisions."64 Such a rule-centered formal logic therefore takes us to a dead-end as much as the older epistemologies. Rules determine the validity of a proposition, yet, in the final analysis, the rules are arbitrary. We are caught in a vicious circle resulting from an academic approach to logic. The only way to break out is to take the problem of ideology seriously.

The dead-end nature of Kaufmann's rule-centered approach to logic was grasped by Dewey and Bentley. "(Kaufmann) requires decisions to get the propositions, rules to get the decisions, and higher rules to get changes in the lower rules; behind all of which he puts a backlog of invariant (i.e., unchangeable) properties which the rules possess."65 Each step in Kaufmann's logic made the problem of logic more and more removed from practical inquiry and argument. Kaufmann's formal definition of meaning is responsible for this manipulation and escalation of abstract thought. When I discuss language and logic in
Chapter Nineteen, I will attempt to clarify how such absurd argumentation occurs. My examination of educational methods in the social sciences in Chapter Twenty-One will also help clarify this matter.

Kaufmann also stressed how theories of knowledge and value can "clarify the criteria of correct belief and correct valuations". But, again, the formal academic approach failed. Replacing a static "epistemology" with a static "methodology" solves nothing. The real alternative is something like what Toulmin called epistemological analysis, always rooted in a specific subject matter. Rather than being formal and academic, it would be pragmatic and practical.

To make this shift a quite different handling of the problem of fact and value is required. Kaufmann wrote that "... the contrast between fact and value is not one between different realms of being, but between two different types of rules, namely, procedural rules and axiological rules."66 The idea that fact and value reflect "different realms of being" should be rejected, but abstracting the problem into axiology is not the solution. "Fact" and "value" are terms applied to different stages in the process of ongoing inquiry and argument. Only if we reify facts and accept a scientistic view of "laws" and "cause" do we get into a problem over the abstract relations of fact and value. When Kaufmann stated that "... there are no insoluble value problems,"67 and then suggested that making the logical meaning of value terms unambiguous is the way to solve value problems, we see where an abstract treatment of this question can lead. It is possible to talk of solving value problems in theory, but they are rooted in practice, i.e., in the ongoing experience and behaviour that is developed and reinforced in a society, and it is there they must be solved. Only when we treat knowledge as
pragmatic, as a means for changing the quality of human life, can we do this.

Like Durkheim and Popper, Kaufmann believed in the unity of method in the natural and social sciences. He wrote: "Comparison of physical laws and social laws has been misled by erroneous preconceptions concerning the nature of the former." Like the other two theorists, his idea of the unity of method was formal and not rooted in an understanding of logic which sees subject matter and the assessment of argument working hand in hand. Both the natural and social sciences are characterized by this "dialectic" and it is from this stance that we should speak of the unity of method.

Kaufmann applied his "methodology" to the classical controversies between rationalism and empiricism, realism and idealism, and monism and dualism. Though a discussion of these controversies is not the "proper study" of this thesis, it is relevant to make a brief comment on Kaufmann's handling of them. Kaufmann argued that the empiricists, who say there is no indubitable truth in immediate experience, were correct. Method is always brought to bear in any inquiry. But he disagreed that any variety of nominalism describes how we make abstractions. His commitment to formal logic and certain rationalistic assumptions led him to reject this approach. We can agree that method is always at play. One of our main criticisms of both vulgar marxism and liberal positivism was that they ignore this effect. But as we have argued, the alternative to these doctrines is not to be found in a formal treatment of method.

Kaufmann agreed with the idealists that knowledge is rooted in human experience, but then rejected their notion that the existence of the external world depends on thought. This is a confusing commentary since human experience exists
because we are in biological, sociological and psychological relationships with
the larger environment. This would imply a total rejection of the idealist posi-
tion, since it stereotypes knowledge as being mental and autonomous. And the
alternative is not a "realism" or crude materialism which sees knowledge as re-
fecting the so-called external world. Our knowledge comes from our praxis, in
Sartre's pragmatic sense, and this approach to knowledge is the radical alterna-
tive to both idealistic and crude materialistic theories.

Kaufmann rejected reductionistic theories of knowledge and therefore re-
jected monism. And he did not subscribe to a dualistic notion as an alternative
to them. Neither monist nor dualist doctrines are tenable, but methodological
analysis of the kind Kaufmann undertook is not the way to clarify this problem.
Ongoing inquiry will continue to give us new clues about human experience and
behaviour. Hopefully, we are ready to reject both dualistic notions of "mind
and body" and of "objective and subjective" and begin to study the forces that
affect the quality of differential human experience and behaviour. When we reject
these formal distinctions, we can leave behind abstract, ontological questions and
begin to discover, in practice, why some people's experience and behaviour is in-
tegrated and healthy, while others is fragmented (e.g., schizoid). Instead of
reducing human experience, behaviour and events to a priori categories, we can
begin to discover, in practice, what the consequences of different modes of ex-
perience and behaviour are.

Our conclusion is that no clarification of problems of logic can come
from creating a discipline of "methodology" which operates in abstraction from
ongoing problem solving. And this is what Kaufmann has created. As he said:
"Methodology does not speak 'about' empirical science in the same sense as empirical science speaks about the world; it rather clarifies the meaning of 'empirical science'. Instead of "rationalism" and "empiricism" we have "methodology" and "empiricism". This constitutes a reform in the way traditional logic viewed science, but does not constitute a real break from it.

The real alternative to the old epistemologies was consistently emphasized by C.W. Mills. In his words:

"... neither Method nor Theory alone can be taken as part of the actual work of the social studies. In fact, both are just the opposite. They are statesmen-like withdrawals from the problems of social science." Mills realized that a de-mystified, pragmatic science and a self-conscious scientist go hand in hand. He also realized that the ideology and logic of scientism inhibits ongoing profound research.

"To have mastered 'method' and 'theory' is to have become a self-conscious thinker, a man at work and aware of the assumptions and implications of whatever he is about. To be mastered by 'method' or 'theory' is simply to be kept from working, from trying, that is, to find out something that is going on in the world." Kaufmann's "methodology" was much more than a withdrawal from the problems of social science. It is a new form of reifying knowledge to replace the old epistemological forms. Kaufmann wanted to make "... explicit the implicit theoretical laws in social science ..." without looking for the roots of rules, laws, causes and meanings in ongoing human activity. He believed that his "methodology" had removed the "... obstacles that a prioristic and relativistic fallacies have ..." and yet, rather than going beyond this false dilemma, he left us with equally abstract ones. We are no better off with an abstract dilemma over "rules" than we were over one of absolutes.
Footnotes

1 Felix Kaufmann: Methodology of the Social Sciences. New York, The Humanities Press (1958), p. vii. The distinction between "deductive logic" and "methodology", between analytical propositions and synthetic propositions, has been increasingly criticized. Perhaps the best known criticism is by Quine who refers to the two sides of this dichotomy as "the two dogmas of empiricism". Quine, like Dewey, argued that "Science is a continuation of common sense, and it continues the common sense expedient of swelling ontology to simplify theory." (Willard V. Quine: From A Logical Point of View. New York, Harper and Row (1963), p. 45.) Like Dewey, who I discuss in Chapter Twenty, he argued that distinctions in science should be treated pragmatically, not ontologically. He stated: "In repudiating such a boundary (between analytic and synthetic propositions) I espouse a more thorough pragmatism (than Carnap)." (Ibid., p. 46.) This thorough pragmatism is concerned with the "... inclination to adjust one strand of the fabric of science rather than another in accommodating some particular recalcitrant experience." (Ibid.) This approach does not abstract the "meaning" of distinctions into ontology, which is the error that Kaufmann made. For example, Kaufmann believed "... that phenomenology has disclosed the nature of the underlying problems" of meaning. (Kaufmann, op. cit., p. 19.) However, combining the errors of rationalism and empiricism, which is what phenomenology tends to do, just abstracts the pseudo-problems of formal logic into a pseudo-pseudo-problem. In a statement that applies to phenomenology, Dewey wrote: "Some logical theories maintain that both kinds of immediate knowledge exist and that mediation and inferential knowledge result from the union of the two; a union in which a priori first truths and empirical material are brought into connection with each other." (Logic, op. cit., p. 139.) The relation of phenomenology to the ideology and logic of scientism has not been dealt with in this study. For a critical study of phenomenology, see M. Merleau-Ponty: The Primacy of Perception. J.M. Edie (ed.), Northwestern University Press (1964).

2 Ibid., p. 2.

3 Ibid., p. 16.

4 Ibid.

5 See the discussion of Whorf in Chapter Nineteen.

6 Kaufmann, op. cit., p. 31.

7 Ibid., p. 3.

8 Ibid., p. 20.

9 Ibid., p. 30.
10 Ibid., p. 34.
11 Ibid., p. 37.
12 Ibid., p. 38.
13 Ibid., p. 39.
14 Ibid., p. 43.
15 Ibid., pp. 46-7.
16 Ibid., p. 48.
17 Knowing and the Known, op. cit., p. 215.
18 Ibid., p. 51.
19 Ibid., p. 56.
20 Ibid., p. 65.
21 Ibid., p. 67.
22 Ibid., p. 81.
23 Ibid., p. 88.
24 Ibid., p. 97.
26 Ibid., p. 112.
27 Ibid., p. 103.
28 Ibid., p. 114.
30 Kaufmann, op. cit., p. 119.
31 Ibid., p. 120.
32 Ibid., p. 123.
33 Ibid., p. 124.
There are more theoretical controversies in the history of psychology than that over introspection and behaviorism. In some ways, this was a crude debate rooted in a false understanding of human consciousness. The conflict between varieties of behaviorism and psychoanalysis is a more fundamental debate. Recently the conflicts between the so-called "third force" in psychology, what is sometimes called "self psychology", and the behaviorist and neo-Freudian theories have played an important role.
56Ibid.

57Ibid., p. 203.

58Ibid.

59Ibid., p. 205. This is the same error that the psychologist Allport made in his discussion of values in the social sciences. (Gordon W. Allport: The Nature of Prejudice. Garden City, Anchor (1958), pp. 477-80.)

60Ibid., p. 208.

61Ibid., p. 227.

62Ibid.

63Ibid., p. 229.

64Ibid., p. 230.

65Kaufmann, op. cit., p. 216.

66Kaufmann, op. cit., p. 236.

67Ibid., p. 238.

68Ibid., p. 237.

69I will be using the term schizoid in the next four chapters. "Such a schizoid individual in one sense is trying to be omnipotent by enclosing within his own being, without recourse to a creative relationship with others, modes of relationship that require the effective presence to him of other people and of the outer world. He would appear to be, in an unreal, impossible way, all persons and things to himself. The imagined advantages are safety for the true self, isolation and hence freedom from others, self-sufficiency, and control." (R.D. Laing: The Divided Self, op. cit., p. 75.) I will argue that a process like what Laing called schizoid is occurring when language is reified as it is in the ideology and logic of scientism.

70Kaufmann, op. cit., p. 240.

71The Sociological Method, op. cit., p. 122.

72Ibid., p. 121.

73Kaufmann, op. cit., p. 243.

74Ibid.
It is useful to critically examine one other approach to logic which stresses rules. Winch's work is useful because his treatment of rules was based on a consideration of sociology more than formal methodology. Because it combines an academic view of epistemology with an academic view of sociology, it serves as an example of and stands as a warning against eclectic approaches to problems of logic. As well, Winch's approach shows how a misconstrued comparison of the natural and social sciences leads to a confusion about matters of logic.

The Split Between Thought and Reality

Winch first discussed what he called the "philosophical bearings" of his approach to the social sciences. He claimed that philosophy dealt with the conceptual problem of "man's relation to reality".1 Showing his orientation to this problem, he wrote: "To ask whether reality is intelligible is to ask about the relation between thought and reality."2 Like Kaufmann, his analysis began with the assumption that "thought" and "reality" are separated. This idealist assumption runs throughout his work. When discussing Mannheim's handling of the problem of ideology, we argued against any approach which ignores the fact that thought and language are an essential aspect of social reality. The problem for logic is thus not how the two relate, but how different forms of thought function in society. I have continually raised the question of how academic and formal thought functions
at present and how the development of a pragmatic understanding of thought and
language might relate to a change in the function and quality of the social
sciences.

Winch's philosophical orientation was not the kind required to develop a
practical or working logic. Believing in a split between thought and reality, he
also believed in the value of formal studies in "metaphysics" and "epistemology".
For him, the "... discussion of the central questions of metaphysics and episte-
mology themselves may ... have light to throw on the nature of human societies."3
This proposal is somewhat deceptive. If Winch was interested in analyzing why
people come to believe in metaphysical and epistemological questions, then some-
thing valuable could be learned. But this was not what he meant. Instead of
this, he was interested in "... tracing the implications of the concepts we
use." He distinguished this analysis of concepts from empirical research, i.e.,
the concepts were to be analyzed in abstract from their scientific use. Winch
thus believed in "... the pivotal role of epistemology within philosophy."5
Summarizing his orientation, he wrote: "... what is really fundamental to
philosophy is the question regarding the nature and intelligibility of reality."6

Winch's next task was to link epistemology to the social sciences. It is
worth noting that this approach is the exact opposite to that of the sociology of
knowledge. He attempted this by discussing the idea of "understanding". He asked:

"How is ... any understanding possible? To answer this question it is
necessary to show the central role which the concept of understanding
plays in the activities which are characteristic of human societies."7

His approach to understanding was developed by criticizing Durkheim and
by utilizing Wittgenstein. First he quoted Durkheim:
"I consider extremely fruitful this idea that social life should be explained, not by the notions of those who participate in it, but by more profound causes which are unperceived by consciousness and I think also that these causes are to be sought mainly in the manner according to which the associated individuals are grouped. Only in this way, it seems, can history become a science and sociology itself exist."8

But Winch could not accept the causal hypothesis. He was interested in the nature of the contact between "mind" and "reality" and the question of meaning in terms of the nature of this relationship. His critique of Durkheim was, therefore, rooted in his idealist assumptions and not in a critique of Durkheim's logic per se.

Discussing Wittgenstein, Winch stated that "...the whole substance of Wittgenstein's argument that it is not those practices considered on their own which justify the application of categories like language and meaning but the social context in which these practices are performed."9 Winch contrasted Wittgenstein's approach to "rules" with that of Ayer10 who he claimed was mistakenly looking for rules independent of society.

This concern with relating the "rules" used for understanding and the social context of their use may seem to conflict with Winch's assumptions about the separation of thought and reality. We might expect Winch to treat "rules" more as Kaufmann did; as though "methodology" or "epistemology" were an autonomous discipline. Winch, however, developed his concept of understanding and rules in a very different manner.

Sociological and Epistemological Rules

To understand this, we need to discuss what Winch meant by "meaningful behaviour". He developed this idea by arguing for a closer relationship between
epistemology and sociology. First, he stated: "... the philosophical elucidation of human intelligence, and the notions associated with this, requires that these notions be placed in the context of the relations between men in society." Then, on the basis of Wittgenstein's approach to rules, he wrote that "... the relations between sociology and epistemology must be different from, and very much closer than what is usually imagined to be the case." Finally, he argued that concepts must be meaningful to be explanatory. Epistemology needs to analyze the meaning of philosophical concepts and sociology needs to analyze the meaning of social concepts to be able to explain anything. The sociologist, for Winch, is then concerned with "meaningful behaviour". The new relationship between sociology and epistemology comes from this concern since "... all behaviour which is meaningful ... is ipso facto rule-governed." Because rules operate in both philosophy and society, the study of epistemology has implications for the study of society.

As we said, Winch's treatment of "rules" is very different than that of Kaufmann. Though his philosophical orientation is idealistic, his actual approach to "rules" has a pragmatic overtone. For example, while Kaufmann maintained the rationalistic conception of intelligence, Winch recognized the interdependence of intellectual functions and practical activity. For example, discussing inference, he wrote that "Learning to infer is not just a matter of being taught about explicit logical relations between propositions; it is learning to do something."

For Winch our habits and our methods of reflection were intertwined. "Rules" for understanding do not obtain their validity because of any formalism,
but because of their use. "The only mode of life which can undergo a meaningful development in response to environmental changes is one which contains within itself the means of assessing the significance of the behaviour which it prescribes." 

The Disunity of Method and Scientism

Winch's idea of "meaningful behaviour" therefore helps us avoid the trappings of a formal academic logic. How did Winch approach what he called the "social studies as science" in terms of this orientation?

Winch pointed out that for J.S. Mill all explanations involved the same logical structure. We were critical of Durkheim because like J.S. Mill he held to a stereotyped formal notion of logic. But Winch's conclusion, unlike our own, was that explanation in the natural and social sciences is fundamentally different. For him, the former are concerned with physical changes while the latter are concerned with conceptual changes. In contrast to this, I would argue that the social sciences are concerned with behavioral and structural change, and that "concepts" are used to this end. From this point of view the natural and social sciences explain in a similar way though to different ends. A discussion of this matter can help us see how Winch's idealistic assumptions affected his approach to the philosophy of science.

Winch's view of explanation was not metaphysical even though he did treat "concepts" in terms of formal epistemology and not in terms of the sociology of knowledge. He did not believe that the "shareability" (my term) of scientific rules stemmed from observations, but rather that it was related to
the power of a "reference group" over a group of scientists. He agreed with Hume's statement that "Tis evident, that all scientists have a relation, greater or less, to human nature; that however wide any of them seem to run from it, they still return back by one passage or another."\(^{16}\) The notion of "human nature" is too static to explain how a scientist's work is ultimately rooted in beliefs that are beyond the realm of direct inquiry. Discussing the problem of ideology is a more fruitful way to raise this problem.

For Winch, both the study of natural and social regularities depended upon having common rules. And he had an interesting comparison to make regarding the nature of rules in the two areas:

"... whereas in the case of the natural scientist we have to deal with only one set of rules, namely, those governing the scientist's investigation itself, here what the sociologist is studying, as well as his study of it, is a human activity and is therefore carried on according to rules. And it is these rules, rather than those which govern the sociologist's investigation, which specify what is to count as 'doing the same kind of thing' in relation to that kind of activity."\(^{17}\)

This distinction between what is being studied and the study of it can be useful. In the social sciences, according to Winch, rules "govern" both the human activity being studied (social rules) and the way it is being studied (philosophical rules), whereas it is not true that social rules govern physical processes. This distinction can help us become aware of just how integrated social science and society are. The study of how behavioral "rules" relate and change; of how changes in behavioral norms that accompany large scale social changes affect and are affected by scientific norms, follows from this awareness.

But how real is the distinction? When Winch said that it is the "rules" that govern human behaviour and not those which govern our investigation of this
behaviour which will "specify what is to count as 'doing the same kind of thing' in relation to that kind of activity", he was saying that so-called philosophical or epistemological rules are always subservient to the social ones. It follows from this that social norms are the basis of intellectual ones, since agreement about how to study will depend on agreement about what to study and the particular value we place on the human events out of which our problems arise. If we begin to think in this manner, Winch's philosophical separation of "thought" and "reality" is no longer tenable. Yet it was Winch's own distinction that led to these questions.

Doesn't the same relation between logic and subject matter as Winch suggested for the social sciences exist for the natural sciences? Isn't it also social norms (e.g., the training of a scientist to a paradigm) that specify what is to count as doing the same kind of thing, that is, as a relevant fact, for the natural scientist? The rules that govern the natural scientist's work and interpretation do not have an a priori, ahistorical or trans-social nature any more than those of the social scientist. Winch was implying something metaphysical and meta-social about natural science investigation which we saw, with Kuhn, is not accurate.

Winch's confusion was over the nature of scientific subject matter. The "physical world" is given and the natural scientist studies "it" according to priorities established by the discipline. But so is the "social world" given in the sense that biological and historical processes have led to the development of human "society" independent of social science. And the social scientist also has priorities that will affect the effects of knowledge on human society. The
natural sciences do not have one and the social sciences two sets of rules. The rules of both kinds of investigation are rooted in social priorities and ultimately in ideologies. It is vital to recognize this if the real nature of the unity of method in both fields is to be understood.

Winch's confusion about methods in the natural and social sciences led to confusion about the idea of "prediction". Here he was similar to Max Weber. He wrote that "If O wants to predict how N is going to act he must familiarize himself with the concepts in terms of which N is viewing the situation; having done this he may, from his knowledge of N's character, be able to predict with great confidence what decision N is going to take." Winch was saying that the social scientist must know the "rules" by which a person gains meaning in any situation if he or she is to be able to predict acts. In addition, he was rejecting the applicability of the idea of prediction developed in the natural sciences for the social sciences.

"... the central concepts which belong to our understanding of social life are incompatible with concepts central to the activity of scientific prediction. When we speak of the possibility of scientific prediction of social developments of this sort, we literally do not understand it because it has no sense." But what do we mean when we talk of prediction? We do not mean, as we saw with Toulmin, that knowledge about the causes of a phenomenon allow us to predict its behaviour. Rather what we called "middle-range laws" sufficiently represent the dynamics of an event to allow us to predict how, given certain conditions, a similar event will occur. Winch's view of prediction in the natural sciences was false. He implied that the natural scientist is rule-free in his predictions, which is not the case. The natural scientist does
not make predictions independent of the rules of interpretation that have
developed within the relevant paradigm and subject matter. Winch was re-
jecting a "straw man" when he rejected prediction in the social sciences.

Idealized and Working Logic

Winch next discussed "the mind and society". Here we see how
Winch's view of logic paralleled his attempt to combine epistemology and
sociology. He made it clear that he did not believe in a meta-social view
of logic. For him the "... criteria of logic are not a direct gift of god,
but arise out of, and are only intelligible in the context of, ways of living
or modes of social life." But what did he mean by saying that logic is only
made intelligible in the context of ways of living? Did he mean that abstract
logic must be applied to practical problems to be intelligible? Or, in con-
trast, did he mean that logic is practical? We saw with our discussion of
Toulmin how a belief in the separation between "logical theory" and "logical
practice" can still exist when a theorist rejects a metaphysical notion of logic.
We also saw how an "idealized logic" and a "working logic" are incompatible.

We must examine Winch's "philosophical bearings" to reveal what he
meant. For him philosophy must take an uncommitted look at the criteria of
logic even if it must be related to the context of ways of living to be "made
intelligible". "To take an uncommitted view of ... competing conceptions is
peculiarly the task of philosophy ..." Agreeing with Wittgenstein, Winch
claimed that "Philosophy leaves everything as it was." It is clear from this
that Winch accepted an abstract, even if not a meta-social, view of logic.
is intelligible only in a living context, but the philosopher need not evaluate how different "ways of living" affect logic. He or she just analyzes the logic in abstract.

This position conflicts with Winch's own assumptions. On the one hand, he wanted to bring epistemology and sociology closer together; and on the other hand, he was not willing to accept the implications of this for logic in the social sciences. Even after admitting that the "ways of living" give logic their intelligibility, he wanted to treat logic in abstract from evaluating this relationship between it and human activity. In short, Winch wanted to keep philosophy as a profession.

This partly explains why he talked of R.S. Lynd's "philosophical confusion" and of his "corrupt use of scientific objectivity", rather than debating Lynd's point that objectivity can be naively "in favour of the going system", "frankly biased" toward it, or critical of that social system. Winch was unwilling to bring philosophy down from its ivory tower to begin to evaluate how different logics and ways of living relate. We have already argued that formal academic logics relate to conservative commitments and that philosophy can be no more value-free than science.

Winch was critical of Durkheim (and Pareto, though he is not relevant to our study) for treating propositions and theories as "facts". My own discussion of Durkheim was critical of his reified notion of facts. Of Pareto, Winch wrote: "In a sense (he) has not carried his empiricism far enough." The same thing could be said of Durkheim. If the empiricist attitude is carried far enough, and one's assumptions are made explicit and critically evaluated,
then we see that the fundamental problem for the philosophy of science and the sociology of knowledge is to understand different modes of discourse and their function in society.

Winch went on to discuss Weber's approach to understanding and explanation. You will recall that Weber distinguished "interpretative understanding" from "causal explanation". Because of his Weberian-like idea of "meaningful behaviour" we might expect Winch to accept this distinction or at least to accept this idea of "understanding". But he did not. Of this distinction Winch said: "In short, he adopts the external point of view and forgets to take account of the 'subjectively intended sense' of the behaviour he is talking about; and this, I want to say, is a natural result of his attempt to divorce the social relations linking those workers from the ideas which their actions embody ..."25 Weber's acceptance of the "external point of view" was rooted in his confused understanding of "cause". Though he recognized that the social sciences could not treat its subject matter solely in terms of cause and effect, and in this sense was not scientistic, Weber's radical nominalism led him to an extreme form of intellectual reductionism. Because he rigidly separated matters of fact and matters of value, yet considered value a matter of fact, he could never treat explanation in a pragmatic way. So Winch was correct for criticizing Weber for divorcing "social relations" from "ideas".

But there is an irony in Winch's point. We have argued that Winch himself did not understand the methodology of the natural sciences and hence had a false idea of causation. We have also argued that though he wanted to bring epistemology and sociology closer together he was not willing to follow
the implications and abandon academic epistemology. In a sense then Winch's criticism of Weber applies to himself.

This criticism of Weber has implications for our thesis. For one thing, if the "subjectively intended sense" of behaviour is to be understood for the humans being studied, should it not also be understood for the social scientist? If we abandon what Winch called the "external point of view" and accept that the scientist's beliefs and problems are rooted in "ways of living", then a new quality of criticism - ideological criticism - has to be developed. To enable us to do this, all epistemologies which define "objectivity" in a way that assumes the external and causal point of view must be rejected.

There is a second implication. If the above argument holds then we must realize the need to constantly ask Lynd's question "Knowledge for what?" or the recent version "Knowledge for whom?" Once the role of ideology in logic is analyzed, we cannot avoid adding this concern with the controls over and priorities and consequences of knowledge to those with which social science must deal.

The third implication is that our approach to logic must account for the effects of the sociology of knowledge. This is just a reverse way of saying what has been stated before. If we cannot divorce social relations from ideas, we cannot evaluate ideas without also evaluating the social relations that they grow out of and reinforce. And, as we have consistently argued, no variation of so-called value-free science can account for these relationships.

Winch's discussion of "the mind and society" is rooted in a false as-
sumption of the nature of logic in the natural sciences and his schizoid un-
derstanding of the relation of "thought and reality". When he wrote that 
"... the understanding of society is logically different from the understand-
ing of nature ... the concepts in terms of which we understand our own mental 
processes and behaviour have to be learned, and must, therefore, be socially 
established ..." he was ignoring the fact that concepts in both natural and 
social science are learned and socially established. His argument, like Pop-
ner's, was greatly built on "straw men".

Academic Reductionism and Schizoid Logic

Winch ended his analysis by discussing "concepts and action". The 
title shows how his "philosophical bearings" - his idealistic splitting of 
thought and reality - both integrated and falsified his study. In this dis-
cussion, as in each of the above, we will find useful insights and anachronistic 
dogmas combined.

Winch came very close to the main point of this study when he stated 
that "... a new way of talking sufficiently important to rank as a new idea 
implies a new set of social relationships." In the next chapter we shall 
discuss how Marx, Sartre and Mead all realized that to develop new ideas - and 
theoretical insights - new social relations have to develop. But Winch did not 
really accept this notion of "praxis".

It is intriguing to study someone who is caught between two traditions. 
On the one hand, Winch emphasized that "To give an account of the meaning of a 
word is to describe the social intercourse into which it enters." We see here
what we earlier called the "near pragmatic" tendency in Winch. But when he talked of how "... social relations between men exist only in and through their ideas ..." we again see how an idealistic philosophy pervaded his thought. Ideas do not have an abstract existence which mediates social relations. Ideas "exist" because the social relations, institutions and language of humans enable "them" to be documented and because "they" socialize people to believe in "them". Winch's false treatment of ideas as things is the root of his schizoid logic.

When we discuss the relationship between changing social relations and changing ideas, we are dealing with one of the fundamental problems in the social sciences. Winch's ambiguous and contradictory handling of this problem related to his confusion over the relation of the natural and social sciences. For example, arguing for a distinction between relations of "concepts" and "actions" in the two sciences, he wrote:

"An event's character as an act of obedience is intrinsic to it in a way which is not true of an event's character as a clap of thunder; and this is in general true of human acts as opposed to natural events. In the case of the latter, although human beings can think of the occurrences in question only in terms of the concepts they do in fact have of them, yet the events themselves have an existence independent of those concepts ... But it does not make sense to suppose that human beings might have been issuing commands and obeying them before they came to form the concept of command and obedience." 30

"Human acts" and "natural events" certainly are of a different quality. The study of the latter, however, constitutes a human act. Though the event has an independent existence, the concept - derived from a combination of problems, methods and theories in the physical sciences - is rooted in ongoing human activity. In this sense, the study of so-called nature and humanity is the
same. Humans are, after all, "a part of nature", and Winch's point, therefore, seems trite and meaningless.

But there's another matter to raise. Human acts also have an existence that is independent of the observation and development of concepts. The observation and development of concepts is a particular form of human act; and it is not to be confused with the act itself. A man "obeying" a command does not do so because he carries an academic concept of "obedience" with him.

Winch's idealism underlay his projection of academic concepts onto all human activity. And this idealist or academic reductionism is no less vulgar than vulgar marxism. His attempt to make the social sciences different than the natural sciences was rooted in his mystification of the latter and misunderstanding of the former. All science is rooted in human activity. All scientific concepts are related to human acts. The representative, idiomatic nature of both social and natural science gives it a unity within human activity.

We might expect Winch's idealism to lead him to agree with Popper's methodological individualism. There is a similarity between Winch's tendency to attribute a causal character to academic "concepts" and Popper's abstracted treatment of social scientific models. Winch saw human acts not in terms of, but as being affected by, academic concepts. Popper saw models of institutions as being created by academics. It is their belief in the autonomy of "concepts" that gives them a commonality.

Winch, however, was quite critical of Popper.

"Popper's statement that social institutions are just explanatory models introduced by the social scientist for his own purposes is palpably untrue. The ways of thinking embodied in institutions govern the way the members of the societies studied by the scientist behave."
This criticism of Popper is similar to my own. It again shows that Winch paid lip service to the sociology of knowledge. But Winch only referred to the affect on thinking of the institutions that the social scientist studied. He did not refer to the affect of scientific and educational institutions on the thinking of social scientists themselves. Supposedly the philosopher who does an "uncommitted analysis" of how other's thought and socialization relate is him or herself free of the very processes studied in other humans. But we have seen both from an ideological and logical point of view that this cannot be the case. Winch and Popper thus both believed in the autonomy of academia. The one believed that independently developed "concepts" have an almost causal significance for human acts, the other that the independently developed "models" are only of a methodological significance.

Winch's view of "concepts" reminds me of Marx and Engels' definition of ideology. The "three tricks" that these authors argued are used to develop ideology are similar to the way Winch related concepts and action. In his work, there is no analysis of the structure and function of science and the way this prioritizes problems, methods and theories. And this is the only way to analyze, specifically, how any concepts develop from and affect human activity. Do they, for instance, have the consequence of "oppressing" humans by being mystified, irrelevant and unintelligible? Or, do they "liberate" them because of their practical relevance and intelligibility? This sort of question, vital once the fusion of ideology and logic is recognized, cannot be dealt with by Winch's idealistic orientation.
Winch's confusion about methods in and relations between the natural and social sciences led him to make an analogy between social interaction and intellectual dialogue. For him "... social interaction can more profitably be compared to the exchange of ideas in a conversation than to the interaction of forces in a physical system."\(^{33}\) We again see Winch's tendency to reduce society to ideas about society. He continued with his analogy by stating that "... the way to understand events in human history ... is more closely analogous to the way in which we understand expressions of ideas than it is to the way we understand physical processes."\(^{34}\)

Social interaction, however, is not caused by "ideas". Ideas are an aspect of human praxis. Particular ideas - especially ones related to scientific concepts - are not, in any way, representative of those among the population at large. They are ultimately rooted in and affect the beliefs of the general society, but the particular kind of praxis within scientific and educational institutions transforms them into new systems of language with differing functions. This fact discredits all attempts to explain, let alone understand, human behaviour or experience through a reduction of events to formal academic categories. To clarify how this process occurs we must now turn to a discussion of language.

Footnotes


2Ibid., p. 11.
I have not included Wittgenstein in this study, but I believe his approach to language and logic has the potential to deal with the problem of ideology. Wittgenstein was not a mechanistic or reductionistic theorist, though many trained in linguistic philosophy tend to be. He did "... not imagine the meaning (of a word) as an occult connection the mind makes between a word and a thing ..." Instead, he situated words in praxis. As he said: "... our proposition that that which has pains or sees or thinks is of a mental nature is only, that the word 'I' in 'I have pains' does not denote a particular body, for we can't substitute for 'I' a description of a body." (Ludwig Wittgenstein: The Blue and Brown Books. New York, Harper and Row (1965), pp. 73-4.) Because of the primary role of linguistic techniques in Wittgenstein's approach, when it is learned through a scientistic educational system, it can easily turn into a formalistic, meaningless ritual.


Winch, op. cit., p. 40.
22Ibid.


26Ibid., p. 119.

27Ibid., pp. 122-23.

28Ibid., p. 123.

29Ibid. Criticizing Winch's idealism, Gellner has written: "Institutions are indeed 'made' by the concepts of the participants. But, however embedded a concept may be in one or a set of institutions, this never proves the concept or the theories or assumptions built into it to be true. Institutions may embody falsehoods, protect them, and be sustained by them. This (does) not turn them into truths." (Ernest Gellner: The Entry of the Philosophers. The Times Literary Supplement. Apr. 4, 1968, p. 349.) Such a criticism may have rejected idealism, but it did not reject a formal understanding of truth. As such it requires criticism from the stance of the problem of ideology.

30Ibid., p. 125.

31Ibid., p. 127.

32See p. 10 above.

33Winch, op. cit., p. 128.

34Ibid., p. 132. What I have called academic reductionism leads people to falsely see all knowledge as based upon some form of epistemology. This error is general in academia and is also made by the "new sociologists" who, we have been led to believe, have transcended both liberal positivism and vulgar Marxism. For example, the academic marxist (or "marxist scholar" depending on how you view him) T.B. Bottomore, like Winch, tried to keep philosophy and sociology separated. Treating them in an academic way, that is, with no existential reference for ideas, it is possible to do this. Thus he stated: "Both Durkheim and Mannheim seemed to claim that sociology can make a direct contribution to philosophy, in the sense of settling philosophical questions. But this is an error; thus, epistemology is the basis of a sociology of knowledge, not vice versa. All that is intended here is to suggest that sociology raises, to a greater extent than other sciences, philosophical problems, and consequently that the sociologist who is at all concerned
with the larger aspects of his subject is led on to consider philosophical issues which are always in the background of sociological reflection." (T.B. Bottomore: Sociology. London, George Allen and Unwin (1962), p. 71.) Without considering the problems raised by either Durkheim or Mannheim, he claimed "this is an error; thus, epistemology is the basis of a sociology of knowledge, not vice versa". Once inquiry, not the writing of eclectic textbooks, which obscure problems, becomes our concern we find that Durkheim's way of dealing with the philosophical implications of sociology were fundamentally different than that of Mannheim. This, not a formal consideration of the relations of "epistemology" and "sociology", is what is needed if problems of logic in the social sciences are to be clarified. It is noteworthy that in addition to Bottomore taking a formal, textbook approach to both sociology and philosophy, he accepted the logic of scientism. He believed that "the sociologist (and of course other social scientists) should be capable of distinguishing between questions of fact and value questions". (Ibid., p. 69.) Furthermore, showing his false understanding of the notion of "cause", he wrote that "... the relations between phenomena of the natural world are mechanical relations of causality". (Ibid., p. 44.)
Chapter Nineteen

Language and Logic: Mead

It is now time to consolidate the argument of this study and to point to its implications. I have continually referred to the problem of language in relation to the problems of both ideology and logic and will now develop this point fully. For example, in Chapter One, I quoted Marx and Engels' statement that "... language is practical consciousness ... (which) arises from the need ... of intercourse with other men."¹ I argued that this understanding of language underlay those authors' distinction between ideology as false, elitist and reified consciousness and knowledge as practical consciousness. Then, after criticizing various rhetorical approaches to the problem of ideology and discussing why intelligent approaches to this problem are so rare, I returned, in Chapter Eleven, to this question. I argued that Sartre's concern with "praxis" related him to Marx and Engels on the question of language, ideology and knowledge. I quoted Sartre as saying:

"... ideas do not change men. Knowing the cause of a passion is not enough to overcome it; one must live it, one must oppose other passions to it, one must combat it tenaciously, in short one must 'work oneself over'."²

Sartre viewed knowing as a means to change oneself; not indicative of a change in and of itself. According to this view, academic knowledge, that is, knowledge that is not an existential project, is conservative since it allows the process of knowing to become abstracted from lived contradictions. Marx, Engels and
Sartre not only agreed that ideas are ultimately rooted in praxis, but also that they are impotent if not related to existential and historical struggles.

Sartre, however, was aware of the relevance of method to this process. He believed that "Concrete thought must be born from praxis and must turn back upon it in order to clarify it, not by chance and without rules, but - as in all science and all techniques - in conformity with principles." Sartre's "search for a method" was undertaken because marxism is presently handicapped by a lack of clarity about method. He recognized the need for "rules" or "principles" in knowledge, though it should be clear that his adherence to the idea of praxis made his idea of "rules" qualitatively different than that of the academics.

The pragmatic orientation to language and knowledge has clearly pervaded all aspects of my study. It was an important basis for my criticisms of formal logic. And it is fundamental to the development of a working logic. For example, I quoted Toulmin's statement that "... language ... consists not of timeless propositions but of utterances dependent ... on the context or occasion ..." to show that those who are developing alternatives to formal logic have to see language as a practical matter. As well, in Chapter Eighteen, I quoted Winch's statement that "... a new way of talking sufficiently important to rank as a new idea implies a new set of social relationships."

This question of language is then central to our argument and requires a more thorough examination. In this chapter, I will examine the general thesis of Sapir and Whorf and evaluate its relevance to the problems of ideology and logic. I will discuss one example of the misuse of this thesis and then rely
heavily on the work of George Herbert Mead to help clarify the matter. Mead provides an important basis for my criticisms of scientistic dichotomies and discussion of ideology and inquiry in Chapter Twenty.

The Heuristic Character of Language

According to Sapir, the particular form a language takes will affect the meaning of one's experience. "It is highly important to realize that once the form of a language is established it can discover meanings for its speakers which are not simply traceable to the given quality of experience itself but must be explained to a large extent as the projection of potential meanings into the raw material of experience." It is because of this function of language that human beings can "... transcend the immediately given in their individual experience and ... join in a larger common understanding." Because of this function, language lies at the heart of science. Without language, we could not "transcend the immediately given" nor develop pragmatic modes of inference and prediction. As Sapir stated: "Language is heuristic ... its forms predetermine for us certain modes of observation and interpretation."

Saying this should not lead to the conclusion that language transcends experience. Such a view would mystify "language", as many mystify "facts" and the point of my argument would be lost. "Language is at one and the same time helping and retarding us in our exploration of experience ..." While language "... may be looked upon as a symbolic system which reports or refers to or otherwise substitutes for direct experience, it does not as a matter of actual behaviour stand apart from or run parallel to direct experience but completely interpenetrates with it."
The awareness of the function of language in science has grown in the past few decades. A long established ignorance about its heuristic function underlay much of the confusion in traditional epistemology and logic. For example, Durkheim's naive treatment of "social facts" as non-concepts or things would not have been possible had he understood how language is inextricably involved in the process of inference and generalization in science. Language does not function as an autonomous, value-free tool which allows us to investigate "reality". Language functions as part of the behaviour of social reality. Because of this Sapir wrote that "... it is generally difficult to make a complete divorce between objective reality and our linguistic symbols of reference to it ...".

Language is thus not merely a "symbolic system of reference". The fact that language derives its meaning from actual contexts where it is an aspect of "continuous behaviour" means that "... it may be seriously doubted whether the ideal of pure reference is even attained by language," including its use in scientific discourse. Because of this Sapir's general approach to language can be said to complement Toulmin's critique of formal logic.

The heuristic nature of language presents an even more basic problem than this for science. Once we reject the view which stresses the role of language as a symbolic system of reference we must account for the direct effects of language forms on behaviour. Sapir argued that "... in the actual context of behaviour (language) cannot be divorced from action ...". Because of this, he made a distinction between "patterns of reference and patterns of expression" in language. This distinction undermines the common sense and scienc-
tistic dichotomies between "actions" and "words", between "theory" and "practice". Language is an essential aspect of behavior and hence can never be used for pure reference. As Sapir said, the maxim "actions speak louder than words" lacks insight into the nature of speech. It is interesting that formal logic, which lacks an awareness of the heuristic function of language, has assumptions which parallel this common sense maxim. This is a further reason why one cannot accept the professionalization of the academic as a guarantee of critical intelligence. The professionalization of the academic often means no more than a translation of common sense ignorance into sophisticated jargon. If we are to develop a thoroughly pragmatic and humanistic approach to science we have to become aware of the dialectic relationship between common sense and science.

Sapir's main concern was with the classification of different languages. And an awareness of how the forms of particular languages affect so-called patterns of reference and expression of language would be required for any thorough understanding of linguistics and science. Our concern is more with the general implications of an understanding of language for the problem of logic, and, in terms of this, of ideology.

We can discuss this matter by relating a sociology of knowledge perspective to Sapir's general approach to language. For example, on the basis of his classification of world languages, Sapir concluded that "There is no general correlation between cultural type and linguistic structure." Hence a study of the "overt cultural pattern" of a people does not, in itself, clarify the particular heuristic function of the language. For example, it cannot tell us
how language affects the ideology of a people, the form and content of their knowledge and the rationales for both, or their behaviour. Sapir explained why this approach is not adequate: "To a certain extent this lack of correspondence may be due to the fact that linguistic changes do not proceed at the same rate as most cultural changes, which are on the whole far more rapid."19

The structure of language then may lag behind the forms of behaviour in a culture. This itself presents a problem for epistemological analysis. For instance, since academic social scientists come from a particular social strata, and, equally important, since their training occurs in institutions, whose dominant function in society is a conservative one, the linguistic categories of that grouping will likely be inappropriate for understanding the experience and behaviour of people going through vast cultural changes. For example, an academic who is immersed in the language of a reference group which accepts the end-of-ideology ideology would be incapable of understanding the experience and behaviour of revolutionaries in the society. Academics trained to think in categories, which upon analysis prove to be formalizations of the dominant values of a society, could not begin to understand the experience and behaviour of a segregated ethnic minority. He or she could reduce such experience and behaviour to academic categories, but that is quite different from understanding it. Furthermore, one trained in formal logic, for example, analytic philosophers, may see great complications in a study of the uses of language of people living outside the ivory tower. But, as Sapir stated, "... the normal speaker does not actually feel the clash (say between different genders in language) which the logician requires."20 People who engage in the practical
affairs of a society do not use language as the academic logician does. "Abstract terms, which are so necessary to our thinking, may be infrequent in a language whose speakers formulate their behaviour on more pragmatic lines."

Sapir assumed that the abstract terminology of academia was necessary. We can recall that Marx and Engels viewed formal "abstractions" as a "trick" for creating and rationalizing ideology. Regardless of whether or not we accept this, it is not enough to uncritically accept the abstract linguistics of academia. We must ask how they function. We have already argued that the formal logic of the universities has a conservative function, whereas a pragmatic logic can function to give people practical knowledge; knowledge that can help them change their praxis. I will take up this question in Chapter Twenty where I show how a rejection of the dichotomies of scientism allows us to have a pragmatic understanding of the role of abstractions in inquiry.

Science and Linguistics

Whorf developed the implications of an understanding of language for science and logic more directly than did Sapir. He began with a discussion of the question: is language a natural logic? Because of the heuristic character of language, he answered "no". Whorf argued that the notion of "natural logic" was based on two fallacies.

"First, it does not see that the phenomena of a language are to its own speakers largely of a background character and so are outside the critical consciousness and control of the speaker who is expounding natural logic. Hence, when anyone, as a natural logician, is talking about reason, logic, and the laws of correct thinking, he is apt to be simply marching in step with purely grammatical facts that have somewhat of a background character in his own language or family of languages but are
by no means universal in all languages and in no sense a common substratum of reason. Second, natural logic confuses agreement about subject matter, attained through use of language, with knowledge of the linguistic process by which agreement is attained: i.e., with the province of the despised (and to its notion superfluous) grammarian. 

These points are critical for this study. Only if words are treated in a reified manner, i.e., taken out of their human context, can one treat language as a natural logic. To do this contradicts what we now know about language. Such an approach is tautological for it reduces "reality" to the linguistic categories of a particular language. Since inference and argument is a comparative process, a scientific use of linguistics cannot reflect or "grasp" reality. Through language we come to compare one aspect of reality with another and obtain some form of knowledge in the process. This is an active, not passive, process. The belief that language is a natural logic leads one to accept abstract rules, i.e., rules that are seen in a formal, not pragmatic, way. But Whorf showed why this notion of rules is unacceptable.

"... if a rule has absolutely no exceptions, it is not recognized as a rule or as anything else; it is then part of the background of experience of which we tend to remain unconscious. Never having experienced anything in contrast to it, we cannot isolate it and formulate it as a rule until we so enlarge our experience and expand our base of reference that we encounter an interruption of its regularity." 

Treating language as a natural logic and treating logic in a formal way are therefore complementary. And, conversely, seeing both language and logic as part of human praxis, are related. Once the form of rationalism that underlies the belief in natural logic is challenged, the transition from a formal to a pragmatic logic can be undertaken. Whorf saw the need to reject the classical notion of rationalism.
"It was found that the background linguistic system (in other words, the grammar) of each language is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions, for his synthesis of his mental stock in trade. Formulation of ideas is not an independent process, strictly rational in the old sense, but is part of a particular grammar, and differs, from slightly to greatly, between different grammars."24

From this, he concluded that "We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way - an agreement that holds throughout our speech community and is codified in the patterns of our language."25

Once again we face the fact that our commitments and our training underlie our ideas. Because "we are parties to an agreement to organize nature in this way", Whorf argued that "... no individual is free to describe nature with absolute impartiality."26 We have already argued this point from the stance of both the problems of ideology and logic. A critical analysis of language further reinforces our argument against objectivism, the value-free dogma and the end-of-ideology.

Whorf summarized his view in terms of a "new principle of relativity ... which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated."27 On the basis of his studies of language, he referred to "The relativity of all conceptual systems, ours included, and their dependence upon language stand revealed."28 Specifically, in the case of the English language, he argued that "... we have ... a monistic view of nature that gives us only one class of word for all kinds of events."29 In English we reduce events to verbs, and the structure of verbs makes it dif-
icient to situate our ideas in the ongoing world. "An 'event' to us means 'what our language classes as a verb' ... and ... it is not possible to de-
finite an 'event' in terms of nature ..."30 In contrast, some languages (e.g., Hopi) can define an event by duration and can see an event in terms of nature, that is, the natural background. This difference goes a long way in explain-
ing why many issues in traditional logic prove to be pseudo-problems. The
formal view of "cause" and "laws", which we have already criticized, may be partially rooted in the monism of our language. In a sense, the only "uni-
verse" that the philosophers of scientism discuss is the dominant universe of
discourse.

An analysis of language can therefore help clarify problems in the
philosophy of science. For instance, the view of "time" that is implied in a
language may provide us with clues about logic. The development of the notion of mathematical time used in physics may have been affected by the tendency of our language to abstract events out of their natural background. As well, the
distinction between "past", "present" and "future", which is related to the formal treatment of events, may have been necessary to be able to develop the
concepts and operations that are related to "prediction".

Whorf argued that the universe could be described without recourse to
a concept of dimensional time. The notion of dimensional time has clearly af-
fected the kind of knowledge and logic that we have developed, but such know-
ledge and logic does not reflect "nature". The events which are selected in
terms of our categories and problems have a grounding. "They" can be seen in a variety of ways. "They" can even be ignored. "They" might not even exist
if they had no pragmatic value to us. But it is difficult to imagine what a different perspective on "events" would mean. We are all trapped, to a greater or lesser degree, by our language and the ideology and logic that complements it.

Whorf asked: "How would a physics constructed along these lines (without dimensional time) work ...?" He answered: "Perfectly, as far as I can see though of course it would require different ideology and perhaps different mathematics." He recognized that "ideology" and "science" were not exclusive because language never functions as a natural logic. Language and ideology are not at all synonymous, but the former forms a selective foundation for the latter.

An awareness of the relevance of linguistics for science and ideology can, in Whorf's words, contribute to "our sense of perspective". It can open up questions in the sociology of knowledge and philosophy of science from a new direction. For instance, "reality" in English is defined as a noun or thing. This is one reason why the dichotomies of scientism have been taken to be "reality" or to reveal reality. This has also led to untold pseudo-problems in philosophy. Treating "reality" as a thing or things, while not understanding the heuristic function of language, the philosophers of scientism have totally failed to clarify that science is a human endeavour undertaken within the ongoing events of nature. As a student of Whorf said:

"Reality, then, is more like a value we assign to things in order that our future behaviour may be guided to desired results ... The problem of reality, then, is the problem of what is effective, and it would seem at this point that reality is determined by forms of behaviour."
Reified Linguistics

An analysis of language does not necessarily clarify the problems of ideology and logic. The Sapir-Whorf hypothesis of "linguistic relativity" need not even lead to an awareness of these problems. Semanticists who falsely take "relativity" to mean that the meaning of words can be understood and manipulated formally and analytic philosophers who treat words as things, without any situational reference, are but two examples. A specific example is the formal manner in which Landau applied the idea of linguistic relativity to questions of logic. Landau was not concerned with how formal linguistics can function to create an approach to logic that covers up the ideological underpinnings of a scientistic form of knowledge. He spoke of how "a linguistic system possesses a definite logic," not of how a linguistic and logical system can function ideologically. He was more interested in maintaining the logic of a linguistic system during inquiry than in understanding how that logic affects the outcome of inquiry.

His adherence to the maxim of "internal consistency" of formal logic was shown by his statement that "A sometime violation of a rule constitutes an error: but a general disregard of its rules and regulations transforms the language into nonsense." Landau thus used a formal analysis of linguistics to argue for more linguistic precision. He did not discuss how such precision can narrow the realm of inquiry to the point of being tautological. He did not discuss the need to consciously attempt to break from the limits of both technical languages and the general language and thought that complements it if new meta-
phors to facilitate the process of inference are to be developed. He even argued against mixing linguistic systems. "To combine the unrelated, to mix irrelevancies, to confuse different grammars, to build a miscellaneous vocabulary - this is to produce a polyglot that invites the disorganization of a discipline."36

This use of the hypothesis of linguistic relativity is related to an ignorance of the problem of ideology. To the extent that Whorf recognized that his analysis had implications for the problem of ideology, Landau can be accused of distorting the hypothesis. Landau accepted a naive view of scientific discovery and the origin of problems; a view that totally ignored the role of ideology in science, and, in this sense, he failed to understand the implications of linguistics for science. For example, he stated that

"None of this is to suggest that minds must be kept closed to new ideas. A science must always be open to suggestions which may be productive of knowledge. Nor does it matter where or how such suggestions originate. Scientists speculate and guess, they are intuitive, they have hunches as to similarities between seemingly diverse worlds. All of this, however, belongs in what Reichenbach has called the "context of discovery". In this context, which is neither limited to science or a part of science, the scientist is sovereign. He has free choice. There are no scientific limits on what he does."37

Landau, like Popper, separated the origins of problems from the actual process of inquiry. Such a separation reduces science to an abstract formal process and ignores the ongoing activity that is involved in inquiry. For Landau, it was "formal rules" which must guide inquiry. According to him, once the scientist chooses his linguistics and logic

"... he is no longer sovereign. He is now constrained by the 'language of science', by the set of formal rules that make up its grammar."38

He called this constraint the "due process of inquiry".
Toulmin made many valuable points through his analogy between law and logic. Landau's analogy is far more restricting. It tends to narrow our attention rather than open it to fundamental problems. Landau's concern was with tightening up the metaphors used in any discipline. He wanted us to stay with a so-called grammatic logic once a metaphor was selected to guide inquiry. The development of precise, abstract "models" was his overriding aim. His reference to language was just one means of doing this. Rather than analyzing language as a means to clarify how different approaches to logic function ideologically, he was concerned with refining formal concepts with the aid of formal linguistics.

We have consistently criticized such a formal approach to concepts. When Landau stated that "The more developed (formal) the language (model) the clearer are its concepts, the more explicit and certain are its rules," he was making the same assumption that underlies all formal approaches to logic. But we have seen - especially when we criticized Kaufmann - how formalizing "rules" does not enhance certainty but creates another a priori (e.g., Kaufmann's "basic rules") and thus takes an aspect of logic outside the process of inquiry. Toulmin's approach to logic was valuable because it exposed this and treated logic as a pragmatic discipline always rooted in subject matter.

Refining and formalizing the logic of a linguistic metaphor removes language from its human context. It treats language as a "natural logic"; exactly what Whorf argued against. That is why we cannot accept Landau's statement that
The logic of a model is very strict: It is expressed in the precise vocabulary (operational) of a scientific language. The logic or program of a metaphor is pre-scientific: it retains the relative ambiguity of the natural language in which it is stated.\textsuperscript{40}

Landau called this formalization the transformation from "a natural to a scientific language,"\textsuperscript{41} but, in fact, it creates an abstract logic (the logic of models) and separates subject matter from logic. Many pseudo-problems and mystifications are created in the process. And the ideological underpinnings of a particular logic or body of knowledge are left obscured.

In his paper, Landau talked of the process of verifying the analogy implied by the particular model that is being formalized. This notion of "verification", however, will tend to be tautological since the so-called "due process of inquiry" limits a scientist to the logic of the model. The ideological backing implied by the logic and model will, therefore, be ignored and "verification" easily becomes nothing more than an uncritical ritual which has no significance in terms of inquiry.

Landau warned us not to take metaphors literally:

"Metaphors are frequently taken literally and this means that a presumed analogy is allowed to become an identity without any demonstration of evidence - i.e. an assertion of fact that may be and usually is erroneous. One may add that the more familiar and conventional the metaphor, the greater is this danger.\textsuperscript{42}

Yet his "due process of inquiry" leads to just such a reification. Defining science as "... a movement from natural languages to technical languages, from metaphors to models ..."\textsuperscript{43} restricts inquiry so that the arguments implied by science go unscrutinized. This is one reason why "familiar and conventional metaphors" rooted in the dominant ideology of our society have become the basis of a scientific orthodoxy.
Landau's view of "science" paralleled his concern with formal models and his related ignorance of the way different logics function ideologically. He claimed that developing an "... abstract deductive system ... is the hallmark of science." If obtaining "unambiguous correspondence" between a model and (Landau would have to say) reality is seen as the basis of science, then science itself becomes abstract. The "theoretical nature of science" of which Landau wrote does not mean that concepts have to become formalized and logic reduced to the rules of relationship within a particular model. If theory is seen in a pragmatic way, as Toulmin described it, then science no longer is reducible to a deductive logic. Because Landau equated his "due process of inquiry" with obtaining "purity of method" he became trapped by the fallacies of scientism. Rather than an analysis of language being used to clarify how logic and ideology interrelate, for him it was a means to achieve the impossible - value-free models, a value-free logic.

Language and Pragmatic Logic: 1 - Behaviorism and Epistemology

We saw above that Whorf's theory of linguistics took him very close to a pragmatic theory of knowledge. Once we recognize that "the problem of reality is the problem of what is effective", we have to ask how ideology and language affect human goals and the behaviour related to them. Once we begin to do this there is no need to engage in abstract, academic debates about logic.

Mead's analysis of language and consciousness provides us with the necessary clarification of this matter. In the context of our analysis of ideology and logic, his concepts become valuable to an extent that most contemporary sociologists and philosophers have not recognized. To show this, I will discuss
his ideas about the way language functions in socialization and social control.

Rather than beginning with abstract problems in logic, Mead attempted to ground his analysis of logic in relevant subject matter. This contrasts sharply with the approaches taken by Weber, Durkheim and Popper, and fulfilled what Toulmin called "epistemological analysis". For example, Mead argued that with the growth of behavioristic psychology, our understanding of "consciousness" advanced to a point where the older epistemologies were no longer credible. He argued that a

"Prebehavioristic psychology had a foot in two worlds. Its material was found in consciousness and in the world of physiology and physics. As long, however, as psychology was occupied with states of consciousness which constituted objects, there was an inevitable duplication. The whole physiological and physical apparatus could be stated in terms of states of consciousness, and solipsism hovered in the background."48

"Consciousness" remained an a priori in such a psychology and no matter how much concern there was for physiological data there remained a dualism between the so-called "mind" and "body".

Mead argued that "A behavioristic psychology, on the other hand, that is not responsible for the content of the object, becomes a science that is cognate with physiology and dynamics, and escapes the trail of the epistemological serpent."49 Such an orientation is concerned with human acts and finds "... its objects given in the world with which all science deals."50 It no longer looks for "states of consciousness" per se. Because of this, it was more consistent with the approaches developed by the natural sciences.

"The natural sciences start pragmatically with a world that is there, within which a problem has arisen, and introduces hypothetical reconstructions only in so far as its solution demands them. They always have their feet upon the solid ground of unquestioned objects of observation and experiment ..."51
Prebehavioristic psychology did not have this scientific orientation but instead was rooted in "speculative philosophy". And this psychology "... carried the epistemological problem into the experience of the individual." Even though empirical methods were used in psychology, "states of consciousness were still regarded as cognitive". An arbitrary "bifurcation of nature" remained which kept psychology from situating cognitive processes in the ongoing conduct of the human.

Mead saw behaviorism as the radical break from the dualisms of speculative philosophy. With it the "active interests of the organism" became the focus of psychology. Rather than perception and cognition being approached in terms of "states of consciousness" per se they were approached in terms of behaviour. In this new approach "The percept is relative to the perceiving individual, but relative to his active interest, not relative in the sense that its content is a state of his consciousness." This behaviorism "... placed the central nervous system in the world of things ..." and the "mind" of the human was no longer seen as a detached a priori or "spectator" of reality.

2 - Formal Logic and Ongoing Activity

"It remained for pragmatism to take the still more radical position that in immediate experience the percept stands over against the individual, not in a relation of awareness, but simply in that of conduct. Cognition is a process of finding out something that is problematic, not of entering into relation with a world that is there." According to this view, there is no longer a person, with a mind, who perceives
reality. Instead there is a person engaged in "ongoing activity". This conduct "outlines and defines objects" for the person. His or her consciousness is therefore active, not passive; it is rooted in the activity of the organism.

According to Mead, our changing concepts of "time" have affected our approach to consciousness and to epistemology. Here we begin to see how we can relate his ideas to the linguistic analysis of Whorf. Objects have a different meaning for a person depending on the relevance or irrelevance of them to his or her ongoing activity. There is no "objective world" out there which a person perceives. There is a world within which a person acts.

The meaning of the world will depend on the relation in space and time of different objects to the person in his or her particular activity. There is no timeless reality that a person perceives. There is ongoing activity, activity through time and space, which makes different aspects of the world, at different periods, problematic for him or her.

The notion of objectivity that we have criticized throughout this study is no longer credible once consciousness is seen in terms of ongoing human conduct through time and space. Also, the erroneous character of formal logic is exposed once this new understanding of consciousness is generalized to other problems.

"Objects which in a thousand ways are identical for the two individuals are yet fundamentally different through their location in one spatio-temporal plane, involving a certain succession of events, or in another. Eliminate the temporal dimension, and bring all events back to an instant that is timeless, and the individuality of these objects which belongs to them in behavior is lost, except in so far as they can represent the results of past conduct."57

This new approach to consciousness helps explain how formal logic came
to be mistaken as the basis of science. A timeless approach to events, taking events out of the context of ongoing activity, does have a function in human conduct.

"We abstract time from this space for the purposes of our conduct. Certain objects cease to be events, cease to pass as they are in reality passing and in their permanence become the conditions of our action, and events take place with reference to them."\(^{58}\)

Our ongoing activity does not immerse us in some metaphysical "present" or "immediate experience" for if it did it would not be ongoing. For Mead, our ongoing activity "... belongs either to the passing present, or to the irrevocable past, or to the contingent future."\(^{59}\)

It is possible to treat some events in a timeless, formal way. And without this formal treatment of some events, at certain junctures in ongoing activity, we could not learn or predict. Such an abstraction allows us to make judgments necessary for us to develop more intelligent behaviour. But this is a different thing than saying that all knowledge is formal. The ground of knowledge remains our ongoing activity and the problems that arise from this. Because of this perspective we can say that Mead, like Marx and Sartre, was a theorist of human praxis.

This approach to consciousness means that "There is a relativity of the living individual and its environment, both as to form and content (my emphasis)."\(^{60}\) In our ongoing activity through time and space not only the content but the form of activity and problems change. Abstracting a "form" from past activity and superimposing it onto new activity and problems, rooted in a qualitatively different "praxis", is the main error that lies at the root of formal logic.
3 - The Generalized Other and Scientific Rules

This new approach to consciousness has an additional relevance for our study. Besides shifting our attention away from epistemological pseudo-problems to human praxis, it gives us an additional foundation for a sociology of knowledge perspective. If we must approach consciousness of the world in terms of ongoing activity, then any adequate study of logic must account for the way people affect each other. For example, we have talked of how a grouping of scientists work on a class of problems because of training and commitments to a common paradigm.

Mead referred to this process in a particular way. "If we are to cooperate successfully with others, we must in some manner get their ongoing acts into ourselves to make the common act come off."61 A scientist is not working on "his" or "her" problem. He or she is working on a common problem, in terms of a common paradigm, in his or her own way. "The objective of the act is then found in the life-process of the group, not in those of the separate individuals alone."62 The "self" is not something isolated from "others", and this applies as much for the intellectual activity and reflection of a scientist as any other form of praxis. His or her behaviour is social and therefore his or her consciousness must have a social foundation. In scientific work, as well as in any form of work, the individual "... organizes his own response by the tendencies on the part of others to respond to his act."63

This approach means that all views of consciousness "as a sort of spiritual stuff" must be discarded. All theories of logic and epistemology which imply or assume the existence of an autonomous consciousness must also be
discarded. The very core of science, the creative reflection of a person who is engaged in active problem solving, is itself related to the ongoing activity of others. "It is just because the individual finds himself taking the attitudes of the others who are involved in his conduct that he becomes an object for himself." Becoming an "object for oneself", or what C.W. Mills referred to as the skills of controversy with oneself, is what critical comparative thought is all about.

This general approach can give us a more realistic understanding of the development of "rules" in science than formal approaches that abstract "rules" out of the context of ongoing human activity. To show this we need to understand what Mead meant by the "generalized other". In brief, he outlined two stages in the development of the generalized other in the child. First, in "play", the child acts as he sees others acting. Second, in "games", the child has internalized "rules" or "regulated procedures" so that he or she no longer requires others to imitate. Others react to the child's play in such a way that his or her own behaviour becomes organized into predictable games.

This process also occurs for scientists. The so-called "rules" of science also have a foundation in a "generalized other". Certain behaviour and related consciousness comes to have a similar value for a grouping of scientists. It is even possible to talk of the changing "rules" of the "scientific game". "Rules" become the way that this similarity in meaning is communicated efficiently and passed on. Without the underlying behavioral socialization and resulting praxis, the "rules", however, would have no meaning.
This approach helps to demystify scientific ideas and to pinpoint the human activity that complements them. A scientific "idea" is not something that reflects "laws" or "causes". Using Mead's terms, it is an "aroused organized attitude" of a social grouping whose common acts are communicated in terms of "rules". "Laws" and "objectivity" have no reality outside the common acts and common values of the scientists.

"We assume the generalized attitude of the group, in the censor that stands at the door of our imagery and inner conversations, and in the affirmation of the laws and axioms of the universe of discourse ... Our thinking is an inner conversation in which we may be taking the roles of specific acquaintances over against ourselves, but usually it is with what I have termed the 'generalized other' that we converse, and so attain to the levels of abstract thinking, and that impersonality, that so-called objectivity that we cherish."66

This approach to logic may startle, even shock, those deeply socialized to scientific rationalizations. But unless we agree that to the extent that common meanings exist for any group of scientists their acts also must have common meaning, "science" becomes perceived as a metaphysical matter. This approach does not say that scientists create reality, but neither does it assume that they discover "it". Both are false. As Mead said: "... objects exist in nature (and in society) as the patterns of our actions."67 We must act in a common way to gain common meanings about objects. Without human praxis, there is no science; and the type of common praxis will underlie both the form and content of science.

4 - The Social Field of Science

Mead developed the implications of this behaviorist approach to consciousness for logic in a more specific manner. In his words: "If knowledge
is discovery of the unknown, this world is not known - it is simply there. 68

The world does not have to be known to exist. This is the epistemological
double-bind of idealist philosophy. A particular form and content of knowl-
edge results from a particular type of problem solving in the world. It
does not result from the attempt to know the nature of the world per se. If
this is so then logic cannot be viewed as something that helps make the world
intelligible to us. It is something that helps us make sense of and evaluate
the knowledge, both the arguments and consequences involved, in the world.

As Mead stated:

"Logical necessity obtains in the field of reflective thinking. To
transfer it to the world that is there, and within which thought
is occupied in the solution of problems, would be to dismiss ex-
perimental science as a meaningless and pernicious discipline and
to return to the science of dogma." 69

Our knowledge is not of the so-called essences of the world nor is it
something abstracted from our own existence in the world. Knowledge is developed
through a particular type of social experience of humans, not through a discovery
of some trans-human "reality". For science to exist, humans must first share a
common concern for an object or event. Their common gestures become symbolic
for this common concern. Communication results when a grouping of people in-
ternalize each other's attitudes about the meaning of the symbols. For Mead,
this allowed consciousness, but did not yet constitute knowledge. Knowledge
results when we know "what the import of the symbols is". 70 This is a practical
matter; one of acting in the world and evaluating the consequences within the
common language and meaning that have developed to that point in time.
An individual "mind" never comes to "know" something. Significant social relationships and language are crucial for the symbols, communication, consciousness and knowledge to develop for a person. Mead believed that "... in the thought of the scientist the supposition of his mind and his self always involves other minds and selves as presuppositions and as standing upon the same level of existence and evidence."71 Even more important, as a natural and social world must exist for there to be natural science, a social and natural world must exist for there to be social science. Events in the natural and social world are the ground from which all knowledge is developed. Records and arguments kept in social institutions are indispensable for all knowledge. A "universe of discourse" that gives a person a footing from which to think, reflect and conceptualize is fundamental to all science.

From this perspective, it can be argued that there "is no limit to the field of knowledge".72 There is no true social science! Rather, depending on the events or objects with which a group of scientists begin, and the "universe of discourse" they act and think within, a different type of knowledge, with a different function, will develop. This does not mean that there aren't different qualities of knowledge, or that knowledge can start anywhere and proceed anywhere. Inquiry is not at all random or eclectic. But it does mean that social science depends on the changing social world for its events and that the social scientist is part of the social world he or she is studying. The position he or she has within the social structure and the related peer and reference groups that act as a "generalized other" will greatly mediate the meaning that the changing world will have. It is upon this fact that the sociology
of knowledge perspective rests. And it is because of this fact that ideology becomes problematic for all science.

A "social science" problem is, therefore, never rooted in an objectively describable reality, but from the social field of the scientist. The "universe of discourse" within which a particular scientist thinks and works will underlie his or her selection and treatment of problems. The problem does not come from the "mind" of the scientist; the events of the world as selectively perceived underlie it. Mead argued that the "... world may be said to contain the problem within itself, and so to surround the problem." But the "working hypothesis" with which any scientist proceeds will be an outgrowth of the particular meanings of events that are associated with his or her "generalized other". The character of the ongoing praxis, for example, the political relevance of any social grouping of scientists, will be the basis of the particularity of the problems with which they deal.

"... the world that is there includes and surrounds the problem in the sense that the problem is also there within the field of conduct, for, as has been indicated, the problem arises in the conduct of individuals and out of the conflict of acts which inhibit one another because the same object calls out mutually antagonistic responses. When these problems pass into the field of reflection, they are so formulated that they would occur in any experience, that is, they take on a universal form." The "problem" is not something detached from the scientist. It is situated in his or her own praxis - in the nature of the ongoing activity and the way this affects one's response to social events. The problem must, by definition, then be historically and biographically specific.
"The problem must happen to an individual, it can have no other locus than in the biography, but the terms in which he defines it and seeks its solution must be universal, that is, have common import. This location of the problem in the experience of the individual in its historical setting dates not only the problem but also the world within which that problem arises. For a world within which an essential scientific problem has arisen is a different world from that within which this problem does not exist, that is, different from the world that is there when this problem has been solved."75

The "universality" of any problem does not come from the objectivity of a scientist, but from two things: the "universe of discourse" within which the scientist operates and generalizes, and the fact that events in the world are the basis of problems. A particular form of reflection, which is always related to a particular "generalized other", gives concepts rooted in problems, methods and theories a particular universal character. A certain kind of human praxis, in the context of historical trends, remains the basis of anything about which there is reflection or generalization. As long as we don't mystify the "generalized other" into something abstract, i.e., over and above ongoing human praxis, we can almost treat a paradigm and a "generalized other" as being synonymous.

Such an approach has obvious implications for our study. For example, one's "... goal in the pursuit of knowledge is not a final word but the solution of a problem in the world that is there."76 Making the world into "a picture of abstractions" and/or assigning "a metaphysical reality to facts"77 that are, in fact, rooted in our ongoing conduct in the world is clearly not the way to do this. Our criticism of the ideology and logic of scientism is therefore reinforced by Mead's analysis of the social fields of science.
We still have to show how Mead's approach to the relationship of language and logic reveals the ideological underpinnings of science. A study of the relation of ideology to political science referred to the relevance of Mead's work.

"Mead's point is that language does not express ideas existing antece-dently in all minds, nor does it passively reflect 'data' from the objective environment. Rather, language is a socially constituted product that focuses attention on selected aspects of the environment in specialized ways: The prevailing universe of discourse sets a frame for our perception of the problems and possibilities in social life."\(^78\)

One implication of this is that formal "logics" are abstractions of a particular "universe of discourse", rather than evaluations of the worth, for example, the consequences, of that universe of discourse. This is just another way of saying that formal logic has no real content. But this does not yet make the connection between ideology, language and logic explicit.

Mead himself made this connection when he wrote that:

"A person learns a new language and, as we say, gets a new soul. He puts himself into the attitude of those that make use of that language. He cannot read its literature, cannot converse with those that belong to that community, without taking on its peculiar attitudes. He becomes in that sense a different individual. You cannot convey a language as a pure abstraction; you inevitably in some degree convey also the life that lies behind it ..."\(^79\)

This implies that to learn a universe of discourse you must learn a new way of life. For a certain class of problems, methods and theories and concepts rooted in them to have meaning to a scientist, the ongoing activity of those who act as one's "generalized other" and are associated with these "concepts" must also have meaning. A life-style and work-style and a related set of commitments is then
involved in any form of science. To take us full circle again, these commitments are ultimately political and ideological. Both as implied backings for an argument and as articulations or universalizations of positions rooted in real political conflicts, one's intellectual work always has an ideological underpinning. Mead has presented us with an analysis of language and logic which points to the intricacies and actual workings of these relationships in practice.

Footnotes

1See p. 14 above.
2See p. 183 above.
3See p. 186 above.
4See p. 348 above.
5See p. 410 above.
7Ibid.
8Ibid.
9Ibid., p. 8.
10Ibid.
11Ibid., p. 9.
12Ibid., p. 10.
13Ibid., p. 11.
14Ibid.
The ideal of "pure reference" is rooted in a near-schizophrenic understanding of language, experience and behaviour. It suggests that we can observe ourselves and make sense of what we see without being involved. In fact, the interrelation of language and behaviour affects us all, including the scientist. And this interrelationship is essential for us to be able to study experience and behaviour. Once we acknowledge the fact that the scientist always works within a "social field" which affects the things he or she generalizes about and the way he or she makes generalizations we can abandon the pseudo-problems of scientism.

In the motto of Maryland which reads "deeds are more effective than words", deeds are associated with males and words with females. (The New Merriam-Webster Pocket Dictionary, Richmond Hill, Ontario, Simon and Schuster (1968), p. 623.) Not only is the notion that actions or deeds speak louder than words an erroneous one, but it may be rooted in the sex-role socialization of our culture. This possibility raises several questions. For example, how much is the reification of language in academia rooted in the division of labour between males and females (at work with adults; at home with children) and the dissociation of theory from practice, even mind from body, that results from this?

I take up this matter in Chapter Twenty.

Sapir, op. cit., p. 34.

Ibid., p. 35.

Ibid., p. 36.

Ibid.


Ibid., p. 41.

Ibid., p. 45.

Ibid.

Ibid.

Ibid.

Ibid., p. 47. If Whorf meant that our concepts are relative to a particular linguistic-ideological-logical paradigm, I am in agreement with him on this point. If he was caught, as Mannheim, between a scientistic notion of truth and objectivity and a relativism rooted in a developing skepticism of this idea, I am not. The fact that he even considered the idea of "absolute impartiality" suggests the latter interpretation. As I have continually stressed, once we rid
ourselves of the ideology, logic and linguistics of scientism, the relevant question becomes one of evaluating the different functions and consequences of different forms and contents of knowledge.

29 Ibid., p. 48.

30 Ibid. See Dewey's discussion of verbs in Chapter Twenty for more clarity on this point.

31 Ibid., pp. 49-50.

32 Ibid., p. 51.

33 Ibid., p. 53.


35 Ibid.

36 Ibid., p. 6.

37 Ibid. Landau's interpretation of Reichenbach seems to contradict the gist of this statement. "Every theory of knowledge must start from knowledge as a given sociological fact ... Knowledge ... is a very concrete thing; and the examination into its properties means studying the features of a sociological phenomenon." (H. Reichenbach: Experience and Prediction. Chicago, Phoenix (1938), p. 3.)

38 Ibid.

39 Ibid., p. 7.

40 Ibid.

41 Ibid.

42 Ibid., p. 8.

43 Ibid.

44 Ibid., p. 9.

45 If by stating that science is theoretical a person implies that theory is deductive, he is mistaken. But there is a contrary way of seeing science as being theoretical in nature. Writing of Freud's theory, Althusser asked:
"... in this organic practico-technico-theoretical whole do we have a whole that is truly stabilized and founded at the scientific level? In other words, is the theory really theory in the scientific sense? Or is it not, on the contrary, a simple transposition into theory of the methodology of the practice (the cure)? Hence the very common modern view that beneath its theoretical exterior ... psychoanalysis remains a mere practice that does sometimes give results, but not always; a mere practice extended into a technique (rules of analytic method), but without a theory, at least without a true theory; what it calls theory being merely the blind technical concepts in which it reflects the rules of its practice; a mere practice without theory ... perhaps then, even simply a kind of magic? that succeeds, like all magic, because of its prestige - and its prestige, applied to the fulfillment of a social need or demand, therefore its only justification, its real justification." (Louis Althusser: Freud and Lacan. New Left Review, May-June, 1969, No. 55, p. 53.) Often theory is just the abstraction of the rules of some technique and formal logic is used to attempt to obscure this fact. Only a pragmatic approach to logic is able to scrutinize the total activity involved in inquiry, and, as such, determine whether there is any theoretical significance in a scientific argument.

46 Landau, op. cit., p. 10.

47 The term "behaviorism" has been associated with two distinct tendencies in the social sciences. Mead's behaviorism was not that of Watson, Pavlov, Hull or Skinner - the so-called objective psychologists. This kind of behaviorism is thoroughly integrated into the ideology and logic of scientism. Mead's behaviorism was more similar to that stressed by Dewey who argued that while human events have to be studied from the standpoint of conduct this process cannot be treated in an external, so-called objectivist way.


49 Ibid.

50 Ibid.

51 Ibid., p. 260.

52 Ibid.

53 Ibid.

54 Ibid., p. 261.

55 Ibid., p. 262.
56 Ibid.
57 Ibid., pp. 266-67.
58 Ibid., p. 267.
59 Ibid., p. 264.
60 Ibid., pp. 267-68.
61 Ibid., p. 268-69.
62 Ibid., p. 269.
63 Ibid., p. 272.
64 Ibid., p. 273.

My use of the term "games" should not be given relativistic connotations. Because scientists learn rules for a particular paradigm much as children learn rules for a particular game does not mean that there are not real consequences that result from scientific games. It does, however, emphasize that the different consequences of doing differing kinds of things in inquiry are often the result of the integration of scientists into certain social relationships.

66 Ibid., pp. 276-77.
67 Ibid., p. 277.

69 Ibid., p. 46.
70 Ibid., p. 51.
71 Ibid., p. 53.
72 Ibid., p. 56.
73 Ibid., p. 58.
74 Ibid.
75 Ibid., p. 59.
76 Ibid., p. 60.
William E. Connolly: Political Science and Ideology. New York, Atherton Press (1967), p. 96. I have not included a discussion of Noam Chomsky in this study. Like Wittgenstein, Chomsky's approach to linguistics can, potentially, account for the problem of ideology. For example, in a discussion of linguistics and politics he wrote: "Scientific ideas and political ideas can converge and, if they converge independently because they have each developed in the same direction, that is fine. But they should not be made to converge at the cost of distortion and suppression or anything like that." (Noam Chomsky: Linguistics and Politics. London, England, New Left Review, Sept.-Oct., 1969, No. 17, p. 30.) His understanding of the relation of science and politics, however, remained formal; probably because his orientation to linguistics (for example, his idea of "generative rules") seems to be appropriate to the formal logical needs of the academic models presently being developed by the dominant approach to behavioral science in the United States.

Ibid. This statement by Mead was perhaps the most crucial in providing the initial ideas around and out of which I developed this study. I mention this to point out how necessary it is to read someone, as a "generalized other", who has articulated one's hunches for any thesis to develop. If what I have said about the social field of science has validity, it obviously has to apply to my own work. The relevance of Mead's work did not strike me existentially until I moved into a "commune" and began to find my language changing as my habits changed.
Chapter Twenty

Ideology and Inquiry: Dewey

The problem of ideology is rooted in the relationships between the social arrangement of science, for example, the division between mental and physical labour in society, the class of problems, methods and theories that dominates science, and the social and human consequences of such a set up.

The problem of logic is rooted in the relationship between methods of evaluating knowledge and the ideological function of a particular orientation to knowledge. For example, I have argued throughout this study that formal logic, as a method of evaluating knowledge, complements the scientistic research that is done for the established society on the pretense of being value-free. It is a study of language that shows the inadequacies of all theories of knowledge that fail to take the problems of ideology and logic into account. Once it is recognized that language is not value-free, but functions heuristically as part of human praxis, the attempt to develop an epistemology that is free of ideology proves to be futile. As one author put it: "A given language inclines its users ... to accept 'naturally' a certain metaphysics or epistemology and thus ultimately influence behaviour." This is much the same as saying, as did Marx and Engels, that ideology mediates behaviour and consciousness.

Whether a theorist personifies ideology into "the ideologue" and in the process mystifies science, avoids the whole issue with "sociologism", or is more sophisticated and uses formal "logic" to help rationalize the arbitrary
separation of science from ideology, there remains an ignorance about the relations of language to praxis and the implications of this for the problems of ideology and logic. Once the relations of politics and science are conceptualized, with the aid of the notion of "ideological struggle", then scientism itself becomes exposed as an ideology and the ideological function of the theories of knowledge that justify it becomes apparent. A formal or academic approach to logic tends to reify our means of evaluating arguments and in the process it distorts our understanding of the problems of ideology and logic. Whether such formalization takes the form of attempting to develop value-free or neutral concepts, or treats "rules" in abstract from a consideration of the ideological context within which intellectual judgments are always made, formal logic serves the same purpose of obscuring the problem that ideology poses for logic.

But where does this clarification leave us? My clarification of the problems of ideology and logic in the social sciences was not intended to nurture a nihilistic relativism about knowledge. If this results, then my argument has been abstracted, perhaps even given an ontological status, and the reader is still searching for some abstract criteria for justifying one argument over another. The alternative to this is to develop an approach to logic which strengthens our intellectual commitment to social science.

Throughout this thesis I have argued that since knowledge is pragmatic, that is, rooted in praxis, then only a pragmatic orientation to logic can assist us evaluate the arguments involved in creating knowledge. If our means of evaluating arguments do not deal explicitly with the relations of language
and praxis, ideology and logic, then our logic will not be inclusive enough to fulfill its task. Logic in the social sciences must be able to avoid the dichotomies of scientism if it is to have a function beyond that of rationalizing tautological statements. A logic that cannot account for the problem of ideology is useless as a tool to assess arguments.

Though Dewey did not conceive of his approach to logic in these terms, pragmatism does fulfill the above requirements. I will show this, first, by contrasting Dewey’s approach to logic with the formal approach and, second, by criticizing the scientistic dichotomies between objective and subjective, theoretical and practical, and empirical and normative. On the basis of this critique, I will develop a perspective on the question of method and "rules" that takes account of the implications of the problem of ideology for logic. This will involve a discussion of the form that social inquiry which does not ignore ideology can take.

Formal and Pragmatic Logic

Dewey criticized formal logic because it leads us to believe that something can "... be an object of knowledge per se." As he said: "When the act and object of perception are isolated from their place and function in promoting and directing a successful course of activities in behalf of use-enjoyment, they are often taken to be exclusively cognitive." This isolation of an act or object from its place or function leads to the pseudo-problems of academic epistemology. For example, an academic orientation to knowledge leads to false questions about which one of many abstract, that is, imagined approaches
to epistemology, is "most real". "It is only when an object of focal observation is regarded as an object of knowledge in isolation that there arises the notion that there are two kinds of knowledge, so opposed to each other that philosophy must either choose which is 'real' or find some way of reconciling their respective 'realities'." As I proceed, I shall discuss how academic conflicts between rationalism and empiricism, and idealism and materialism are rooted in this confusion.

Being anti-academic does not necessarily imply that one is anti-intellectual. An attack on scientism is not an attack on science. Rather, in terms of this study, it is an attempt to have the problem of ideology included in the class of problems with which social science deals. This would entail no less than a scientific revolution in my estimation.

The distinction between anti-academic and anti-intellectual is basic to this thesis. When the logician Moore wrote that it was always "... things which other philosophers have said that suggested philosophical problems to me" and that he did "... not think ... that the world or the sciences would even have suggested to me any philosophical problems ..." we have an example of the academic mentality and some hunches about the kind of praxis that underlies the pseudo-problems of traditional epistemology. Not conceptualizing problems in terms of language and praxis nor ideology and logic, academics think within the narrow linguistic boundaries of their specialized disciplines and work within those of their ivory tower. In the process, academic philosophy and logic have become absurd.
This isolation of a human act or natural object from its context creates dichotomies which, when superimposed onto the ongoing world, leads to an unnecessary fragmentation of subject matter. About this "petrification of distinctions", Dewey and Bentley wrote:

"Philosophical discourse is the chief wrong-doer in this matter. Either directly or through psychology as an ally it has torn the intellectual, the emotional, and the practical asunder, erecting each into an entity, and thereby creating the artificial problem of getting them back into working terms with one another. Especially has this taken place in philosophy since the scientific revolution of a few centuries ago. For the assumption that it constituted natural science an entity complete in and of itself necessarily set man and the world, mind and nature as mindless, subject and object, inner and outer, the moral and the physical, fact and value, over against one another as inherent, essential, and therefore absolute separations." 7

The contemporary disciplines of the social sciences are themselves exposed as being ideological once the effects of the fragmentation of subject matters and the academic logic that obscures these effects are themselves scrutinized. 8

Dewey and Bentley viewed formal logic as being presocial-scientific.

"We may take Darwin's great demonstration of the 'natural' origin of organisms as marking the start of the new era in which man himself is treated as a natural member of a universe under discovery rather than as a superior being endowed with 'faculties' from above and beyond, which enable him to 'oversee' it. If we do this, we find that almost all logical enterprises are still carried on in pre-Darwinian patterns." 9

Formal logic is not only abstracted from the subject matter of the social and biological sciences, it is in contradiction to this subject matter. The variations of formal logic provide no real choice for those interested in a logic that can help evaluate arguments rooted in ongoing substantive inquiry. If we rely on formal logic "... we are asked to take our choice between traditional
logic, which was formulated not only long before the rise of science but when also the content and methods of science were in radical opposition to those of present science, and the new purely 'symbolistic logic' that recognized only mathematics, and even at that is not so much concerned with methods of mathematics as with linguistic formulations of its results. 10

What Dewey called traditional logic was not originally constructed in abstraction from ongoing events. There was a type of praxis, related use of language and ideological orientation which complemented it in its time and place of origin. Dewey pointed out that the forms in Aristotelian logic were "... not formalistic ... not independent of 'subjects' known". Rather, the subjects were exclusively concerned with the definition and classification of so-called "essences" and had "... no room for any logic of discovery and invention." 11 As Dewey wrote: "These considerations explain the ease with which a logical theory which was strictly ontological or existential in its original reference became a merely formal logic when the advance of science destroyed the background of essences and species upon which the original logic was based." 12

The logic of today which is rooted in traditional logic is formal because it has "forms without subject matter".

"When eternal essences and species are banished from scientific subject matter, the forms that are appropriate to them have nothing left to which they apply; of necessity they are merely formal. They remain in historical fact as monuments of a culture and science that have disappeared, while in logic they remain as barren formalities to be formally manipulated." 13

This separation of language forms from human praxis is what constitutes the re-
ification of "knowledge". Nowhere has it gone to the extent that it has with formal logic. It must be clear that formalizing ideas which have a clear relation to subject matter and human praxis does not constitute such a reification. The use of mathematics in ongoing inquiry in physics, for example, does not constitute such a reification. Doing the latter does not contradict the pragmatic approach to logic. In contrast to reified logic, the so-called independence of such forms "... is intermediate, not final and complete."¹⁴

A pragmatic approach to logic contrasts sharply with a formal, reified approach. It is based "... upon the postulate that knowings are always and everywhere inseparable from the knows - that the two are twin aspects of common fact."¹⁵ Dewey was fundamentally opposed to the separation of logic from ongoing inquiry and the ongoing activity that goes with it. "Whatever relative novelty may be found in my position consists in regarding the problem as belonging to the context of the conduct of inquiry and not in either traditional ontological or the traditional epistemological context."¹⁶

Dewey and Bentley summarized their approach in the Preface to their "terminological inquiry" into contemporary theories of logic.

"... knowing is co-operative and as such is integral with communication. By its own processes it is allied with the postulational. It demands that statements be made as descriptions of events in terms of the durations in time and areas in space. It excludes assertions of fixity and attempts to impose them. It installs an openness and flexibility in the very process of knowing. It treats knowledge as itself inquiry - as a goal within inquiry, not as a terminus outside or beyond inquiry."¹⁷

Once "knowledge" is seen as a "goal within inquiry" then inquiry can be seen as a particular form of human praxis. This perspective avoids the pit-falls that develop out of the dichotomies of scientism. As we shall see, it allows us to
understand and undertake social science without ignoring the problem of ideology.

The Dichotomies of Scientism: 1 - Objective and Subjective

The value-free dogma or the end-of-ideology ideology accepts the dichotomy between the object and the subject without question. Epistemological theories that complement the scientific ideology all begin with this dichotomy as an *a priori*. Dewey and Bentley pointed out that this dichotomy has an ontological connotation.

"It is a familiar fact that the historical systems of epistemological philosophy did their best to make ontological conclusions depend upon prior investigation of the conditions and nature of knowledge. A fact which is not so familiar, which indeed is often ignored, is that this attempt was itself based upon an ontological assumption of literally tremendous import; for it was assumed that whatever else knowledge is or is not, it is dependent upon the independent existence of a knower and of something to be known; occurring, that is, between mind and the world; between self and not-self; or, in words made familiar by use, between subject and object."\(^5\)

This belief in the independent existence of the knower and the known, this placement of "'man the analyzer' outside of, or over against the world of his analysis"\(^5\) is contradicted by our analysis of language in Chapter Nineteen. In fact, a non-theory of language and an alienated type of praxis which allows people to think of linguistic forms in a reified manner complements such a belief.

Dewey's approach recognized the relevance of the study of language for logic. Like Pierce, he made a "... flat denial of (the) separation of word, idea and object ...";\(^5\) a distinction that scientific philosophers consistently make. As Bentley said of Dewey's approach to logic, "The adequate development
of the theory of inquiry must await the development of a general theory of language in which form and matter are not separated. Such a theory, of the kind Mead developed in his studies of socialization, would see "... language, with all its speaking and writings, as man-himself-in-action-dealing-with-things ...". Because it would not separate the word, the object and the idea, such an approach to language would not postulate "... the intervening realm of names as a new and third kind of fact lying between man as speaker and things as spoken of ..."

The reification of linguistic forms, and all the ignorance this implies about problems of ideology and logic, postulates the existence of such a third realm of facts. Developing a theory of logic which is adequate for the social sciences "... will require complete abandonment of the customary isolation of the word from the man speaking, and likewise of the word from the thing spoken of or named." The "basic postulate" of this approach "... is that the knowings are observable facts in exactly the same sense as are the subject matters that are known." Rather than fragmenting the person, the object under consideration, and the idea about it - and treating each of them as an abstraction - Dewey's method of observation treats "... the speaker or knower along with the spoken of or known as being one common durational event." Rather than treating "man the analyzer" as though he were separated from the world of analysis, the praxis that underlies any act of knowing is acknowledged by his approach.

This approach invalidates the ontological meaning that scientism attributes to the dichotomy between the subjective and objective. Once we look at language as an aspect of human praxis, we see human "... experience as neither
subjective or objective but as a method or system of organization ..."27 or what Dewey called a "transaction". As Dewey and Bentley wrote:

"What has been completely divided in philosophical discourse into man and the world, inner and outer, self and not-self, subject and object, individual and social, private and public, etc. are in actuality parties in life-transactions. The philosophical problem of how to get them together is artificial."28

Dewey's critique of the dichotomy between the subjective and objective should not itself be given an ontological meaning.29 As he said, anyone who "... puts what is said in an ontological context instead of that of inquiry is sure to go amiss in respect to understanding (my position)."30 Any attribution of ontological meaning to this dichotomy "... needs to be replaced by consideration of the conditions under which they occur as distinctions, and of the special uses served by the distinctions."31

Abstracting the process of naming into a third realm of fact and the creation of formal logic are interrelated errors. However, this does not mean that the distinctions that epistemological theory has reified were not functional in advancing inquiry under certain conditions.

"What happens when distinctions which are indispensable to form and use in an efficient conduct of inquiry - that is to say, one which meets its own conditions as inquiry - are converted into something ontological, that is to say, into something taken to exist on its own account prior to inquiry and to which inquiry must conform, is exhibited ... in the epistemological phase of modern philosophy; and yet the new science could not have accomplished its revolution in astronomy, physics, and physiology if it had not in the course of its own development of method been able, by means of such distinctions as those to which theory gave the names 'subject' and 'object', 'mind' and 'the world', etc., to slough off the vast mass of irrelevant preconceptions which kept ancient and medieval cosmology from attaining scientific standing."32
The dichotomies of the scientistic ideology are rooted in a modern type of "word magic". When pragmatic distinctions are converted into ontologies, the words become treated as being autonomous, that is, as carrying their own meanings. Dewey's pragmatic approach to logic was an attempt to place the categories of scientific language themselves into the realm of inquiry. The word magic of the epistemologists of scientism led them to treat "... a use, function, and service rendered in conduct of inquiry as if it had ontological reference apart from inquiry." And pragmatic logic is "... an attempt to convert all the ontological, as prior to inquiry, into the logical as occupied wholly and solely with what takes place in the conduct of inquiry as an evergoing concern."

Like C.W. Mills, Dewey was opposed to the separation of questions of "method" or "theory" from the problems at hand. Once any issues of logic derived from a contrast of common sense and scientific knowledge are "... placed and treated in the context of different types of problems demanding different methods of treatment and different types of subject matter, the problem involved assumes a very different shape from that which it has when it is taken to concern the ontological 'reality'." Dewey even argued that the polarization of rationalist and empiricist philosophies was rooted in the abstracting of questions of theory from the context of inquiry. "The failure of the controversy to arrive at solution through agreement is an important ground of the idea that it is worthwhile to take these constituents of controversy out of an ontological context, and note how they look when they are..."
placed within the context of the use they perform and the service they render in the context of inquiry."36

The scientific dichotomy between objective and subjective not only leads to ontological distinctions between the knower and the known, but between the rational and the empirical. The scientific ideology is so ingrained in our educational system that the notion that a person "reasons" about objects and other persons he or she "experiences" has become almost an axiom. Because the conflict between "reason" and "experience" has been given an ontological connotation, the distinction impedes rather than facilitates inquiry into human experience and behaviour. Both sides of the conflict are, in effect, anti-scientific. Dewey even argued that

"The two doctrines, that there is an immediate knowledge of existential objects or of qualities as sense-data, and that there is an immediate knowledge of rational principles - necessarily go together. Atomistic empiricism and rational a priorism are correlative doctrines."37

Both doctrines reduce the characteristics of inquiry to something postulated outside inquiry. One reduces inquiry, and, in effect, human existence, to the reasoning of the knower or subject. The other reduces it to the knower's experience of the known or object. Both ignore the praxis of inquiry and the fact that knowledge always involves what Sartre called mediations and totalizations. The matter of mediations and totalizations leads us to a discussion of the second dichotomy of scientism.

2 - Theory and Practice

Because they reify linguistic forms, that is, do not situate language
in praxis, formal approaches to logic treat theory as a realm unto itself. Dewey not only rejected this separation of theory from practice, he provided an historical explanation of how this scientistic dichotomy developed. For example, discussing the differential status between Greek citizens, on the one hand, and Greek artisans and traders, on the other hand, he stated that "The definitely socio-practical division between workers and non-citizens who were servile, and the members of the leisure class who were free citizens, was converted by philosophical formulation into a division between practice and theory, experience and reason."38

This statement shows how Dewey's pragmatic approach to logic and Marx and Engels' handling of the problem of ideology converge. Marx and Engels believed that ideology, as false and elitist ideas, was rooted in the division between physical and mental labour and the consequent treatment of language and consciousness as being abstracted from practice. Dewey explained the fallacies of formal logic in a similar way, though he did not deal explicitly with the problem of ideology. His own analysis of the division of labour in early western culture, where "... the social status of the persons engaged in carrying on the activities in question was so enormously different ..."39 that some techniques were considered "lower" and some "higher", led him to a similar understanding of the dualism between theory and practice. He argued that the different status associated with different techniques "... when ... reflectively formulated, became the dualism of the empirical and rational, of theory and practice, and, in our own day, of common sense and science."40
Problems of logic and the problem of ideology converge once a historical analysis of the uses of language and knowledge is undertaken. But a particular approach to logic and knowledge is itself required for such a study to be possible. The shift from a formal, idealized orientation to logic to an orientation which facilitates historical inquiry into the uses of language, can be considered a change in paradigms. It only appears tautological to say that a new perspective is required to understand the shortcomings of an older one. The pragmatic value of the new perspective and implied criticism of the older one is the vital matter.

Dewey proposed such a change in perspective, that is, a shift away from approaches to logic and related subject matter that is rooted in the scientistic dichotomy between theory and practice, science and common sense. He emphasized the need to always situate our inquiry within particular settings. As he wrote:

"... we never experience nor form judgments about objects and events in isolation, but only in connection with a contextual whole. The latter is what is called a 'situation'."41

This approach, similar to that of Sartre with his emphasis on mediations and totalizations, avoids the pitfalls of both factuality and rationalism.

"It is more or less a commonplace that it is possible to carry on observations that amass facts tirelessly and yet the observed 'facts' lead nowhere. On the other hand, it is possible to have the work of observation so controlled by a conceptual framework fixed in advance that the very things which are genuinely decisive in the problem in hand and its solution, are completely overlooked. Everything is forced into the predetermined conceptual and theoretical scheme. The way, and the only way, to escape these two evils, is sensitivity to the quality of a situation as a whole."42
When the "situation" is ignored, science becomes scientism and the affects of common sense on inquiry are ignored. This leads to the myths about laws, causes and determinism which we exposed, with the aid of Toulmin, in Chapter Sixteen. The pseudo-problems of traditional epistemology result from this ignorance. "The separation and opposition of scientific subject matter to that of common sense, when it is taken to be final, generates those controversial problems of epistemology and metaphysics that still dog the course of philosophy."1143 The practice of science and debates over the character of science become treated in a metaphysical manner because knowledge is not situated, that is, treated as a form of praxis. Yet the effects of the "situation" on the total process of inquiry are pervasive.

"... the unsettled, indecisive character of the situation with which inquiry is compelled to deal affects all of the subject matters that enter into all inquiry. It affects, on the one hand, the observed existing facts that are taken to locate and delimit the problem; on the other hand, it affects all of the suggestions, surmises, ideas that are entertained as possible solutions of the problem."44

What we call "common sense" affects all situations of inquiry. What I said about language having a general, heuristic function in all science, a function that invalidates Weber's manufactured distinction between the normative and the empirical, can also be said of what Dewey called the "situation".

"It is a commonplace that every cultural group possesses a set of meanings which are so deeply embedded in its customs, occupations, traditions, and ways of interpreting its physical environment and group-life, that they form the basic categories of the language-system by which details are interpreted. Hence they are regulative and 'normative' of specific beliefs and judgments."45

Sometimes common sense refers to the meanings accepted by a cultural group.
The scientist, in his or her inquiry, is always affected by these meanings. Sometimes it refers to the significance of things - where it has an active connotation of the sort Sartre associated with praxis. "In any case, the difference between the two meanings may be reduced, without doing violence to the facts, to the difference between phases and aspects of special practical situations that are looked into, questioned and examined with reference to what may or should be done at a particular time and place and the rules and precepts that are taken for granted in reaching all conclusions and in all socially correct behavior."46

Dewey's emphasis on situating our inquiry brings into question the scientistic dichotomy between theory and practice, science and common sense. "Doing and knowing are both involved in common sense and science - involved so intricately as to be necessary conditions of their existence ... the difference between common sense and science (does not) consist in the fact that knowing is the important consideration in science but not in common sense."47 The pragmatic approach to logic treats both common sense and science as "transactions". Whether a human is engaged in inquiry, as a scientist, or is dealing with the practical affairs of life, he or she is in a constant transaction with the world of things and other humans.48 The person is not interacting in the sense that "interaction" implies a split between subject and object.

This transactional approach negates two dominant ways of viewing common sense and science. "One of these ways treats them as names for mental faculties or processes, while the other regards them as 'realistic' in the epistemological
sense in which that word is employed to designate subjects alleged to be knowable entirely apart from human participation.⁴⁹ In rejecting formal logic, Dewey was also rejecting these ways of looking at common sense and science. For him both are in a dialectical relationship throughout inquiry. For Dewey "... 'common sense' is a usable and useful name for a body of facts that are so basic that without systematic attention to them 'science' cannot exist, while philosophy is idly speculative apart from them because it is then deprived of footing to stand on and a field of significant application."⁵⁰

Theory and practice both involve praxis or purposive behaviour. One has to be thoroughly schizophrenic to envision theory without a human transaction. This is why Dewey rejected scientistic approaches to logic. For him the difference between science and common sense "... resides in their respective subject matters, not in their basic logical forms and relations." He continued that "... the difference in subject matters is due to the difference in the problems respectively involved; and, finally, that this difference sets up a difference in the ends or objective consequences they are concerned to achieve."⁵¹ This is not to say that science, as a particular form of praxis, with particular values, cannot become abstracted from common sense. "The fact that what science is of is about what common sense subject matter is of, is disguised from ready recognition when science becomes so highly developed that the immediate subject of inquiry consists of what has previously been found out."⁵² To understand such an abstraction of science from common sense, however, is a sociological and historical matter, not something gleaned from abstract epistemology or formal logic.
What I have called the social arrangement of science underlies this question.

The problem of ideology is the problem of logic because unless the social scientist has a perspective on how the social arrangement of science affects the character, ends and consequences of science, these latter things become mystified into matters of abstract epistemology and formal logic. Logic then becomes abstracted and is unable to fulfill its task of assessing arguments. Logic must be rooted in subject matters and not treated as an abstract discipline if it is to have any significant application.

Dewey argued this same point.

"In the most important matters the effect of science upon the content and procedures of common sense has been disintegrative. This disintegrative influence is a social, not logical, fact. But it is the chief reason why it seems so easy, so 'natural', to make a sharp division between common sense inquiry and its logic and scientific inquiry and its logic."\(^53\)

The study of the sociology of knowledge, if not used in a reductionistic way, is necessary if we are to develop approaches to logic that account for ideology. Because Weber and Popper were unaware of the relevance of the sociology of knowledge for matters of logic they remained ignorant of the problem of ideology as an intellectual problem. A study of how and why the social arrangement of science has "disintegrative" effects on common sense at present would be quite necessary to realize the shift from a formal to a pragmatic perspective on logic. In addition, it would aid in the development of subject matter that complemented a pragmatic orientation to knowledge.

Dewey was not interested in abstract definitions. He was interested in the specification\(^54\) of relations in a situation within which humans are in
transaction with others and the world. Inquiry, for him, was not theoretical per se. It always had "... the goal of establishment of an objectively unified existential situation."\(^{55}\) Here the term "objective" was not given an ontological meaning, but rather refers to the impartial\(^{56}\) judgment of whether or not consequences of certain operations fulfill the end-in-view, i.e., constitute a solution to a problem. Objectivity has to do with the commitment to situate inquiry and assess argument in terms of their explicit and implicit backing, not with being of an academic profession or believing in a metaphysical notion of reason or facts. An objective inquiry sees "... inquiry as advancing from the indeterminate situations in full activity throughout, and requires the 'objects' determined by inquiry to be held within its system, future as well as past."\(^{57}\) To clarify what a pragmatic approach to objectivity entails, it is necessary to discuss the scientific dichotomy between fact and value.

3 - Fact and Value

Dewey's emphasis on situating inquiry helps to demystify the scientific dichotomy between common sense and science. To complete our critique of formal logic, the scientific dichotomy between fact and value, empirical and normative must also be evaluated. For example, when we focus on the "situation", that is, situate our language and knowledge in ongoing praxis, we no longer can separate ideas about values from those about facts. Only if we treat language as a third realm of fact can we arbitrarily separate ideas about values from those about facts and attribute an independent, ontological status to each. Since language and ideas do not constitute a third realm of fact, this division
is not tenable.

Dewey consistently criticized the belief in factuality that complements the scientific dichotomy between value and fact. He rejected the common assumption that "The facts are out there and only need to be observed, assembled and arranged to give rise to suitable and grounded generalizations." Ignorance of the problem of ideology and of the relevance of language for problems in logic underlies the scientific mystification of facts. It therefore breeds an ignorance about the character of scientific understanding. Treating facts in abstraction from their context makes it impossible to realize that "understanding" refers to the significance of situational relationships. Dewey pointed out that "In science, since meanings are determined on the ground of their relations as meanings to one another, relations become the objects of inquiry ...

..." Being ignorant of this, the ideologists of scientism, Durkheim being a main example, treat "facts" as "things" or "essences". Dewey clarified this matter as follows:

"Understanding or interpretation is a matter of the ordering of those materials that are ascertained to be facts; that is, determination of their relations. In any given subject matter there exist many relations of many kinds. That particular set of relations which is relevant to the problem in hand has to be determined. Relevant theoretical conceptions come into play only as the problem in hand is clear and definite; that is, theory alone cannot decide what set of relations is to be instituted, or how a given body of facts is to be understood."61

The dichotomy between facts and values is what is used to rationalize the abstract empiricism of scientism. Observations can be accumulated, but no understanding is possible until they obtain some significance. And this significance is itself rooted in values - not seeing values in an abstract, onto-
logical or metaphysical way - but as goals in terms of which we evaluate con-
sequences. Dewey stated this same point.

"It follows that in social inquiry 'facts' may be carefully ascertained
and assembled without being understood. They are capable of being or-
dered or related in the way that constitutes understanding of them
only when their bearing is seen, and 'bearing' is a matter of connec-
tion with consequences."\textsuperscript{62}

Dewey argued that factuality presented a more serious problem for the
social sciences than for the natural sciences.

"The result of taking facts as finished and over with is more serious
in inquiry into social phenomena than it is with respect to physical
objects. For the former are inherently historical."\textsuperscript{63}

The context or situation within which an object or event that is being observed
gains its meaning is always historically contingent. When social structures
change, the situations within which people act also change. Behaviour and ex-
perience changes and therefore "facts" or significant relationships within
situations also change. Dewey, like Marcuse, opposed all analysis which reified
facts into an ahistorical, ontological realm.

Dewey rejected the dichotomy between facts and values because he re-
jected the formal approach to logic which complemented and rationalized it.
Facts and values can be separated only if linguistic forms are reified and
facts are mystified. Only then can we treat facts as being distinct from ideas.
This mystification of facts, as we showed throughout our study, is rooted in a
false understanding of the philosophy of physical science. As Dewey stated:
"... if there is one lesson more than any other taught by the methods of the
physical sciences it is the strict correlativity of facts and ideas."\textsuperscript{64}

Ideas in all the sciences, whether social, natural or physical, have a function and
no facts can be developed without recourse to them. "A generalization in the form of a hypothesis is a prerequisite condition of selection and ordering of materials as facts." 65

For Dewey, "ideas are anticipated consequences." 66 Since both values and facts play a role in anticipating the consequences of inquiry, they cannot be arbitrarily split. Values affect the end-in-view of inquiry. They have a function in the ongoing praxis of inquiry. The relations which are determined to be significant in the context of a certain problematic situation, i.e., "facts", also function to direct inquiry. The distinction between "facts" and "values" can therefore only be made in a pragmatic way, if at all, and never in the total way that the value-free dogmas impose on science.

Because of the pervasiveness of the ideology and logic of scientism in academia and in the culture at large, for example, the fact that the dichotomies of scientism are embedded in and reinforced by our very language and praxis, it is difficult to conceptualize an alternative perspective on the question of values and facts. Though critical of formal reified logic, Dewey himself unknowingly tended to think of ideas in terms of the scientistic dichotomies.

For example, in 1938 he wrote:

"Observed facts in their office of locating and describing the problem are existential; ideational subject matter is non-existential. How, then, do they cooperate with each other in the resolution of an existential situation? The problem is insoluble save as it is recognized that both observed facts and entertained ideas are operational. Ideas are operational in that they instigate and direct further operations of observation; they are proposals and plans for acting upon existing conditions to bring new facts to light and to organize all the selected facts into a coherent whole." 67

Though Dewey stressed the functional character of both ideas and facts, he split
the two in terms of their existential or non-existential character. This
treatment of "ideas" as being non-existential can easily lead to the treat-
ment of ideas and language as a third realm of fact, and, ultimately, to the
ontological separation of value from fact.

But later, in 1948, Dewey saw his error.

"One of the authors of this volume (J.D.) wishes to make specific cor-
rection of certain statements in his Logic, the Theory of Inquiry about
observations. As far as those statements limit the word to cases of what
are called 'sense-perception' - or, in less dubious language, to cases
of observation under conditions approaching those of laboratory control
- they should be altered. For the distinction made in that text between
'observation' and 'ideation' he would now substitute a distinction be-
tween two phases of observation, depending on comparative temporal-
spatial range or scope of subject matter."68

This dialectical understanding of observation and of the role of values and
facts within ongoing inquiry is essential if we are to avoid both abstract
empiricism and grand theory. And such an approach shows that utopia, seen as
"proposals for acting upon existing conditions to bring new facts", for example,
new social and human relationships "to light", is not at all contrary to scien-
tific inquiry. Dewey, like Marcuse in this regard, recognized that since in-
quiry is human in essence it can be used for either alienating or liberating
purposes.

If we think of ideas as external things, we will never be able to de-
velop approaches to logic which account for the problem of ideology. Dewey
did stress the point that "ideas" are "escapes" from ongoing behaviour; and
human consciousness, especially when reflective and/or expanding,69 certainly
tends to go beyond the immediate situation of the person. It does not follow
from this, however, that ideas are external things. To treat them as such is
the ultimate of projections. Rather than projecting "ideas" and language into
a third realm of facts, Dewey emphasized the functional character of an idea when one is involved in inquiry.

"In short, unless it is clearly recognized that in every case of obstructed ongoing behavior 'ideas' are temporary deviations and escapes, what I have called their functional and operational standing will not be understood. Every idea is an escape, but escapes are saved from being evasions so far as they are put to use in evoking and directing observations of further factual material."70

Dewey believed that the ontological controversy between rationalism and empiricism was self-reinforcing because of its false understanding of ideas. A failure to recognize the functional character of ideas when one is engaged in inquiry leads to a distorted view of both facts and concepts. Both sides of the controversy between factuality and theory treat logic in a formal way. Dewey wrote of "... the logical mistake of those methods that treat conceptual subject matter as if it consisted of first and ultimate self-validating truths, principles, norms". He continued: "As so often happens with contrary one-sided views, the defects of the factual, so called 'positivistic' school and of the conceptual school, provide arguments by which each evokes and supports the view of the other."71

If we separate fact and value, in theory, and do not see both as aspects involved in the praxis of inquiry, then both become treated as though they are external to humans. The view that facts are "out there to be discovered" and the view that values are "self-validating truths" are complementary. The function and effects of both facts and values are left unscrutinized within this frame of reference. For example, from the stance of the scientific ideology, values are treated as independent of inquiry. As Dewey pointed out "...
"... the formalistic position is very likely to provoke a reaction that contributes to strengthening the theory of fixed a priori schemes of value, known by direct rational intuition." Such a mystification makes it impossible to situate values as ideas about goals - what we value, what we would like to see more of in the ongoing praxis that constitutes inquiry. Furthermore, when values are treated abstractly, for example, as rational intuition, the range of ends, relative to the actual and potential means available, which are accepted in both common sense and science, will remain unnecessarily narrow. For example, if we treat "values" as abstractions, engage in so-called value-free research, and, upon completion, return to value-questions, the ideas we have about values will have remained unquestioned and will tend to remain traditional. The goals stemming from these ideas about values will be restricted to those already accepted by the established, dominant society. The range of ends in terms of which social inquiry could be undertaken will consequently remain narrow and unimaginative.

Dewey believed that this approach to values was pre-scientific. He compared the implied social determinism of a scientism which reifies values and goals to those of the established order to the prenatural scientific attitude towards "nature". For Dewey,

"... physical science has, in practical fact, liberated and vastly extended the range of ends open to common sense and has enormously increased the range and power of the means available for attaining them. In ancient thought, ends were fixed by nature; departure from those ends that were antecedently set and fixed by the very nature of things, was impossible; the attempt to institute ends of human devising was taken to be the sure road to confusion and chaos. In the moral field, this conception still exists and is even probably dominant."
The scientistic myth about determinism, which we criticized in Chapter Sixteen, in effect, helps rationalize the values of the established society.

Dewey believed that "... the past history of social thought has been dominated by the conceptual approach."  

Whether it was a belief in "ontological and cosmological fixed ends", which is what Dewey believed was widespread in his time, "... the conceptions were not framed with reference to the needs and tension existing at a particular time and place or as methods of resolving ills then and there existing, but as universal principles applicable anywhere and everywhere." This so-called conceptual approach, which treats values as formalisms without any existential significance, complements the value-free dogma. Scientism is not only founded on a rhetorical dichotomy between science and ideology, it is also founded on one between "science" and "morality". This is the main reason why the liberal values of the end-of-ideologists are abstracted from social realities. Because of a belief in the dichotomy between science and common sense, scientism does not account for the affect of established values on the ends of inquiry. Yet, "Common sense ideas, beliefs and judgments in every culture are controlled by teleological conceptions, by ends; in modern language, by considerations of value." 

Dewey's pragmatic approach to logic emphasized the means and ends of inquiry rather than treating science as a factual, value-free endeavour. Both values, or goals that affect inquiry, and facts, or significant situational relationships, were seen in the context of ongoing inquiry. From this stance, some methods or means are better than others for achieving a particular end.

"It does not follow in any of these cases that the 'better' methods are ideally perfect, or that they are regulative or 'normative'
because of conformity to some absolute form. They are the methods which
experience up to the present shows to be the best methods available for
achieving certain results, while abstraction of these methods does sup-
ply a (relative) norm or standard for further undertakings. "77

Dewey emphasized the same point in another way when he wrote that "Realistic
social thinking is precisely the mode of observation which discriminates ad-
verse and favorable conditions in an existing situation, 'adverse' and 'fa-
vorable' being understood in connection with the end proposed."78

Both values and facts are relevant to the means and ends of social
scientific inquiry. Though Dewey did not analyze and criticize the ideology
of scientism directly, his pragmatic orientation led him to reject any tend-
cy to exclude the matter of ends from ongoing inquiry. The preconception
that evaluations should be excluded from inquiry excludes "... ends (conse-
quences) from the field of inquiry and reduces inquiry at its very best to
the truncated and distorted business of finding out means for realizing ob-
jectives already settled upon."79 He continued: "From the logical stand-
point, it rests upon the postulate that some end is already so fixedly given
that it is outside the scope of inquiry, so that the only problem for inquiry
is to ascertain and manipulate the materials by which the end may be attain-
ed.80 Whether we take Weber and his sophisticated separation of the normative
and empirical, as an example, or Durkheim's crude reduction of the normative to
the average, as determined by the nomothetic, we see this exclusion of ends from
inquiry. Because they reified linguistic forms and failed to situate inquiry in
praxis, the ideologists of scientism prove to be anti-scientific at best; schiz-
ophrenic at worst.
To be able to alter our categories of thought and see logical distinctions in a pragmatic, non-ontological way, it is necessary to transform our understanding of the role of rules, propositions, etc. in inquiry. Once we do this, we can engage in social inquiry without regressing to the scientific dichotomy between value and fact so as to rationalize the inadequate nature of our studies. In this regard, Dewey emphasized that "a proposition must be defined by its function," that is, as "an instrumental use of language." The failure to do this leads to the false notion of "immediate knowledge" which we have argued that both rationalism and empiricism accept. "As soon as it is forgotten that they are means and that their value is determined by their efficacy as operative means, they appear to be objects of immediate knowledge instead of being means of attaining knowledge." The failure to see propositions as instrumental uses of language also leads to a denial of existence or immediate experience. As we saw with Popper, when the distinctions within knowledge are given an ontological status, human consciousness of existential situations comes to be thought of as being impossible and mystical.

The reification of method, "rules", propositions, etc., and the false notions of logic that go with this process, complement the exclusion of values from inquiry. Again emphasizing the functional or pragmatic character of logical propositions, Dewey wrote that "The fact that they have fulfilled the demands imposed upon them in previous inquiries is not logical proof that, in the form in which they have emerged, they are organs and instrumentalities
which will satisfy the demands of a new problematic situation.\textsuperscript{84} Separating method or theory from a "problematic situation" is what allows formal logicians and other ideologists of scientism to treat "facts" and "values" as abstractions. Such a reification leads to "the conversion of a function in inquiry into an independent structure."\textsuperscript{85} The formal logicians that try to discern the nature of these so-called "independent structures" forget that methods, rules, propositions, etc. only have meaning, value and consequence within a problematic situation. The result of this reification is not theoretical dialogue and clarification but "meaningless jumble" or what I earlier called "word games". If we are to develop an ideology and logic that facilitates a relevant and scientific approach to social inquiry, we can never forget that

"Discourse that is not controlled by reference to a situation is not discourse, but a meaningless jumble, just as a mass of pied type is not a font much less than a sentence. A universe of experience is the precondition of a universe of discourse."\textsuperscript{86}

It is because Sartre's notion of praxis and his existential project stressed the need for knowledge to be related to the particular situation of a person and his or her historical totalizations and significations that he was so fundamental to this study.

Dewey's pragmatic approach to logic was not opposed to the use but only the misuse and over-use of rules and propositions in inquiry. To clarify the functional character of method, so as to bring both value and fact into the praxis of inquiry, he suggested that logicians clearly distinguish the existential qualities of a situation from the functional role of all method.
"For practical purposes no harm results in identifying the function with the quality as an existence, just as no harm results from identifying an object as a spade because the operative use and the consequence of the use of the object are integrated with its existence. But failure for the purposes of theory to distinguish existence and function has been the source of continued doctrinal confusion."87

If the existential qualities of a situation and the functional role of method are not distinguished, in theory, the possibility of ignoring the reality of the existential qualities and/or the reduction of them to methodological categories from past inquiry, which have become treated as a priori, is greatly increased. In either case, the "function is transformed into an independent structure" and the reification of human events is well underway. The pseudo-problems of scientistic epistemologies, not the real logical problems of ongoing inquiry, then become the priority. A false understanding of theory and a related ignorance of the fact that language is itself a form of behaviour underlie this mystification of knowledge.

In Chapter Seventeen, we saw an example of this reification. Failing to distinguish between the existential qualities of a problematic situation and the functional role of method, Kaufmann abstracted "meaning" into a formal problem. It was not his concern with rules or propositions that underlay this error, but his failure to situate method in ongoing inquiry. This related to his ignorance about the relation of language to logic. For example, Kaufmann saw "meaning" as a matter for deductive logic. He was concerned with the relationships between propositional meanings. This concern rested on an uncritical use of language.

Dewey clarified this problem as follows:
"... judgment, like inquiry, is temporal. It is temporal not in the external sense that the act of judging takes time, but in the sense that its subject matter undergoes reconstitution in attaining the final state of determinate resolution and unification which is the objective that governs judgment.

It is necessarily involved in what has been said that the linguistic form which expresses, or is the symbol of, judgment is a true verb; that is, one expressing action and change.

When 'is' appears in judgment it has temporal force, distinct from was or will be, and distinct from the 'is' of a proposition where 'is' designates a non-temporal or strictly logical relation between meanings. When it is stated that 'the boy is running' the reference to change, time and place lies on the surface. When one says 'this is red' the temporal reference is linguistically disguised. But the statement certainly does not mean that this is inherently red or is always red. Color quality changes to some extent with every change in light. It is red now, but only under a specifiable set of conditions, and a completely grounded judgment demands that the conditions be stated."

Kaufmann, typical of formal logicians in this regard, reified language and thus reified fact, theory, meaning, science, and, in effect, human beings. This does not mean that the ideology of scientism rests on a semantic problem. Semantics usually accept the reified uses of language and then attempt to manipulate the meanings of words without reference to their basis in and consequence on human praxis. But it does point out how indispensable a radical ("going to the roots") study and use of linguistics is for clarifying logical problems.

4 - Ideology and Inquiry

This study has shown that the widespread and rhetorical separation of "science" from "ideology" is rooted in an ignorance of the problem of ideology, a false understanding of the philosophy of the physical sciences, and upon a reified formal use of language and logic. This rhetorical separation of "science" and "ideology" and the ignorance that results from it itself serves a
social and political function. A fragmented and over-specialized "science" reflects a fragmented and over-specialized society. The awareness of the social and political consequences of science is retarded within such a social arrangement; and, in turn, such ignorance is itself functional in maintaining the fragmented and over-specialized social system that complements it. As science and technology play a more dominant role in society, and the language and categories of scientism spread into common sense uses, formal logic, in particular, functions to obscure and mystify the character and consequences of the social arrangement of scientism. It is in this sense that we can consider formal logicians the most sophisticated of the ideologists of scientism. Though the end-of-ideology mood has faded, formal logic continues to rationalize scientism in a more abstract and perhaps more viable manner.

Where lies the alternative? Our rejection of reified linguistics means that we cannot solve the dilemma of social science in theory. The dilemma that the ideology of scientism presents for social inquiry can be clarified in theoretical language, as this study shows, but the solution lies in a new form of praxis out of which new forms and content of inquiry can develop.

In Chapter Twenty-One, I shall briefly outline the implications of this study for the university. Before doing this, it is important to present a general picture of the form, though not necessarily of the problems and content, of an approach to social science that does not arbitrarily disassociate inquiry from ideology. Dewey, like Sartre, was thoroughly pragmatic in his vision of science and he therefore provides us with such a perspective. For him "Scientific knowing is that particular form of practical human activity which is con-
cerned with the advancement of knowing apart from concern with other practical affairs."91 In this view, knowing is not the monopoly of science - an elitist attitude widespread among academics. All human activity involves knowledge. It is the form of knowing which distinguishes science from other types of knowledge. Scientific inquiry is not to be described, nor are logical issues that arise from scientific inquiry to be approached, in an ontological way. Such issues are to be "... placed and treated in the context of different types of problems demanding different methods of treatment and different types of subject matter ..."92

For Dewey the method and outcome of scientific inquiry

"... becomes warranted assertion. 'Proof', which the older logics endeavored to establish under validities of its own for the control of knowledge, is here to be developed within, and as a phase of, inquiry; all certainly becomes subject to inquiry including the certainties of these very canons of logic which older logics have treated as the powerful possessors of certainty in their own right."93

A "warranted assertion" is an adequate judgment about the significance of consequences of particular relationships in a problematic situation. In Mead's terms a warranted assertion comes when we know what is the import of symbols which have both common meaning and common reference in the ongoing world. To understand how such a judgment develops at a stage in inquiry, it is necessary to understand the functional role of abstractions in inquiry. Misunderstanding about this aspect of inquiry underlies the major mystifications of scientism. Since ideas are "anticipations" - as both means and ends of inquiry - function as conceptual tools in inquiry, abstractions beyond one's immediate experience or one's "existential reference", as Dewey called it, are fundamental to successful
inquiry. As Dewey said: "Abstraction from assured and certain existential reference belongs to every suggestion of a possible solution; otherwise inquiry comes to an end and positive assertion takes its place." Positive assertion and warranted assertion are not the same thing. A special form of abstraction is required for scientific inquiry. "A flight away from what there and then exists does not of itself accomplish anything." Dewey argued that "The peculiarity of scientific abstraction lies in the degree of its freedom from particular existential adhesions."

The function of abstraction in inquiry must be distinguished from the notion of abstract "reason" associated with rationalism and deductive logic. Scientific abstraction always has reference to a problematic situation. If disassociated from this it easily regresses to a reductionistic philosophical idealism or materialism. In Dewey's words:

"The generality of all scientific subject matter as such means that it is freed from restriction to conditions which present themselves at particular times and places. Their reference is to any set of time and place conditions - a statement which is not to be confused with the doctrine that they have no reference to actual existential occasions." Scientific abstraction is based on what Dewey called "directing conceptions" or "ruling ideas". He carefully avoided the scientific jargon about "laws", "causes", etc. Ruling ideas help anticipate the alternative consequences of doing alternative operations, and, as such, allow a "judgment of evaluation". Of this process Dewey wrote:

"Inquiry into social phenomena involves judgments of evaluation, for they can be understood only in terms of eventuations to which they are capable of moving. Hence, there are many possible interpretations
in the abstract as there are possible kinds of consequences. This statement does not entail carrying over into social phenomena a teleology that has been outmoded in the case of physical phenomena. It does not imply that there is some purpose ruling social events or that they are moving to a pre-determined goal. The meaning is that any problematic situation, when it is analyzed, presents, in connection with the idea of operations to be performed, alternative possible ends in the sense of terminating consequences. Even in physical inquiry, what the inquirer observes and the conceptions he entertains are controlled by an objective purpose—that of attaining a resolved situation. The difference between physical and social inquiry does not reside in the presence or absence of an end-in-view, formulated in terms of possible consequences. It consists in the respective subject matters of the purposes. This difference makes a great practical difference in the conduct of inquiry . . . .

It is vital to understand the function of these directing concepts. Dewey outlined "the three indispensable logical conditions of conceptual subject matter in scientific method":

"... (1) the status of theoretical conceptions as hypothesis which (2) have a directive function in control of observation and ultimate practical transformation of antecedent phenomena, and which (3) are tested and continually revised on the ground of the consequences they produce in existential application."

If they are not understood pragmatically, these "directive conceptions" become treated as a priories with a status outside ongoing inquiry. The long-term use of concepts makes this a continual problem.

"Directing conceptions tend to be taken for granted after they have once come into general currency. In consequence they either remain implicit or unstated, or else are propositionally formulated in a way which is static instead of functional. Failure to examine the conceptual structures and frames of reference which are unconsciously implicated in even the seemingly most innocent factual inquiries is the greatest single defect that can be found in any field of inquiry."

The social sciences are more retarded than the natural sciences in this regard. Directing conceptions tend to attain a fixed, ontological meaning in social inquiry. "One of the simplest ways of grasping the logical difference
between social inquiry that rests upon fixed conceptual principles and physical inquiry is to note that in the latter the theoretical controversies which exist concern the efficacy of different conceptions of procedure, while in the former they are about questions of an alleged intrinsic truth or falsity.\textsuperscript{102} Both Kuhn and Toulmin criticized the scientistic notion of truth, but they failed to discuss the ideological significance of the replacement of this notion with a pragmatic approach to the question of validity. Dewey did this when he pointed out the relationship between the failure to understand the function of scientific abstraction and the maintenance of a narrow, established range of ends within contemporary social science. He believed that distinctively moral matters "... will continue to be matter of customs and of conflict of customs until inquiry has found a method of abstraction which, because of its degree of remoteness from established customs, will bring them into a light in which their nature will be indefinitely more clearly seen than is now the case."\textsuperscript{103} This would not mean that social science would become neutral towards practical matters. Rather it would have a flexibility in the range of abstractions that are utilized to determine the significance of relations within a problematic situation. "Failure to encourage fertility and flexibility in formation of hypotheses as frames of reference is closer to a death warrant of science than any other thing."\textsuperscript{104}

Dewey made some statements about scientific abstraction which could be misinterpreted in a scientistic way. For example, he wrote that "The actual course of scientific inquiry has shown that the best interests of human living in general, as well as those of scientific inquiry in particular, are best served
by keeping such inquiry 'pure', that is free from interests that would bend the conduct of inquiry to serve concerns alien (and practically sure to be hostile) to the conduct of knowing as its own end and proper termims."\textsuperscript{105}

One might associate Dewey and Weber on the basis of this statement, but such would negate Dewey's pragmatic understanding of logic. Dewey did not believe that inquiry could be free of ideology, but he did not conclude from this, as Mannheim tended to, that all knowledge is relative or irrelevant. Nor did he ignore the point that certain situations facilitate and others retard flexible inquiry. Like Bronowski, his awareness that a certain context is required for the "habit of truth" to develop made him realize the importance of distinguishing between technique and rhetoric, on the one hand, and open thorough inquiry, on the other.

The aim of science, then, is not the creation of abstractions, but the alteration of conditions according to what Dewey called an end-in-view. Though inference is necessary as a stage in inquiry, inquiry does not end with inference.\textsuperscript{106} This point is vital if we are to grasp the radical difference between the ideology of scientism and a pragmatic orientation to social science. According to the latter view, the outcome of a scientific judgment "... is not a 'conception' nor even a 'pronouncement', but the \textbf{full activity} (my emphasis) that rounds out inquiry."\textsuperscript{107} It is "... when the consequences of (experimental observation) combine with facts already obtained so as to constitute a unified total situation (that) inquiry comes to an end."\textsuperscript{108} This conclusion of inquiry can never be taken in an ontological way since the "facts already ascertained" are themselves a reflection of a model, paradigm and ultimately an ideology.
which may be being replaced by another orientation as anomalies develop within it. Judgment, related to a thorough understanding of the problems, methods and theories that are relevant to the problem at hand, remains fundamental to inquiry.

Dewey's notion of a "total unified situation" has a close similarity to Sartre's notion of "praxis". A comparison of the two theorists will serve to emphasize my point about the character and function of scientific abstractions. As we saw in Chapter Eleven, Sartre believed that "the point is to subordinate nothing a priori". His critique of vulgar marxism and its reductionism to a priori led him to the same view of ideas, as being pragmatic, that Dewey's critique of formal logic led him to. For Sartre "ideas" were never true or false, but were "regulative", that is, "principles ... as jobs to be done". Knowledge is not interested in definition per se but is itself a "project" to help understand human praxis and the way historical totalizations and significations function, as universals, within a particular form of praxis. And knowledge, as a project, has a practical import. As Sartre said: "To understand is to change and to go beyond oneself."

Dewey used the term "existential" in a different way than did Sartre, but this does not reduce the similarity of his idea of inquiry changing a situation and Sartre's similar understanding of human praxis. Dewey conceptualized his approach to logic more in the language of experimentalism. "What scientific inquirers do, as distinct from what they say, is to execute certain operations of experimentation - which are operations of doing and making - that modify..."
antecedently given existential conditions so that the transformations are facts which are relevant and weighty in solution of a given problem. In contrast, Sartre conceptualized in the language of existentialism as a philosophy opposed to scientism both in its vulgar marxist and positivistic form. He defined "praxis" as "a passage from objective to objective through internalization". In place of what Dewey called scientific abstractions, or directing concepts, Sartre referred to the "totalizations" of the person, for example, a scientist, which attempt to understand the significations (values, ends) that affect behaviour and experience in a particular social and historical setting. The outcome of praxis, the purposeful surpassing of the past, is not a significantly different idea from Dewey's notion of a "modification of antecedently given existential conditions".

A similar notion of freedom underlay both theorists and their approach to knowledge. Sartre saw his existential project as an attempt to alter the class of problems with which marxism dealt. Dewey saw all inquiry as an attempt to affect the "movement", i.e., the consequences of a situation by utilizing human judgment. As he said: "The purpose of the operations of observations which differentiate conditions into obstructive facts and positive resources is precisely to indicate the intervening activities which will give the movement (and hence its consequences) a different form from what it would take if it were left to itself; that is, movement toward a proposed unified existential situation." Both abandoned the scientistic myth about determinism. Rather than concluding that humans can have no real control, that is,
freedom to change conditions according to chosen ends, and are therefore trapped in a relativism of myths, both developed a thoroughly pragmatic approach to knowledge. Once we see knowledge as a goal within inquiry or as a project to change human praxis, we have to abandon reductionistic and deterministic theories of knowledge. Once we reject the ideology and logic of scientism, in all its ramifications and varieties, we can recognize that judgment and freedom, not relativism, replace the metaphysical notions of laws, causes, fact, theory, etc.

Once we abandon the scientistic dichotomies between the objective and subjective, theory and practice, value and fact, we can begin to understand why social scientific inquiry cannot be free of ideology. But neither is inquiry necessarily reducible to the dominant ideological relations in the society. Because the scientistic ideology ignores the problem of ideology and reifies logical problems it is unable to understand that inquiry is a human project. Because of this, contemporary social science tends to be reduced to the ideology of the established order. The crucial role that judgment and evaluation play in inquiry is not acknowledged and social science becomes glorified custom.

The very foundation of inquiry in what Dewey called an "indeterminate problematic situation" is related to ideology. The pragmatic approach to logic recognizes that "social conflicts and confusions exist ... before problems for inquiry exist". For Dewey the social conditions that affect scientific social inquiry were threefold. They can "... (1) grow out of actual tensions, needs, 'troubles'; (2) have their subject matter determined by the conditions
that are material means of bringing about a unified situation; and (3) (or be) ... related to some hypothesis, which is a plan and policy for existential resolution of the conflicting social situation. All stages of inquiry are then affected by the social arrangement of science, and all problems, methods and theories are therefore ideological.

The scientific abstractions and end-in-view that are means to bringing about a "unified situation" are also related, though not rooted, in the ideological relationships in society. Dewey quoted a statement by Cornford to express the same point: "There is an inalienable and ineradicable framework of conceptions which is not of our own making, but given to us ready-made by society - a whole apparatus of concepts and categories, within which and by which individual thinking, however daring and original, is compelled to move." The normative and regulative categories of language, as an aspect of praxis, is further evidence of this relationship between ideology and inquiry. But inquiry, if it is to be scientific in the pragmatic sense, cannot be dependent on these conceptions and categories. It cannot escape them, but neither should it treat them as a priori outside inquiry. Dewey believed that "The evils in current social judgments of ends and policies arise ... from importations of judgments of value outside of inquiry." The ideology of scientism, with its ontological dichotomies, creates such a priori, and thus metaphysics, at the very foundation of inquiry. With the aid of formal logicians, facts, theories and values get reified into mutually exclusive realms. The evaluation of the role of fact, theory and value, as aspects of inquiry, therefore becomes impossible, and mystified views about scientific description,
exploration, etc. replace consciousness about the centrality of judgment in scientific inquiry.

The social arrangement of contemporary science underlies the ideology of scientism. The compartmentalization of social science is the social foundation of the widespread ignorance of the problem of ideology and the implications of this for issues in logic. Once formal logic is demystified and logic is approached in a pragmatic manner, we can begin to see how incompatible are a fragmented, so-called value-free social science and a social science that nurtures consciousness of the centrality of judgment. Dewey argued that "... a survey from the logical point of view of the historical development of the social disciplines discloses the causes of splitting up social phenomena into a number of relatively closed compartments and the injurious effects of the division." 119

Dewey, like Sartre, was a thorough-going pragmatist. Language, logic - as the theory of inquiry, and the practice of inquiry were all situated in human praxis. His radical departure from formal logic allowed him to develop a perspective on matters of logic that is fundamental to the scientific revolution that is necessary if we are to humanize social inquiry. His attempt to replace ontology with logic provides a perspective on science that can account for the problem of ideology. His clarity about matters of logic does not give us a new abstract and false security to replace the traditional ones rooted in formal logic. Instead, we are confronted with the freedom to make judgments, in accordance with pragmatic principles, as Sartre also recognized. It is in this sense that we can consider both Sartre and Dewey as existentialist logicians.
The implication of their approach is that we are always free to make choices in our inquiry. Our choices must come from and return to existential situations, but that is what choice is all about.

The Politics of Inquiry

Dewey's pragmatic approach to logic has direct implications for politics. Science can never transcend politics, but social scientific inquiry, rooted in consciousness of the role of judgment and choice, can alter the form that politics takes. Dewey related his theory of logic to politics as follows:

"Without systematic formulations of ruling ideas, inquiry is kept in the realm of opinion and action in the realm of conflict. For ultimately the only logical alternative to open and above board propositional formulation of conceptual alternatives (as many as possible) is formation of controlling ideas on the ground of either custom and tradition or some special interest. The result is dichotomization of a social field into conservatives and progressives, 'reactionaries' and 'radicals', etc."^120

If directing ideas for action are not formulated on an "open and above board" basis, then the development of sectarian and academic ideas is inevitable. Whether we criticize vulgar marxism or liberal positivism - each with their rhetorical political function in differing societies - both lack awareness of the role of judgment in science. Sectarian and/or academic rhetoric is required to cloak over their mutual ignorance and the inability of either orientation to deal with the question of human judgment and freedom explicitly.

Though Dewey's approach rejected the logic of scientism, it is unclear whether he rejected all aspects of the ideology that complements it. His argu-
ment that inquiry must be able to consider "as many conceptual alternatives as possible" was not rooted in an inquiry about the range of ends that different institutions (e.g., the university) will tolerate for ongoing, pragmatic inquiry. A theory of pragmatic logic is useless without institutional settings within which pragmatic inquiry can occur. His approach, therefore, needs to be expanded if we are to develop all the implications of our criticism of the ideology and logic of scientism. His emphasis on "unifying an existential situation" needs to be combined with the dialectical awareness of milieux and structures that C.W. Mills stressed. Otherwise, inquiry can itself become abstracted from the institutional-structural realities in society. It is possible that educational institutions on this continent, with their repressive tolerances and surplus rhetoric, could nurture pragmatic ideas about logic and knowledge, and yet none of the realities necessary for pragmatic inquiry exist. The way Dewey's pragmatic philosophy of education was misinterpreted and misused in the American educational system should be warning enough.121

C.W. Mills, who was more aware of the political rhetoric of the end-of-ideologists than of the logical rhetoric of the formalists, emphasized the strategic aspect of inquiry. "Any adequate 'answer' to a problem ... will contain a view of the strategic points of intervention - of the 'levers' by which the structure may be maintained or changed; and an assessment of those who are in a position to intervene but are not doing so."

In the social sciences, the abstract determination of the significance of relations within a situation is not enough to accomplish some end-in-view. The social and
political controls operating in a society, and the "ideological struggle" that relates to any specific inquiry, are themselves relevant to the realization of an end-in-view. A strategic judgment about "those who are in a position to intervene" into situations is indispensable if our orientation is to be consistently pragmatic.

Footnotes

1Rollo Handy: Philosophy's Neglect of the Social Sciences. Philosophy of Science. No. XXV, April, 1958, p. 119.

2My criticisms of these "tactics" for avoiding the problem of ideology were stated in Chapter Three.


4Ibid.

5Ibid.

6John Dewey and Arthur F. Bentley: Knowing and the Known, op. cit., p. 231.

7Ibid., p. 277.

8See Robert S. Lynd: Knowledge for What?, op. cit., especially The Social Sciences As Tools, pp. 114-79. Lynd can be considered the precursor to C.W. Mills as a critique of American social science.

9Knowing and the Known, op. cit., p. 205.

10Logic, op. cit., p. 79.

11Ibid., p. 87.

12Ibid., p. 88.

13Ibid., p. 92.

14Ibid., p. 103.
Pierce argued "... that the purport of any concept is its conceived bearing upon our conduct." (Pragmatism, op. cit., p. 126.) This pragmatic approach and his awareness that language is an aspect of praxis and does not constitute a third realm of facts complemented his rejection of both inductive and deductive approaches to logic. Similar to Toulmin in this regard, he saw the role of philosophy and logic as the assessment and development of argument. As he said: "Its reasoning should not form a chain which is no stronger than its weakest link, but a cable whose fibers may be ever so slender, provided they are sufficiently numerous and intimately connected." (Ibid., p. 81.) Because of this, he used the term "adduction", from adduce - "to bring forward as evidence or example" - to describe his approach to logic.

Though Norman O. Brown, perhaps more than anyone recently, has challenged us to question the "boundaries" through which we have learned to see ourselves and think. For example, he argued that "The body, like the body politic, is a theatre; everything is symbolic." (Love's Body. New York, Vintage (1966), p. 131.) Though he questions the same distinctions that the ideology and logic of scientism reify, he tended to make his criticisms into a new ontology. As Marcuse wrote of Brown: "Unless the analysis takes the road of return from the symbolic to the literal, from the illusion to the reality of the illusion, it remains ideological, replacing one mystification by another." (Love Mystified: A Critique, in Negations: Essays in Critical Theory. Boston, Beacon Press (1968), p. 235.)
47. *Knowing and the Known,* op. cit., p. 281. In this discussion, I am not equating common sense with practice nor science with theory. Rather I am suggesting that the split between theory and practice is absurd, but that the one between science and common sense, both of which have a practice, is problematic for logic and requires clarification.

48. The notion of transaction in Dewey’s writings complements Mead’s concern with the "generalized other", "social field", etc. Both are similar, in this regard, to Martin Buber and his notion of human experience as dialogical ("I-Thou"). See Paul E. Pfuetze: *Self, Society, Existence.* New York, Harper (1961).


52 *Knowing and the Known*, op. cit., p. 281.

53 *Logic*, op. cit., p. 76.

54 To Dewey and Bentley, specification was "the most highly perfected naming behaviour. Best exhibited in modern science. Requires freedom from the defectively realistic application of the form of syllogism commonly known as Aristotelian." (*Knowing and the Known*, op. cit., p. 302.)

55 *Logic*, op. cit., p. 105.

56 The use of this term can create confusion. By "impartial" Dewey did not mean "objective", in terms of objectivism or having technical professional skills of research. Rather he meant that the objective consequences of doing certain things must be the method of evaluating them. The people doing certain things, including professional researchers, may be the least impartial in evaluating resulting consequences.

57 *Knowing and the Known*, op. cit., p. 212. What we consider to be the "objects" of social inquiry will complement our orientations to questions of logic (including "objectivity"). Dewey proposed a thoroughly materialistic approach to this question. "... artifacts on the side of the part taken by environmental conditions and arts as acquired skills on the organic side do all the work that spirits, souls, minds, consciousness and organisms as (ex) citatives have been called upon to do, having, of course, the advantage of being as observable as the trees and fossils that primary inquiries deal with, while being, in addition, the means through which they are subjected to inquiry." (Sidney Ratner and Jules Altman (eds.): *John Dewey and Arthur Bentley: A Philosophical Correspondence 1932-1951*. Rutgers University Press (1969), pp. 625-26.)

58 *Logic*, op. cit., p. 495.

59 Like Toulmin, Dewey rejected the scientific notion of description, but, unlike Toulmin, he stressed understanding or interpretation instead of explanation, and evaluation instead of prediction. Toulmin was more concerned with the role of representation in inference and with laws, while Dewey was more interested in the full activity of inquiry and in the role of postulations within this. For a discussion of science, which is more thoroughly pragmatic than Toulmin, but which does not totally reject idealized logic, see Reuben Abel: *Pragmatism and the Outlook of Modern Science*. *Philosophical and Phenomenological Research*, Vol. 27, 1966-67, pp. 45-54.
If we reduce all ideas to a functional interpretation, then we create a new form of metaphysics from Dewey's logic. It is therefore vital to make a distinction between how ideas are functional within direct inquiry, and the various other implications of expanded consciousness. Sometimes expanded consciousness is a necessary stage in problem solving, but sometimes it serves to alter the mode of knowing and being and the quality of relationships between the knower and the known. Research into the effects of psychedelic drugs may yet show how the mode of being and knowing are related. See Duncan Blewett: The Frontiers of Being. New York, Award (1969), especially Chapters Two and Three.

Very few American social scientists have an adequate perspective on values and inquiry. One of the few who approaches such a perspective is Robert Merton who has written "In the end, it is the values held by people occupying different positions in society that provide the rough bases for the relative importance assigned to social problems and ... this sometimes leads to badly distorted impressions of the social significance of various problems, even when these are judged in the light of reigning values." (Robert K. Merton and Richard A. Nisbet (eds.): Contemporary Social Problems. New York, Harcourt, Brace and World (1966), p. 782.)
Hayakawa has written "Except for the fact that we sometimes act without thinking, it would seem obvious that how we act is determined by how we think. But even when we act without thinking, our actions are likely to follow the lines laid down by our patterns of thought, which in turn are determined by the language we use." (S.I. Hayakawa (ed.): The Use and Misuse of Language. Greenwich, Connecticut, Fawcett (1962), p. viii.) This, plus his statement that "Meanings are semantic reactions that take place in people" (Ibid., p. viii-ix) grasps the erroneous orientation of general semantics. Such an approach isolates both language and thought from the social field and attributes meaning not to the consequences of certain behaviour, in a particular context, but to something inside of us. If we apply Pierce's notion "that the purport of any concept is its conceived bearing upon our conduct" and recall Hayakawa's authoritarian conduct during the strike at San Francisco State College in 1969, we have further evidence of the academic and unscientific character of semantics. Not only is semantics, with its reified view of language, not a valid way to approach the study of language, as an aspect of behaviour, it can also function to obscure the ideological orientation of a theorist and his or her theories.

For ideas about the kinds of problems that pragmatic inquiry might tackle see Knowledge For What?, op. cit., Some Outrageous Hypotheses, pp. 202-250.

Knowing and the Known, op. cit., p. 282.
Once we reject all varieties of the ideology and logic of scientism, we can gain a perspective on the distinction between materialism and idealism. Sartre's criticism of vulgar marxism and its metaphysical understanding of materialism was based on such a perspective. For example, he wrote that "When the materialist claims to be certain of his principles, his assurance can come only from intuition or an a priori reasoning, that is, from the very speculations which he condemns. I now realize that materialism is a metaphysics hiding behind positivism, but it is a self-destructive metaphysics, for by undermining metaphysics out of principle, it deprives its statements of any foundation." (Materialism and Revolution, in George Novak (ed.): Existentialism versus Marxism. New York, Delta (1966), p. 88.) This is why vulgar marxism becomes a faith. As Sartre said: "I have witnessed conversions to materialism; one enters into materialism as a religion." (Ibid., p. 101.) It is important to note Marx had a pragmatic and not a metaphysical perspective on materialism and idealism. For example, Marx believed that a "consistent naturalism or humanism distinguishes itself both from idealism and materialism, constituting at the same time the unifying truth of both." (Quoted by Colwyn Williamson: Ideology and the Problem of Knowledge, op. cit.) Marx believed that "Communism as a fully developed naturalism is humanism and as a fully developed humanism is naturalism" (T.B. Bottomore (ed.): Karl Marx: Early Writings. Toronto, McGraw-Hill (1964), p. 155) and because of this saw it as a reconciliation of materialism and idealism. As part of the historical movement to communism, he believed that "Natural science will ... abandon its abstract materialist or rather idealist orientation and will become the basis of a human science ..." (Ibid., pp. 163-64.) He, like Sartre, was aware that once materialism becomes sectarian and academic (reductionistic) it turns into its corollary, idealism.

On pp. 448-49 above (footnote 45), I made a distinction between two ways of understanding the theoretical nature of science. I rejected the one associated with deductive logic and accepted the one that argues that science must be rooted in general problems and not just in practice and technique. In this regard, Dewey's argument that scientific abstractions must have generality ("be free from particular existential adhesions") complements the view taken by Althusser.
Dewey would not have treated an "inference" as an explanation or a basis for a prediction, but as a postulation which would serve to direct inquiry to an end or objective consequence. To the extent that Toulmin treated an inference as an end in inquiry, he had the tendency to revert back to scientistic metaphysics.
George Novak argued that the pragmatists are the "ideological cousins" of the positivists. (Positivism and Marxism in Sociology. International Socialist Review, Vol. 29, No. 4, July-August, 1968, p. 27.) Certainly most Marxist-Leninists would take Dewey's statement as proof of his liberal ideology. Still I have argued that vulgar, sectarian marxism and liberal positivism both represent the ideology and logic of scientism. For example, take the following statements by Lenin on the theory of knowledge: "There is definitely no difference in principle between the phenomenon and the thing-in-itself, and there can be no such difference ... knowledge emerges from ignorance (that is) incomplete, inexact knowledge becomes more complete and more exact ... the transformation of 'things-in-themselves' into 'things-for-us', the appearance of 'phenomena' when our sense-organs experience a jolt from external objects, the disappearance of 'phenomena' when some obstacle prevents the action upon our sense-organs of an object which we know to exist. The sole and unavoidable deduction to be made from this - a deduction which all of us make in everyday practice and which materialism deliberately places at the foundation of its epistemology - is that outside us, and independently of us, there exist objects, things, and bodies and that our perceptions are images of the external world." (V.I. Lenin: Materialism and Empirio-Criticism. Moscow, Foreign Languages Publishing House (1947), pp. 99-100.) Here we see a classical statement of correspondence theory, a variation of scientism. Seeing perceptions as images of the external world is rooted in the idealist notion that we observe reality - with an a priori mind. Lenin the revolutionary in political matters becomes Lenin the academic in epistemological matters. He did begin to revise his ideas about knowledge in his Philosophical Notebooks, but Marxist-Leninists have tended to remain faithful to the early scientistic notions. A critique that Dewey made of Trotsky shows how, even with the marxian concern for the "unity of theory and practice", Marxism-Leninism has consistently had a vulgar, scientistic idea of truth, laws, etc. Dewey first argued "... that the end in the sense of consequences provides the only basis for moral ideas and action" and then compared this with Trotsky's statement that "dialectical materialism knows no dualism between means and ends". Rather than Trotsky concluding from this that the means must be evaluated by their objective consequences, he reverted to deductive logic by saying that "(the liberating morality of the proletariat) ... deduces a rule of conduct from the laws of the development of society, thus primarily from the class struggle, the law of all laws". We have already criticized this notion of law and the formal, deductive notion of validity in Chapter Sixteen. The important thing to note is how Dewey, a "liberal", had a more dialectic, and, I might add, "materialist" outlook than Trotsky, a "marxist". Dewey was interested in "the actual relations of means and consequences" to living humans, not in formal, abstract justifications - "laws" - for action. He was aware that "No scientific law can determine a moral end save by deserting the principle of interdependence of means and ends." The adherence of Marxist-Leninism to deductive logic and the ability of Central Committees to rationalize their authoritarianism in metaphysical terms are closely related. This study strongly suggests that in terms of the question of knowledge, the "Marx" in "Marxism-Leninism" should be removed. (John Dewey: Means and Ends, in Leon Trotsky et al.: Their Morals and Ours: Marxist versus Liberal Views of Morality. New York, Merit Publishers (1966).)
"Pragmatism", as it became interpreted within the dominant educational system in the United States, has to do with technique, not the activity, involved in inquiry. This is one reason why Dewey hesitated to associate his theory of logic with the term "pragmatism". To him, "pragmatic" meant "the function of consequences as necessary tests of the validity of propositions". (Logic, op. cit., p. iv.) For the established institutions, and in liberal political rhetoric, it has come to mean the expedient, or the useful, in terms of predetermined ends. This established meaning in no way concerns itself with the evaluation of consequences. The degree to which Dewey's approach to logic and related approach to education has been distorted is shown by the following statement: "Dewey points out that at least one important factor in avoidance of dogmatism or indoctrinative teaching is, not to avoid taking a stand, but to make clear both the position taken and one's reasons for taking it. To do so not only removes the aura of an authoritarian pronouncement, but also provides for one's hearers or readers a basis for making their own assessments of the positions, so that they can thereby arrive at their own convictions; at least they are helped toward such arrival."

(Edward E. Bayler: Pragmatism in Education. New York, Harper and Row (1966), p. 9.) Here Dewey's approach is falsely presented as taking a stand and explaining, verbally, why you have done so. There is no mention of knowledge being a goal within inquiry. Instead we have a reversion to "conviction" with no concern for consequences.

The Sociological Imagination, op. cit., p. 131. In his doctoral thesis, C.W. Mills concluded that Dewey's social psychology was a "model for liberals". He argued that Dewey's approach to education emphasized the "liberal and engineering standpoint". Mills' approach to the sociology of knowledge, however, was slightly sociologistic, that is, reductionistic. In his 1943 Postscript on his thesis, he admitted that studying Dewey without tracing the influence of Mead on him was an "unrepresentative act that is intellectually unwarranted". He also expressed doubts about research in the sociology of knowledge that did not consider "larger epistemological concerns". Because Mills treated Dewey within a narrow political sociological perspective and did not deal with Dewey in terms of matters of logic, ideology and language (Mead), his thesis was superficial. I can, however, agree with Mills that Dewey's "... own analysis leads him away from a specification of the locus of (social and historical) forces. He is pushed upon a high and general level of abstraction, a level incommensurate with his epistemological exhortations." (Sociology and Pragmatism. New York, Oxford University Press (1966), p. 453.) That is why I have argued that unless there is specific inquiry into the workings of the institutions of education we will not be in a position to be strategic in our quest for a pragmatic form of social science.
The ideology and logic of scientism pervades the educational system in Canada. For example, it is the rule, not the exception, to read statements like "Sociology does not attempt to formulate answers to current social questions or provide solutions to the problem of contemporary social life" in "descriptions" of government educational programs. Such an academic view of the disciplines of the social sciences is characteristic and it serves to obscure the contemporary social arrangement and actual and potential consequences of science. An espiri-
cal study of the function and consequences of social science, however, exposes the mythical nature of this kind of value-free rhetoric in the educational system. In the conclusion of one such study, Baritz wrote that

"Many industrial social scientists have put themselves on auction. The power elites of America, especially the industrial elite, have bought their services - which when applied to areas of relative power leave restricted the freedom of millions of workers. Time was when a man knew that his freedoms were being curtailed. Social scientists, however, are too sophisticated for that. The fires of pressure and control on a man are now kindled in his own thinking."

Here I am not so much concerned with an analysis of the academic marketplace as with the means by which the value-free dogma is maintained within the university. When it so blatantly distorts the character of scientific inquiry and is contradicted by the present political and economic function of science, how has this dogma persisted? Why has the university not been able to develop approaches to education, both teaching and research, that can account for the problem of ideology and the ramifications of this for matters of logic? And, conversely, what changes in the university would be required for it to be a center of pragmatic inquiry?

We have already started to answer these questions. In Chapter Six, I discussed Kuhn's reference to the textbooks of science "... truncating the scientist's sense of his discipline's history ..." and then proceeding to "... supply a substitute for what they have eliminated." Kuhn compared this "narrow and rigid" education to the pedagogy of theology. The textbooks, themselves an aspect of the academic marketplace, can be said to help educate ignorance. Because the "subject matter" is abstracted from its historical development and
reified into a "discipline", for example, physics or sociology, it tends to become more the basis of a professional identity than indicative of an involvement in ongoing inquiry within a paradigm which always has the potential of forming anomalies. This scientistic education therefore nurtures a conservative approach to subject matter and reinforces a general conformist set of beliefs. Since a reified and mystified "subject matter" is more resistant to change than one treated existentially and pragmatically, the critical skills of inquiry are not being learned.

This analysis was expanded in Chapter Twelve when I discussed Weber's confused handling of the university. Because he believed "value questions are permanently banned from university discussion", he also argued that both students and teachers should be "condemned to silence" on such matters. But he also recognized that capitalist industrialization was turning universities into bureaucratic institutions with education being taken out of the control of educators. Because he treated "values" as solely an individual matter, and, though this contradicted his awareness of the incorporation of the university into capitalist society, he also believed that the individual assigns tasks to the university according to "ultimate values"; he never undertook a study of the ideology and effects of capitalist universities.

Since Weber's time, the incorporation of the university into capitalist society has been completed. We have a retrospective perspective where Weber had none. The value-free doctrine has become dogma as academia has been integrated into the corporate society. The end-of-ideology is exposed as crude
political rhetoric once the academic marketplace is analyzed. The university now functions as Durkheim believed all education should function: to "impose" an ideology on a new generation and ensure their conformity and adaption to the dominant norms.

Perhaps we are now witnessing a deterioration of this authoritarian education. This is not occurring because the institutions are reforming themselves to become libertarian, but because the traditional socialization of the young is no longer succeeding. Regardless of the increase of dropouts and signs of rebellion among many youth, we still have to ask what the effects of the dominant education are in terms of the ability of people to undertake pragmatic inquiry. One discussion of the effects of corporate, scientistic education concluded that what "... education of this kind conveys to its recipients is a pretense of knowledge and understanding where none actually exists, a pretense which readily develops into an effective bar to learning and thus becomes more destructive than ignorance itself."

Studying the Obvious: 1 - The Boundaries of Academia

Though this is a valid criticism, it is too general to clarify our questions. How, specifically, is the ideology and logic of scientism taught and learned. The fragmented character of the sciences and the complementary unhistorical, often ahistorical and reified treatment of subject matter as "disciplines" certainly creates the conditions within which a formal, idealized logic and the value-free dogma can be learned and maintained. The very organi-
zation of the subject matter along bureaucratic lines predisposes people to such an orientation.

The subject matter, however, is not something which exists in abstraction from the human praxis within the university. Once we reject the scientistic belief that language constitutes a third realm of fact, we can no longer treat subject matter as being independent of the human and social relationships of the university. The reified uses of language, for example, plagiarism, eclecticism (theory without method or problem) and dilettantism, that complement a scientistically understood subject matter are an aspect of these social and human relations. For example, the use of language in the classroom underlies and reinforces the ideology and logic of scientism because the "meaning" of words becomes associated with the setting; and the roles, status, authority and power (of grading) that affects the experience and behaviour of students and teachers within that setting. Yet for pragmatic inquiry to be undertaken ideas about problems, methods and theories have to be situated; that is, have an existential reference. When the meaning of language comes mainly from its mediating function within these impersonal social relationships, rather than from one's involvement in ongoing, cooperative inquiry, it is easy for notions of "method" and "theory" to become abstracted from actual or potential problems that are implied by the social fields within which a person studies, works and lives.

The idea of "inquiry" should not be mystified. Inquiry is related to existential doubt which is related to what Dewey called an "indeterminate,
problematic situation". Yet when ". . . that which is taught is thought of as essentially static . . . it is taught as a finished product, with little regard either to the ways in which it was originally built up or to changes that will surely occur in the future." This forces a concern with problems into the background, and technique and the ability to articulate the specialized uses of technique become equated with "subject matter". Though scientism mystifies technique and verbal intelligence, and, in effect, treats them as science, these are only aspects of inquiry. Without there being the activity of inquiry, language and technique have no meaning, relevance or consequence, except receiving or not receiving marks and credits for the student and salary for the teacher.

We can see from this that an understanding of the roots and consequences of the ideology and logic of scientism can be gained by looking at obvious occurrences in the university. When we learn to study "the obvious" in social events, we will be fulfilling one condition for developing a pragmatic approach to social inquiry. But, while our socialization is abstracted into a priori perceptions, emotions and motivations and uses of language; and people develop a defensive conservative mode of relating to others and the world, such a concern will be rare. Laing pointed out this dilemma when he wrote that social events "... often go out of view in space and time at a boundary between here and now, and there and then - a boundary which unfortunately consigns here and now to unintelligibility without information from there and then, which is, however, beyond our reach."9

From a social psychological perspective, the development and reinforce-
ment of these "boundaries" are the roots of human unconsciousness. The social and human relationships of the university do not cause them; but, were the milieux within which learning occurs to be changed appropriately, these boundaries would not become the unconscious, unquestioned basis of abstracted, academic knowledge. In the classroom, or the office of the professor, where there is formal seating, where mainly formal behaviour predominates, language and thought become formalized. In the informal cafeteria, where there is informal seating and informal behaviour, people get a break from this formal thought and language. But nowhere do students and teachers engage in ongoing dialogue, with clear existential references. They are both continually shifting from formal, public settings to informal, but still public settings. Their experience, that is, how they feel about this, is never able to affect what they do—unless they drop out of the whole process. In terms of their experience, though perhaps not apparent to an observer of their behaviour, the transition from one to the other, from one "here and now" out of a "there and then" into another "here and now" involves a massive structural boundary. It is a boundary that encompasses all aspects of experience and behaviour: everything from muscle-tone, body posture, perceptions of roles, status and authority, the phenomenology of the eyes, uses of language, and the form and content of thought. The break between the two milieux is usually conditioned to a system of bells, but the effects of the structural boundary are not momentary. They persist and compound into a variety of forms of anxiety, and, in some cases, are acted out tragically, as suicide.
2 - The Schizoid Praxis in Academia

This is hardly the means to develop the awareness and skills required for and involved in pragmatic inquiry. But the schizoid, sometimes schizophrenic, existence that results from the educational maze is the rule, not the exception. For instance, "the schizophrenic is ... someone who has been accustomed to relating to symbol-objects rather than person-objects ..." In the interplay between self and others, the self or "sense of being" of the schizophrenic "takes root more in what we feel inside, in what we think and imagine, than in what we actually do." The schizophrenic "takes refuge in the world of symbol-objects, and forfeits trial and error experience in the external world." This characterization of the schizophrenic is too general to apply to academia directly. But if we think of the reified uses of language in academia as an example of taking refuge in symbol-objects, the analogy begins to take on direct meaning. Words can be used in a hollow way. "They mean little to the development of our total personality unless we connect them up with some kind of lived experience." Because humans "can talk about things without having any actual experience of them" we can cut ourselves "off from real living in the world, from real commitments to (our) acts, and (can) take refuge in fabrications of (our) self fantasy."

The university specializes in the reified uses of words and hence it reinforces and nurtures this schizophrenic-like existence. Because schizophrenic behaviour does not predominate in the university, it does not follow that this predisposition is not being nurtured and reinforced within its
milieux. In his study on *The Divided Self*, Laing argued "... that there is a comprehensible transition from the sane schizoid way of being-in-the-world to a psychotic way of being-in-the-world". And Laing's description of the "schizoid mode of being" has a real similarity with what is common in the university. The split between the private and public, the so-called "real" and "false" self in Laing's terms which is so fundamental to the schizoid person, is typical within academia. As one university psychiatrist has stated: "... in a community (like the university) that is community chiefly in a geographic sense and where trust is limited, a huge discrepancy exists between private musings and public statements".

In such a community, where "unilateral relationships" predominate, relationships among humans are typically schizoid. Laing described the dilemma the schizoid person has over establishing relationships as follows: "... there is an attempt to create relationships to persons and things within the individual without recourse to the outer world of persons and things at all ... but, of course, this autistic, private intra-individual 'world' is not a feasible substitute for the only world there really is, the shared world." With the scientistic education of the university and its dichotomies, with the fragmented nature of subject matter, and with the effect of the boundaries of academia, it is difficult to experience a shared world. And yet to the extent that one has expectations of academia being a community, one may strive for such a sharing of experience. As one begins to learn that the reality and rhetoric of the university don't jibe, one's defense becomes like that which Laing attributed
to the schizoid person. "Either he turns the other person into a thing, and depersonalizes or objectifies his own feelings towards this thing, or he affects (feels) indifference."20

Since "a person (in academia, J.H.) can relate himself only to de-personalized persons" (students, faculty, administration or staff) people learn to fear "a real live dialectical relationship with real live people".21 In an institution that is neither a community nor a totally organized bureaucracy, where people have neither the real security of "dialectical relationships with real people" nor the false security of a total organization of their time and work, people are prone to develop what Laing called the "un-embodied self". The person who is caught in this situation may try to "disentangle himself from his body and thereby achieve a desired state of dis-carnate spirituality".22 The search for meaning in abstract uses of language - in reified method and theory - can fulfill a function for a person when the possibility of finding meaning through real relationships is inhibited. Academic ideas are nurtured in the university because of the general impossibility of people relating with others in an ongoing way. The world of "symbol-objects" fulfills a real need, but because the underlying need for relationships is further deprived, the schizoid mode of being is being created.

Concern for abstract empiricism and grand theory in the university is a schizoid form of withdrawal from the world. As Laing wrote about the schizoid: "Instead of the individual meeting the world with an integral selfhood, he disavows part of his own being along with his disavowal of the immediate attach-
As C.W. Mills noted, a concern for either method or theory, without problems that have an existential reference, is a withdrawal from the problems of social science. What he did not recognize was the schizoid character of someone obsessed with factuality or reified concepts. Durkheim's treatment of ideas as "things" is a classical example of a schizophrenic sociology.

The split between the private and the public helps preserve the kind of university structure that both nurtures and reinforces the split in the first place. The schizoid person "begins by slavish conformity and compliance ... (and) the false self system's compliance with the will of others reaches its most extreme form in the automatic obedience ... of the catatonie." The reification of language, the schizoid mode of being, and the learning of scientistic dichotomies, helps create people who will tolerate this very process.

We could interchange Marx's notion of "alienation" for the term schizoid. Marx believed that the academic philosopher was "himself an abstract form of alienated man." He believed that when a person "objectifies himself by distinction from and in opposition to abstract thought, which constitutes alienation as it exists and as it has to be transcended", an extreme form of alienation occurs. And, if we recall our discussion of Marx in Chapter One, this alienated academic is the person who creates ideology.

This alienation is general in academia. Though they try to ignore it, people in the university are relating to each other continually. The educational
function of the institution, in contrast to an industrial function, means that people are both the producers and the product. In a sense people are creating a relationship - out of which a form of knowledge is developed. But the mode of relating is abstract and impersonal. The alienated uses of language and the structures that underlie this lead both students and teachers to objectify themselves in terms of abstract thought, if it can be considered thought at all. As one analysis of capitalist education has stated:

"Student labour is alienated in the same sense that the product is for the future employer rather than for the student himself. Since the product is embodied in the skills of the student himself, he becomes alienated from himself. Thus modern education and technology, when continued in the capitalist mode, frequently gives rise to the individual psychological estrangement often confused with the concept of alienation."27

It matters little what we name this "psychological estrangement". The term schizoid is adequate because it emphasizes the splits that occur when people are engaged in objectifying themselves through an estranged relationship. The important thing is to determine the structural arrangement of the university that maintains this process. In this regard, it is interesting that the "rules" of the university bureaucracy complement the "rules" of the ideology and logic of scientism. The rules of the bureaucracy "... are not intrinsic to the subject, but are an imposed schedule of courses, grades, prerequisites, and departments that satisfy - at least symbolically - a social need for degrees, licenses and skills."28 Neither are the so-called "rules" of the ideology and logic of scientism intrinsic to subject matter. As we have shown, they are a priori imposed onto subject matter that satisfy - at least symbolically - a social need for ideology to rationalize the uses and consequences of the dominant knowledge
in the society. The habits developed among those who survive, and graduate either up or out, complement all the dichotomies of scientism. For example, the graduate carries with him or her the obsession with factuality that was learned while in training.

The roots and effects of the relationship between the enforced boundaries that exist through space and time in the ongoing events of the university, on the one hand, and the ideology and logic of scientism, on the other, are subtle. The term "authoritarian" touches on the character of the classroom: the formalized approaches to logic and the development of the value-free dogma are both mediated through an authoritarian milieu. But there is no simple oppressor-oppressed relationship in the university. All people—students, faculty, staff and administration—are encircled by the structure vis-a-vis the particular milieux within which they act and don't act, move and don't move. Some believe, some disbelieve and others don't care about the symbols, technology, status and rhetoric that integrates the institution. But each reaction is a variation on a theme. No matter what reaction, there is no presence of ongoing, pragmatic inquiry with clear situational and existential references for people. What talking there is is usually without reference, and when people talk about "the university" they speak about the symbols, technology, status and rhetoric of the institution, not about the consequences of a scientistic education for them and society.

3 - The Tautology Between Milieu and Structure

From this stance, a perspective that attempts to account for the
interdependencies of what C.W. Mills called character and social structure, we can consider the classroom, in relation to the total environment of the university, to be a "tautological situation". It is tautological because the way it is structured, that is, its predetermination by university bureaucracy, makes it impossible for people within it to gain a perspective on the set-up. And, if by chance some people begin to gain such a perspective, they, as a minority, or even all of the people in the situation, haven't the control or power to alter it from its prearranged course. Furthermore, because the classroom is a part of a social field, it implies actual and potential problems for inquiry. Within the university milieux there exists the social events that could act as a situational reference for pragmatic inquiry. But without language and thought being directed towards these situations, these problems cannot become objectified. Instead it is typical for people to be passively attentive to the abstracted uses of language in the classroom. In this situation it is understandable how people come to think of words as being a third realm of facts. The impersonal social relationships in the classroom create an alienated use of language. The reference group, and the potential peer group if and when you graduate up, is distant from the student from the time he or she enters the institution. And a distant "generalized other", in Mead's terms, leads to a distant, reified view of knowledge.

Sometimes there are "ideas" expressed that suggest existential references for possible problems for inquiry. But there is no milieu, means or time for these ideas to be evolved into ongoing, cooperative inquiry. As the Berkeley Manifesto stated:
"We all know what happens when we really get 'turned on' by a great idea, a great man, or a great book: we pursue that interest at the risk of flunking out. The pursuit of thought, a painful but highly exhilarating process, requires above all, the element of time."

Commitments are learned in this situation, but they are not those required to engage in the activity that can lead to significant knowledge. Through identifications with reified subject matter, people become committed to their "discipline" and career. Some become professors, as a "career", but they function much the same as if they had graduated into any other profession in the corporate society.

This tautological situation does not arise spontaneously. Besides the alienated praxis of the students and teachers, there is the administrative praxis of those who control, manage and service the a priori and rules of education. But if language is reified into an impersonal verbal relationship between students and teachers, it cannot be used to understand how the structure of the institution and the various milieux interrelate.

Laing and Marcuse, in differing ways, recognized how this interrelation occurs. In a statement not specifically associated with education, but nevertheless appropriate to the "mass course" that is the foundation of the university, Laing stated:

"All those people who seek to control the behaviour of large numbers of other people work on the experiences of those other people. Once people can be induced to experience a situation in a similar way, they can be expected to behave in similar ways. Induce people to all want the same things, feel the same threat, then their behaviour is already captive - you have acquired your consumers or your cannon-fodder."
enforced split between what is experienced, that is, the "real self", and what
behaviour is expected, that is, the "false self", and the consequences of this
in our society, provides a perspective within which the relationship between
the daily, obvious events of the university and the development of the ideology
and logic of scientism begin to be clarified. As an example, the grading sys-
tem is so central to the experience and behaviour of both students and faculty
in the university that it tends to integrate the institution. Students come
to value grades ("they all want the same thing"), even if for differing reasons.
Students perform in terms of the grades ("they feel the same threat"), even if
for differing reasons. The grading system as a

"... system of accountancy acts to break up the continuity and consist-
ency of the work of instruction and to divert the interest of the stu-
dents from the work in hand to the making of a passable record. (This)
puts a premium on mediocrity and perfunctory work, and brings academic
life to revolve around the office of the Keeper of the Tape and Sealing
Wax."32

The way each student experiences these bureaucratic rules is, of course,
personal. But corporate institutions function on the basis of behaviour, and
behaviour in the university is stereotyped and predictable. As long as the ef-
fects of the privatized experience of students remain private and do not become
a force, with implications for unpredictable behaviour in the institution, it is
of no concern to those who control, manage or service the university. Psychologi-
cal and counselling services come with each and every instant university, to try
to ensure that problems remain privatized.

The alienated, schizoid praxis complements the ideology and logic of
scientism too much to be ignored. For the value-free dogma to persist, people
must make a split between their institutional function and expected behaviour, and their private life. The university trains people to do this in a very efficient way. The granting of social status and increased chances of mobility has more than an economic function after graduation. It also serves to reinforce the behaviour required for people to accept such work and the rationalizations for the consequences of it.

Once the private and public are split, it is easier to maintain rhetorical splits between objective and subjective, theory and practice, fact and value, even body and mind. Once the person in academia develops semantic skills he or she is able to manipulate ideas selected without any situational reference in such a way as to rationalize these splits. A mystification of "facts", "laws", "causes", etc. and philosophies of science to "back up" such a mystification are a common example of such rationalizations. If one is really sophisticated, he or she can even develop impressive metaphysical and ontological systems to accomplish this.

Marcuse recognized the function of public rhetoric in maintaining the a priori of scientism. He spoke of "the public language - a language which determines a priori the direction in which the thought process moves". Once the dichotomies of scientism are treated as a priori, thought can be used in such a way that they are always being reinforced. What Runciman has said about vulgar marxism or Natural Law might very well be said of all varieties of scientism. All scientistic approaches to knowledge "... are impervious to evidence not because their proponents do not adduse any in support of their
position, but because the conclusions argued from the evidence rests upon an interpretation which, if consistently maintained, can be guaranteed in advance to cover any fact which the observer might bring back from the sociological study of the contingent world.\textsuperscript{34} As long as the private-public split is maintained and as long as behaviour in the university is predictable and university structure is viable, "the meaning of words (will remain) rigidly stabilized\textsuperscript{35} in such a way that the dichotomies of scientism remain intact.

It would take a "rupture" in the life and work style of a person whose thought is stabilized within the dichotomies of scientism before comparative thought and inquiry could begin. An existential revelation would be needed to recognize that one's praxis, an unthinking or mindless praxis in this case, and not the academic languages or subject matter \textit{per se}, underlay one's acceptance of the scientistic dichotomies. Only then could someone recognize that "... the facts are never given immediately and never accessible immediately; they are established, 'mediated' by those who made them; the truth, the 'whole truth' surpasses these facts and requires the rupture with their appearances."\textsuperscript{36}

Marcuse's remedy tended to be academic for this total conditioning to scientism. He quite rightly pointed out that "repression invalidates the academic enterprise itself, even prior to all restrictions on academic freedom", but he continued

"The pre-empting of the mind vibrates impartiality and objectivity: unless the student learns to think in the opposite direction, he will be inclined to place the facts into the predominant framework of values. Scholarship, i.e. the acquisition and communication of knowledge, prohibits the purification and isolation of facts from the context of the whole thought."\textsuperscript{37}
His idea of "thinking in the opposite direction" remained formalized, even if with dialectical overtones. Marcuse consistently treated "thought" in abstract from praxis. For example, he stated: "Where the mind has been made into a subject-object of politics and policies, intellectual autonomy, the realm of 'pure' thought has become a matter of political education (or rather: counter-education)." Furthermore, he was a little bureaucratic, even mechanistic, in his solution. "Moreover, the restoration of freedom of thought may necessitate new and rigid restrictions on teachings and practices in the educational institutions which, by their very methods and concepts, serve to enclose the mind with the established universe of discourse and behaviour - thereby precluding a priori a rational evaluation of the alternatives."

Though it is totally unrealistic to imagine an institutional solution to so fundamental a problem as that posed for inquiry by the ideology and logic of scientism, Marcuse is one of the few theorists who has exposed the depth of the problem. He believed that the "mental space for denial and reflection must first be recreated" before a rational, I would say "pragmatic", evaluation of historical alternatives would be possible. If the "spurious neutrality" of the university is to be both challenged and replaced, there clearly must be a total transformation of the praxis within it. But "rigid restrictions on teachings and practices" in the university would not accomplish this. Such an idea is itself one-dimensional and potentially authoritarian. Since the ideology and logic of scientism obtains reinforcement from the total structure of the university, it is absurd to imply that the use of restrictions within it could liberate inquiry.
The "bureaucratic ethos" of the university itself complements the value-free dogma, and utilizing bureaucratic means "to open the mental space" necessary for pragmatic inquiry is not only unrealistic, it is self-contradictory. The content of classes might become more "radical" even "revolutionary", and rhetoric might change accordingly (especially if the radical ideas are graded), but the thought would remain academic. People who are integrated into the daily workings of a bureaucracy are not likely to become sociologically perceptive or critical about the milieux within which they work. Their commitment to the maintenance of the milieu of the institution within which they work inhibits them from developing what Mills called "the skills of controversy with oneself, which we call thinking and with others which we call debate". Believing that one's work is value-free the academic is not likely to "... see the roots of his own biases and frustrations (which is necessary) if he is to think clearly about himself, or about anything."

4 - Business-Like Control of Academia

Mannheim believed that "the fundamental tendency of all bureaucratic thought is to turn problems of politics into problems of administrations". Today the university bureaucracy turns problems of education into problems of administration as well. This makes it necessary to study the politics of education if we are to have a thorough critique of scientism.

The political nature of university administrations has long been recognized by critical theorists. Veblen's study of higher education published in
1919 foresaw the effects of the incorporation of the university into the capitalist economy. With the growing business-like control over education, he argued that learning would become "... a merchantable commodity, to be produced on a piece-rate plan, rated, bought and sold by standard units, measured, counted and reduced to staple equivalence by impersonal, mechanical tests." \(^{45}\)

Veblen did not believe that this business-like control of education only affected administrative tasks. The total structure of the university was affected by the new business-like control over higher education. For instance, "The installation of a rounded system of scholastic accountancy brings with it, if it does not presume, painstaking distribution of the personnel and the courses of instruction into a series of bureaux and departments." \(^{46}\) Only an idealist who denied the realities of institutions would try to argue that the organization of university education into departments is determined by the changing problems, methods and theories in particular subject matter. The fragmentation of subject matter into so-called "disciplines" has not occurred because of the pragmatic needs of inquiry, but primarily because of the needs of the bureaucracy.

Veblen believed that the business-like control of the university also affected the motivation for and quality of teaching. "Like other workmen, under pressure of competition, the members of the academic staff will endeavour to keep up their necessary income by cheapening their product and increasing their marketable outcome." \(^{47}\) This may seem a strange way to refer to "professors", who are traditionally thought to transcend the marketplace, but once we have demystified
the ideology and logic of scientism and situate all language in human praxis, we need some such analysis of how the academic is affected by his or her milieu and institution, and the structural relationship between it and the rest of society. If anything, Veblen understated his analysis. Today the university is thoroughly integrated into the marketplace. The Academic Marketplace, with its publish or perish ethic, its textbook credo, its division between teaching and research, its "grantmanship", and its careerist motivations — where obtaining an administrative position is often a goal, and teaching and/or research a means — can only be distinguished from the capitalist marketplace through metaphysical classifications.

On the basis of his study, Veblen concluded that the business-like control of the university was detrimental to all aspects of inquiry. "Nothing but continued workday familiarity with this system of academic grading and credit, as it takes effect in the conduct and control of instruction, and as its further elaboration continues to employ the talents and the deliberation of college men, can enable any observer to appreciate the extraordinary lengths to which this matter is carried in practice, and the pervasive way in which it resistlessly bends more and more of current instruction to its mechanical tests and progressively sterilizes all personal initiative and ambition that comes within its sweep." As he said: Since "it is bad business policy to create unnecessary annoyance", "a truculent quietism is often accepted as a mark of scientific maturity" within the university. Throughout this study, we have seen how much of what passes for "scientific maturity" is nothing more than scientistic rhetoric.
Veblen, like Weber in this regard, realized that "Skepticism is the beginning of science." But, unlike Weber, and more like Bronowski, he realized that certain conditions are required for the creative doubt involved in inquiry to be nurtured. That is why his solution to the problems of university was more political than that proposed by Marcuse. In Veblen's view:

"All that is required is the abolition of the academic executive (read President, J.H.) and of the governing board. Anything short of this heroic remedy is bound to fail, because the evils sought to be remedied are inherent in these organs, and intrinsic to their functioning." On the basis of his structural insights about the university, he argued "... that no remedy or corrective can be contrived that will have anything more than a transient palliative effect, so long as these conditions that create the difficulty are allowed to remain in force."

Academic Freedom as a Repressive Tolerance

Veblen's insight into the structural roots of university problems was not paralleled by the recognition that basic change in the university is impossible while it is integrated into the marketplace. The conditions that are detrimental to inquiry have remained and expanded in the university since the time of Veblen.

Goodman believed that

"Veblen's model is drawn too closely from old-fashioned business administration with its chain-of-command bureaucracy and arbitrary hiring and firing, a situation in which scholars are resentful, insecure and resisitive. But our modern model is drawn from both public administration, developed for placid civil service ... and from scientific business management, with its philosophy of belonging ..."

In contrast to Veblen, he took account of what Marcuse called repressive tolerance
in his analysis of the university. He recognized how the structure of the university allows certain freedoms from institutional authority, but undermines freedoms to alter milieux to facilitate inquiry.  

"In effect, it is the genius of strong administration to weaken the community by keeping the teachers out of contact with the students, the teachers out of contact with one another and with the world, and the students imprisoned in their adolescent subculture and otherwise obediently conformist ... Modern administration isolates the individuals, the groups, and the studies and, by standardizing and coordinating them, reconstructs a social machine ... The machine has no educational use, but it occupies the time of the students (in a period of youth unemployment), it pays the salaries of scholars, and it manufactures licenses and marketable skills."  

Within this "social machine" there is frequent reference to academic freedom. It does not refer to the freedom of inquiry or the freedom to create the context that would nurture what Bronowski called "the habit of truth". This would require the replacement of reified "disciplines"; hence of the curricula and bureaucratic system. Rather, it refers to the privatist freedom of the academic.  

"Fortified in their departments and tenure and the kind of academic freedom that is (dilatorily) protected by ... (University Teachers' Association, J.H.), the senior scholars are not much disturbed by either the students or by one another or by the administration. And society is satisfied by the symbolic proof that a lot of education is going on, fat syllabi, hundreds of thousands of diplomas, bales of published research. And indeed, the students are educated in the process. Most of them learn ... the secret of our uniquely glamorous society, to conform and batten."  

It is worth examining "academic freedom" as a specific example of regressive tolerance in the university. One author has argued that "Our university system works because it exploits the creativity of those who are willing to compromise their academic freedom to enjoy the personal satisfaction of studying and learning for their own sake." Here the use of the term "academic freedom"
implies that freedom of inquiry has to do with having freedom within the milieu within which one works, and that the university does not allow or provide this. Certainly someone in the university who thinks, works and lives in terms of the dichotomies of scientism will appear to have academic freedom. But it is a reification of appearances and the related failure to undertake comparative inquiry that leads to false, scientistic generalizations. Within the present system, the academic exchanges the freedom to undertake significant experiments with education for his or her right to have a subjectivist, privatist involvement with either abstracted empiricism or grand theorizing. Neither constitutes ongoing inquiry and an impersonal, schizoid system of teaching is required to cover up this shortcoming. As long as the academic behaves, for example, teaches; according to the norms of the corporate university, his or her subjective, private world of ideas is tolerated. By the time most academics achieve tenure, they are satisfactorily socialized to the a priori and rules of both the bureaucracy and the ideology and logic of scientism, so there is little change of such non-conformity. 61

There are specific institutional procedures that underlie the repres-sively tolerant form of academic freedom. Writing about the theory and practice of academic freedom, one author stated that:

"The mere exercise of one's academic freedom should not be cause for dismissal whether or not one enjoys tenure. This is the theory. What of the practice? In the absence of a contractual provision to the contrary, a professor without tenure may be dismissed without cause ... Hence the necessity of delimiting the scope of academic freedom as his tenured confrere who cannot be dismissed for exercising academic freedom because in the case of the latter the university must show cause. Here, it seems to me, rests the relationship of tenure to academic freedom." 62
This author was obviously ignorant of the relationship between tenure policies and the repressive tolerances of scientistic education and therefore saw the issue of academic freedom in legalistic terms, but he did expose the contradictions between theory and practice, the rhetoric and reality of the university. Such a contradiction between the theory and practice of academic freedom can itself be rationalized by the ideology and logic of scientism, so we have another example of its one-dimensionality.

Structure As Function: The Political Economy of the University

Goodman tended to focus his analysis on the affect of the bureaucratic university structure on the so-called "community of scholars". He did not see such a structure as a reflection of, that is, a means to fulfill, the functions of the university. Once we admit the mythical nature of the "community of scholars", and realize that rhetoric about this myth itself has a political function in integrating the business-like control of the university, we can begin to analyze the university in terms of pragmatic requirements for social inquiry. Rather than accepting the ideology and logic of scientism and only conceiving ideas within the bounds of its dichotomies, we can begin to establish regulative principles for ongoing inquiry into the workings of the university in society.

What are the consequences of the bureaucratic workings of the university? Such an analysis of the consequences of university structure can give us insights into the functions it serves. The two main consequences or functions of university structure are its role in the political economy and the related creation of
the ideology and logic of scientism. Awareness of the first function of the university has grown since the student revolt against the corporate university has accelerated. The myths of the ivory tower are quickly being exposed and people are beginning to see higher education as an integral part of advanced industrial or state capitalism. As one author put it: "It is no accident, I think, that as Time magazine cheerfully points out in a recent issue, the leaders of business and heads of universities have become interchangeable parts."64

The growing interchangeability of business and university elites reflects the structural integration of higher education into the political economy of state capitalism. We have to understand this integration, at least in general terms, to be able to trace the roots and consequences of the ideology and logic of scientism. For example, it is necessary to realize the relationship between the rationalization of capitalist production and the socialization of the costs of higher education. In a time of a growing technical-scientific labour force

"No one corporation can afford to train its own labour force for there is no way to insure that its investment, once trained, will not seek employment elsewhere. The costs of training therefore have to be socialized."65

The socialization of the costs of education and advanced industrial or state capitalism are complementary because the structures of the state and of the marketplace have fused. Universities and colleges could not have been centralized under corporate control in the manner that multi-national corporations66 have centralized and integrated other aspects of the economy. "Because science and technology are basically social in nature - they cannot be owned and controlled like a machine - private corporations and indeed individual countries have met with
great difficulty in their attempts to monopolize these new productive forces."67 So the structures of the state have become essential to the maintenance of the capitalist system.

We cannot understand the social arrangement of science nor clarify the problem of ideology within state capitalism if we hold to a mechanistic or reductionistic view of the relationship of business and the university. We, therefore, require a dialectical, structural perspective; not one rooted in some conspiracy theory. O'Connor provided this perspective when he wrote that

"... the social character of scientific and technical knowledge means that ultimately no private form of business organization can completely contain and control it. For this knowledge to contribute to the benefit of the corporations, the intervention of the state is needed. In effect, a form of state capitalism must accompany the growth of the corporate conglomerate."68

Though higher education is not owned by corporations, it is greatly controlled by them. The character and extent of this control, however, has been greatly ignored. If we still think the danger to university autonomy stems from government interference, we fail to notice that corporate involvement in higher education, with the aid of the state, 69 has gone beyond interference and become control. Surely the common use of provincial, federal or state police on campuses is indicative that the older concern for government interference is a red herring. Once we understand that "From the standpoint of the corporations, it is more rational to combine technical-scientific labour power with capital-intensive technology, than to combine simple labour power with labour-intensive technologies,70 we begin to understand why higher education has been socialized. But the universities do not just provide the technical-scientific labour force required for state capitalism. The teaching of the ideology and logic of scientism is it-
self indispensable if people in this new labour force are to work without ques-
tioning the consequences of what they do.

With this understanding of the extent of corporate control of the uni-
versities, we can no longer see the immense overproportion of corporate directors
on university Boards of Governors as being accidental or to do with honour or
status. This is the error that Porter made in his study of the interchangeability
of corporate and university elites. For example, he wrote:

"Whether or not power comes from the vast array of honorific roles held by
the economic elite is difficult to say. There is an element of decision-
making, but there is also an important element of honour in the sense
that election to them is much like election to the 'right' club." 71

The reason why Porter was ambiguous on this matter was because his study was not
analytical, but more a combination of abstract empiricism and grand theory. 72
For example, discussing the relations between corporate and university elites, he
stated that "The explanation does not lie in any intrinsic link between the two,
but lies rather in the structural characteristics of a society based on corporate
capitalism." 73 In saying this he did not realize that scientific explanations
never deal with "intrinsics" but, in the case of the social sciences, with struc-
tural matters. And it is the structural change in capitalism, its transformation
into what Porter called "corporate capitalism", that underlies the new power that
corporate elites have over and within universities.

I have continually stressed that there is no significant relationship
between an understanding of the roots and consequences of the ideology and logic
of scientism and political rhetoric. We can see another example of this by con-
trasting the scientistic approach of Porter, as a social democrat, with that of
Galbraith, a liberal. For instance, Galbraith acknowledged the same structural shift that O'Connor described, though he understood it in a very different way. He compared the role of what he named "the educational and scientific estate" to the role of banks in an earlier stage of capitalism. And he argued that this estate stands "... in relation to the industrial system much as did the banking and financial community to the earlier stages of industrial development." For Galbraith, "Both owe (or owed) their prestige and influence to their association with the decisive factor of production." Galbraith stressed one important difference between the educational and scientific estate and the banks in his historical analogy. "The educational and scientific estate has no control over the supply of talent similar to that of the banker over access to savings." Unlike Porter, he acknowledged that because corporate power is fundamental to this society, the educational and scientific estate has no real control over the consequences of its training and research. Though this acknowledgement begins to undermine Galbraith's main hypothesis that the "technostructure" has gained significant power in this society, he stated that the executives of business sit on university boards partially for "... the opportunity to maintain closer liaison with sources of talent and to keep more closely abreast of scientific and technological innovation." Galbraith did not relate his awareness about the educational and scientific estate to the ideology and logic of scientism. Though his study of The New Industrial State was rooted in an awareness of the structural interdependence of education, science and corporations, he accepted enough of the mythology of the
liberal university to ignore this implication of his analysis. For example, over
the question of whether or not the educational and scientific estate "will identify
itself with the goals of the (industrial system)" he answered that "No generaliza-
tion is possible." Yet a study of the problems of ideology and logic shows that
an ideology and logic of scientism is being created in the universities and that
it complements the goals of state capitalism. Furthermore, accepting the liberal
notion of academic freedom which we have already criticized, Galbraith wrote that
"the educational and scientific estate is not inhibited politically by the ties of
organization" that have developed between it and corporations. To suggest that
an "estate" that is integrated into corporate society is not politically inhibited
is to treat "politics" as something unrelated to the distribution and uses of power.
Galbraith's notion of "politics" is therefore similar to the abstract way that lib-
erals in the corporate society treat all matters of value.

For our purposes it is important to note that Galbraith, like O'Connor,
recognized the structural change in capitalism that complements the new corporate
controls over the university. The university is not just a "service station" for
corporations within state capitalism. Its function within the political economy
of advanced industrial capitalism goes far deeper than this. And because of this,
neither the categories of vulgar marxism or of the end-of-ideology can understand
the dynamics of the university. As learning and scientific technique themselves
become commodities in the political economy, and as the state has become a co-
manager of corporate capitalism, these categories become more and more inappropriate
and distorting. The socialization of people to a view of society which reduces
"class struggle" solely to conflicts at the point of industrial production, or
to a view that all class struggle has ended, itself serves to obscure the new
social and economic relations developing as the political economy of the univer-
sity expands.

According to O'Connor, the corporate university is tied into state capi-
talism in four ways. In advanced industrial capitalism, it has become a point
of production. Once we demystify the scientistic dichotomies, especially that
between theory and practice, we are in a better position to understand how the
university functions within the division of labour - including mental labour -
in this society. Second, as an integral part of the research and development
system of the corporate marketplace, the university has become a point of mer-
chandizing. Third, because it is integrated with the state, the university has
become a center of state bureaucratic social control. The fourth function is
rooted in the relationship of the university to imperialism. Within advanced
industrial capitalism the state is involved

"... in the accumulation of capital abroad: in the acquisition of raw
materials, the creation of investment opportunities, the creation of
cheap labour havens, and the stabilization of international banking
centers. The state guarantees foreign investments, stabilizes the
monetary system under the reign of the dollar, provides the economic
infrastructure for private investments with public funds, subsidizes
exports, bribes local client bourgeoisies and military groups, creates
favorable tariff agreements, controls world commodity organizations,
and generally exercises economic, political and military control over
unstable areas (i.e. all underdeveloped areas)."81

The university is a part of this structural mosaic. It does not just service the
state and the corporations; its training and its research and development often
make it fundamental to the policies of the latter.82
This general picture of the political economy of the university must be specified in the particular case of any university in Canada. O'Connor's outline of the integration of the university into state capitalism clearly fits the large multi-universities in the United States. A study of the way the Canadian university is structured by and functions as part of the continentalist process would more clearly determine the political economy of the university in this country. It is likely that as Canada becomes the primary area of United States' corporate investment in the world that the continental academic marketplace will become more integrated into the continental political economy. Academics trained in one multi-university will teach in another as it suits their career, without existential knowledge of the situations of those they "teach", that is, train. In the process, the ideology and logic of scientism will not only distort and impede inquiry, it will also help obscure the growing loss of self-determination for the people of Canada.

Myths About The University

Unless we abandon the liberal notion of the university, including the myth of the community of scholars, and engage in pragmatic inquiry into problems implied by the function of the university, we will not be able to understand the roots and consequences of the ideology and logic of scientism in advanced industrial capitalism. Ironically, the liberal view of the university is often expressed most articulately by academics who see and define themselves as "radicals", even "Marxists". This shows how the ideology and logic of scientism has affected and
been accepted by the so-called "social critics" of academia. Because they have accepted an academic orientation to knowledge, they have not engaged in the inquiry needed to understand university structure as a reflection of its function in the political economy. Thus when they have to justify their own praxis they revert to the myths about the liberal university. But this is not as strange as it first appears. Those who control or manage the university don't require myths to rationalize their activity. Their ongoing exercise of authority and the institutional consequences of this is enough to rationalize their position within the university. Myths are usually taken more seriously by those without, but dependent upon, power.

Let me exemplify this point. After the institutional crisis at Sir George Williams University, Montreal, in 1969, a local group of academic radicals wrote that "... the University must be maintained as the center of free thought, vigorous debate, and the confrontation of ideas, in a setting free of any constraints on academic freedom." It is significant that they saw "ideas", not people, with differing forms of praxis, as being in confrontation. When there is fundamental debate, it is people, not ideas, that are in confrontation, even if the militant behaviour associated with the term "confrontation" is not in existence. Ideas are rooted in language and language is a form of behaviour. But the academic radicals did not situate their theoretical "ideas" in ongoing behaviour. It is also significant that they assumed that the university is a center of free thought and academic freedom. It is true that those who accept the ideology and logic of scientism are "free" to "think" and "debate" in the university. Thought, however, is not one-dimensional, but comparative.
These radical academics developed an "analysis" of the function of the university which, though it touched upon the political economy of education, ignored how university structure fulfills university function. For example, they argued that in bourgeois society the university trains an "administrative and technical intelligensia to implement its rule ... and a humanistic-scientific intelligensia to guarantee its ideological hegemony over other classes". But these ideas were not situated in ongoing events. Instead they talked as though the university fulfilled its function in a metaphysical way. Consistent with the scientific belief that theory is theory - and is true or false as theory, and practice is practice - and is understandable only through theory, they stated that universities "must be understood as contradictory institutions, the essential character of which is the outcome of political and intellectual struggle and not a fixed quality". Such obscurity does not even approach the analysis of the new role of the university in advanced capitalism presented by Galbraith.

Because their view of social trends was mediated and distorted by their adherence to scientific dichotomies, and their related social status, the radical academics persisted with their mythical (theory with no reference) analysis of the function of the university. To perform its functions, they argued that "... the universities have had to be accepted as places in which the freest possible discourse would be permitted." The phrase "the freest possible permitted" is, of course, the crux of the matter. As long as an academic can tolerate his or her own schizoid existence and accept scientific categories as axioms, he or she is free to engage in "discourse". But once a person, whether revolutionary or not,
begins to question these "axioms" and alters his or her teaching and research approaches to open up inquiry into matters ignored by the ideology and logic of scientism, he or she will not find the university to be so tolerant. It is noteworthy that the concern of these academic radicals with maintaining "a setting free of any constraints on academic freedom" on one page was replaced with the concern for "the freest possible discourse permitted" a page later. They shifted from abstract values to a reified social realism88 - with no inquiry to back up either generalization.

These "radical academics called themselves "socialists". And, like all vulgar and/or academic marxists, they showed a certain detached reverence for the socialists who have obtained political power and/or theoretical prestige. But consistent with the scientistic approach to events, they abstracted these "great men" out of their historical and biographic context, and, in doing this, used them as rationalizations for their own praxis in the university. Totally ignoring the fact that revolutionary socialists undertook their profound theoretical work out of universities and while they engaged in political struggles, they wrote that "It is hardly accidental that the outstanding theoretical leaders of the world socialist movement - Marx, Engels, Mao, Gramsci, Castro and many others - were university products."89 The ability to manipulate language without reference to relevant information is one of the skills that the university provides those who think by its rules and a priories. As a way to rationalize first principles, it is adequate. As a basis for inquiry, it is not.

These academic radicals conveniently failed to study Marx and Engels1
theory of ideology and to apply it to themselves. But they persisted that their role as theoretical socialists was to combat "... bourgeois ideology in all its forms - not by abuse, vilification, slander and hysterical outbursts, but by patient argument and the slow formulation of a coherent alternative world world." But if anything is "bourgeois", in the sense that it denies the ideological significance of a particular institution in capitalist society, it is the liberal notion of the university as a place where "the principles of autonomy and academic freedom for all political viewpoints are upheld." Yet this is what the academic radicals stated. In doing this, they abstracted "the university" out of its context within state capitalist society. All political viewpoints are not articulated in the university. Certain people, with certain biographies mediated by particular social class, status, etc., who have experienced certain historical events, get into the university. Others don't. But more important for the purposes of this study, all political viewpoints that are expressed in the university are taught within, that is reduced to, the dichotomies of scientism. The "analysis" presented by these academic radicals is itself an example of this process.

Patient argument and coherent alternatives are indispensable for pragmatic inquiry. But argument and alternatives must be in terms of ongoing inquiry, and not in terms of first principles. The interesting thing is how those who think in terms of first principles, that is, have a static political identity, are the ones who often have nothing but "abuse, vilification, slander and hysterical outbursts" to try to show that a person with similar scientistic assumptions about knowledge, society, history, etc., but with different rhetoric, is one's political enemy.
These academic radicals see themselves as the theorists of the socialist movement. They want to be "free to do that theoretical work which is necessary to the formation of a politically viable radical movement". But in their "analysis" of the university, an analysis that shifts from first principles to reifications of the obvious, there is a notable lack of subject matter and the skills of critical, pragmatic inquiry. For example, they accepted "the maintenance of academic freedom, with all the rights and obligations that this entails" without considering the roots and consequences of what is called "academic freedom" in the university. They whole-heartedly accepted the notion of the "obligations entailed by academic freedom" without pointing out the consequences of these so-called "constraints" for inquiry.

Ultimately, the validity of their position rested on what they called their "experience". Though having a different rhetoric than Popper, these academic radicals relied on the same psychologism to obscure the problems in their position. Thus they wrote that

"Those of us who have been radicals for many years know from experience that every movement for change attracts a lunatic fringe as a well-greased machine attracts grit. Grit, however, has enough sense not to claim that it makes the machine run or that it is the machine. And as a machine must be cleaned from time to time if it is not to grind to a halt, the radical movement must from time to time clean off its opportunistic dirt for the same reason."

We have seen in this study how the ideology and logic of scientism, whether vulgar marxist or liberal positivist, often relies on mechanical metaphors. Such metaphors, especially when used to rationalize the authoritarianism of parties, classes or elites over the "masses", for example, the regimes of Stalin or Nixon,
are often associated with nihilistic consequences. Radical academics who look at ongoing events through grand theory are no less vulgar or simplistic and contradictory in their generalizations than academics with non-leftist beliefs. Their schizoid praxis and reified uses of language makes them more similar to, than different from, those within the ivory tower with whom they agree to disagree.

Radical and Conservative Critiques of the University

Our clarification of the roots and consequences of the ideology and logic of scientism will be enhanced if we continue to utilize a comparative method. Let me therefore polarize the liberal view of the university with that held by many radical students and some conservative scholars.

A common criticism of the university among student radicals is that "... under the present patterns of ownership the university's very production - scientific and technical knowledge and the brainpower to apply and transmit it - is itself the very stuff of which imperialism is made."96 Because of this criticism, many radical students argue that "... as much as tired ex-radical professors will squawk, or liberals warn of the anti-intellectualism of the right, radicals must treat the university as they would a slumlord or a napalm factory."97 The function of universities within the political and military economy makes them complicit in the imperialism of the state capitalist nations over the rest of humanity. In Canada, universities are quickly becoming branch-plant subsidiaries of the U.S. academic marketplace and as such function to extend
the continentalist process.

Because the dichotomies of scientism are treated ontologically and not pragmatically, that is, as useful for particular but not all inquiry, it becomes difficult if not impossible for academics to understand the relationships between the university and this imperialism. For example, if an academic thinks of him or herself as an observer of imperialism, with one's own private beliefs, and does not realize that he or she is within a social field that has a structural relation to an institution which has a structural relation with the rest of the political economy, which functions imperialistically, one cannot even begin to analyze, that is, totalize, the class of problems rooted in the problem of ideology. That is why C.W. Mills was correct when he argued that if matters of method or theory are abstracted from specific problems that the academic will tend towards abstract empiricism or grand theory. The power of the scientistic rhetoric of the ivory tower - where theory is split from practice, the subjective is split from the objective and value is split from fact - keeps the academic from conceptualizing the problems rooted in the very structures that he or she works and lives within.

Treating the dichotomies of scientism in an ontological way may prove to have dire consequences beyond our greatest imagination. If we continue to look at and study the world of ongoing events in terms of "objective", "theory" and "fact", on the one hand, and "subjective", "practical" and "value", on the other hand, we will probably not be able to control, let alone understand, the consequences of present social structures. Perhaps the matter of ecology and pollution
is the best example. Formal, academic and fragmented "studies" about these problems will be unable to simplify, clarify or communicate the roots, consequences and fundamental alternatives to present policies and the structures that underlie them. Though they impede inquiry into these matters, and though there is a slowly growing awareness of the danger of continuing to think in terms of them, the dichotomies of scientism persist. As Lerner said:

"Each of us builds his little private universe, with its fears and hopes and aspirations. But on another level we are all aware that there are forces in the world outside which can pick up this private universe of ours and smash it like an eggshell."98

Lerner's belief that it is the "world outside" that threatens our existence, not the particular structural arrangement of technology, production and science, etc. of which we are a part, is itself rooted in the ideology and logic of scientism. But he was in the process of questioning these assumptions. In contrast to those who still accept the liberal myths about the university, he realized that "a social science in blinders can lead only to social scientists in uniform."99

Lerner believed that five trends underlie the world crisis today. The existence of nuclear weapons, the growth of revolutionary nationalism, what he called the armed doctrine of communism, political wars and the need for world authority were the issues around which he based his critique of education. In his words "To present the nature and operation of these forces is one of the tasks of the ... educational system today."100

We can assume that by this he did not mean that education should indoctrinate people with the ideology of anti-communism under the guise of being value-free. In fact, he was critical of the "liberal mentality" that complements such
an approach to education. This liberal mentality "... has paralyzed much of our educational thinking, and has led by recoil to a brand of educational policy proposals which would make the schools and universities merely the instruments of the state, and would make the test of truth not whether it is valid and verifiable but whether it makes the existing power structure viable."\(^{101}\) And, with the integration of the university into the political economy of state capitalism and the predominance of the value-free dogma and formal logic in academia, this is what has happened.

Lerner linked this tendency to reduce matters of validity to matters of power to what I have named scientism. For example, he quoted the pragmatist William James who wrote that "This systematic denial on science's part of personality as a condition of events, this rigorous belief that in its own essential and innermost nature our world is a strictly impersonal world, may, conceivably, as the whirligig of time goes around, prove to be the very defect that our descendants will be surprised at in our boasted science, the omission that to their eyes will most tend to make it look perspectiveless and short."\(^{102}\) He then argued for "... a feeling for experience and for the exacting relation of language, ideas, and reality which is the nub of the whole scientific method."\(^{103}\)

Lerner believed that "... a philosophy of education today can be nothing short of a philosophy for resolving the triple crisis of our time."\(^{104}\) By "philosophy" he did not mean an academic philosophy which formalizes these issues into propositions, the validity of which are determined in abstract from ongoing events. His view of knowledge and education was more accurate than that.
"... the process of education is neither a pouring of a liquid into a vessel by force nor the evoking of a gushing fountain from its source by the necromancy of love - although if I had to choose between them I should prefer the latter image. I have called it a convergence, or better, an encounter of the student, teacher, and intellectual tradition, taking place not in a vacuum but in a real world, in which all three - nay, all four, the world too - are at every moment transcended and transformed."105

If we see education as an encounter between those engaged in inquiry in certain subject matter and those in the process of becoming engaged in related inquiry, and always situate this in the ongoing world, and, furthermore, if we realize that in such an encounter everything - persons, subject matter and ongoing events - are being transformed, then the notion of education as training within bureaucratic milieux and structures seems a great disaster. We can always play semantic games and argue, rhetorically, that formal education is such an encounter or is in the process of being reformed to become this, but a look at the obvious (e.g., mass courses, grading, credits, the academic marketplace) quickly shows that this is absurd. We can also attempt to justify the ranking system of the university by arguing that it correlates with expertise in particular subject matter and is therefore indispensable to higher education. But the fact that the curricula and bureaucratic rules are mainly a priori to both teacher and student, and the added fact that courses are taught in terms of externals, for example, textbooks and exams, not as people engaged in cooperative inquiry, undermines this position. Only if we ignore the dialectics between structure as function, and classroom as milieux, that is, if we ignore the significant facts, can we consider the present bureaucratic and scientistic training to be educational.
Lerner maintained the belief that there must be a traditional teacher for there to be education. He believed that this was necessary to break students from their isolated "bounds of experience".

"The peer group can transmit only what it is capable of transmitting within the bounds of its experience - and usually the experience is limited. Sometimes, since there is also a tyranny in the peer group, what it transmits is only the enforced cynicism of ignorance and a mocking attitude toward the life of the mind."106

But exactly the same point applies to academics. They can also have a "tyranny in their peer group". Because it is an institutionalized peer group, it may be more schizoid, and, with its reified linguistics, its boundaries may be more impenetrable. The ranking system of the academic marketplace can so obscure intellectual endeavours that it becomes impossible to know who, if anyone, is engaged in significant ongoing inquiry. And there is no ongoing milieu within which this can be evaluated. Most important, university milieux are blatantly hostile to ongoing, critical and pragmatic inquiry because such can disrupt, even subvert, the hierarchical nature of academia. As one anthropologist has stated: "It follows that the more emphasis there is on social ranking within a university the more subversive ideas become, because a good idea can come from any member of a group without regard to the various accidents of history that have created a particular power structure in the university at a given time."107 Once we analyze the structure of the university as a reflection of its function, we can no longer speak of the university as being an accident of history, but the above point is nonetheless relevant.
Politics and Logic in the Multiversity

In a paper entitled University? Impossible! Collenge set out a more formal critique of the university. Though it does not specifically analyze Simon Fraser University, the issues on that campus — especially conflicts between (and within) the Political Science, Sociology and Anthropology Department and the administration — are the roots of many of the problems raised. Because the analysis stems from real university issues, but also because Collenge related political problems in the university to matters of logic in the social sciences, an evaluation of this paper allows me to consolidate the implications of my critique of the ideology and logic of scientism for the university in a specific way.

Collenge believed that the problems of the university are of a "radical" nature. He believed that "... our problems are so fundamental as to require a wholly new philosophical system, in which the idea of the university might make sense ... (and that) the current problems of the university are nothing less than paradigm cases of the malaise in western culture." This seems a strange way to talk about problems in the university, as "paradigm cases", but let us see where this approach to analysis takes us.

Collenge argued that for a university to be a "community", to have a "oneness", it requires a "language of shared symbols", that is, communication that can deal with "characteristic relationships and problems" of all the community and yet be "flexible enough to allow for the stretching of mind and consciousness that goes necessarily with the inevitable demands of change." On the basis of this notion
of a university community, Collenge made several "heavy inferences", mostly to do with language and logic. He pointed out that the "special languages" within the university make a community impossible. Since "the 'meaning' of a word is most usually a function of the way the word is used", these special languages become "unintelligible to anyone not specially trained in them". He saw these special languages as "one of the secret weapons man has invented to understand a puzzling world", but also believed that "the disciplines of academia not only do not talk to one another, by and large, but show decreasing signs of wanting or being able to do so". They have become exclusive.

This "parochialism" has become a matter of university structure. University structure is becoming analogous to the larger social structure "... for disciplines that do not communicate intellectually (and hence cannot share substantive understandings) are in Locke in precisely the same relation one to another as are the interest and pressure groups of society at large: functionally differentiated, they must compete with one another for a share of the available resources and do so by mobilizing power." Collenge thus saw the special languages and functions, and the competition among the disciplines, leading to a political process. "But in the university politics is bad form and consequently the politics of university life are even dirtier because clandestine and unadmitted." This contradiction puts particular pressure on the administration which "... has to operate as if reason were the sole criterion, when power is, and yet being unable to count on the continuity of relative power." This is how Collenge explained why "such administrations become authoritarian".
On the basis of his notion of a university community, Collenge also made some "logical" points. First, he argued that the university is really a multi-
versity, that is, "... a collection of communities depending on the rules of po-
itical coalition and conflict for its structure."116 He believed that
"It is society writ small. No wonder universities lead nobody; no wonder
they have been in the rear of every social movement for the last two
centuries."117

Collenge then shifted attention to "problems of knowledge". He asked:
"What is it, to 'know', especially in a world of special languages and special
references?"118 He was concerned if there was any basis for the university, as
a community, in terms of the characteristics of science.
"Indeed, the hard sciences are interdisciplinary; they do mutually share
and/or understand their respective metaphoric systems; it is their gen-
ius to do so. We can therefore talk about a community of science."119
But when he looked at the "humanities and social sciences", his pessimism about a
university community returned. He argued that "Science and the rest (the humani-
ties and social sciences) in point of fact speak not just different special lan-
guages, but different kinds of languages between which there may be no real pos-
sibility of translation."120 He believed that there are different "teleological
rules" within the two areas of knowledge, and they therefore have "different sorts
of communication".
"... the language of science rests on a rule structure that is wholly
empirical and non-normative. The languages of the social sciences and
humanities are, conversely, normative, even moral, in their very es-
sense."121
Collenge's belief that the humanities and social sciences are normative to
"their very theoretical core" raised particular problems for the process of explana-
tion in social science. He argued that "... while the problem remains to explain system change, the very meaning of system undergoes a radical change for the simple reason that the language in which we think about system is part of the foundation of system itself - we are the system, and we are thinking about changing ourselves."122 This raised several methodological problems. For instance, can an investigator "... be properly 'objective' about a system of which he is a part?" Collenge believed that "... there is something finally odd in trying to be objective about the subjective basis of a language, using that language."123

How do we get out of this dilemma? Collenge believed the solution was the creation of a "logic of ethics in terms of which judgments of right and wrong can be analyzed as logical categories". But there is no such logic at present because of the "anti-normative positivistic path that philosophy and western thought generally have taken since the renaissance". So, even an analysis of the problems of knowledge leads to a conclusion that the university, as a community, is an impossibility. The university is

"... at root, an ethical 'pohram', a system of moral choices about the purposes of social action and change. It is because language itself is, and so is society. But if there is no logic of ethics by which that structure can be explained and criticized, with what are we left?"124

What we are left with depends on where we began and what we assumed at the beginning of our analysis. Let us retrace Collenge's formal critique of the university - both his sociological and philosophical considerations. He quite rightly related the fragmented character of the disciplines to a political process. But his conceptualization of this - that is, his own metaphor - must be scrutinized
carefully. His one-to-one analogy between university structure and the larger social structure is too neat and too abstract to allow us to analyze consequential relationships, including ideological ones, between the university and society. In this metaphor, "interest and pressure groups" compete for resources. If we extend the analogy, the administration functions like the government, with the same insecurities about its continuity. And, according to the logic of this metaphor, it is no wonder that both forms of administration become authoritarian.

With its talk of "interest groups" and "competition for scarce resources", the metaphor is itself rooted in liberal ideology. Liberal ideology tends to reduce all social problems, whether rooted in class, race, etc., to interest groups competing for scarce resources. It ignores the fact that those who own and/or control production, distribution, marketing and consumption have access to immense wealth, while the vast majority of the population is either marginal or impoverished. As the social realities in North America have been exposed, this metaphor has been so contradicted that liberals, like Galbraith, have had to change their perspective sharply.

It also is a metaphor that abstracts criteria from the notion of a "community of scholars", itself a myth, and then evaluates trends in the university in terms of such criteria. It is little wonder then that it remains a formal critique without having any basis in an analysis of the functions of the university within state capitalism. Though a university community is impossible in the present society, the university, as a part of the corporate society, continues to fulfill its functions. A critique that is to be relevant to any strategy to humanize inquiry,
and such would involve the replacement of the fragmented, competitive university of which Collenge is critical, must begin from the concrete, not idealized, view of the "empirical-contingent" world.

Collenge did point out that "politics is bad form" in the university but he did not expose the ideology and logic of scientism which obscures the power plays within the university. Nor did he discuss why there are scarce resources for higher education and how this underlies much of the competition among university departments. Such an analysis would involve an analysis of the priorities of governments and the availability of resources to them. This question, which ultimately forces us to look at the corporate capitalist system of production and distribution of resources and wealth, is fundamental to understanding university problems. The place of the university within state capitalism means that we have to understand the workings of the latter to understand the problems of the former. 125

What are the power struggles in the university about? From Collenge's analysis you get the picture of apolitical disciplines struggling over scarce resources for purely academic reasons. A look at the social arrangement of science and the politics of education however quickly dispels any such notion. Research that functions in the military-industrial set-up gets surplus financing whereas researchers that do not have a direct or indirect function in this set-up must scrimp for resources. 126 Not all possible subject matters are taught within the university, and expansion of one department over another, say, in enrollment and resources, does not occur because of free competition in an open market. Yet this is the image that Collenge's metaphor conjures up. The liberal metaphor, even if
extended to take the power struggles of the university into account, cannot ac-
count for the actual workings of the university.

But what of his logical points? Does his distinction between "science" and "the rest", as he called the humanities and social sciences, hold up? While his concern with language and logic is relevant to a study of the university his understanding of language remained formal. Saying that "the language of science rests on a rule structure that is wholly empirical and non-normative" suggests that the natural sciences are value-free both in technique and theory. But the "paradigms" within which natural science operates are not, as Kuhn showed, unhistorical. Nor are the techniques that are fundamental to them. The social arrangement of the physical sciences interrelates experimental techniques and technology in such a manner that science and politics ultimately have an overlapping teleology or set of goals. Cellelge's logical points, like his political ones, also had roots in liberal theory and the ideology and logic of scientism. For example, "facts" and the "uses to which science is put" were arbitrarily separated by him. In a footnote he stated that "The problems of making nerve gas are scientific; whether to make it, or whether to use it, those are political matters, uniquely normative." What he failed to mention was the existing relationship between political and scientific institutions ensures that certain research, with particular political goals in mind, is given priority. The so-called military-industrial complex does not treat the university as a sanctuary, but as a plant. It is an academic matter to debate, in abstract - that is, without reference to ongoing events - whether "facts" and "uses" are separate or not. The consequences of a certain social arrangement of
science and education is what must concern us in a time when science is thoroughly integrated into the corporate society.

Collenge, like Weber in this regard, split the normative from the empirical in his view of true science. But, unlike Weber, he treated social science as a special normative form of inquiry. But this split and the dilemma that results from it is unreal, even for the so-called hard sciences. Only if we mystify the hard or exact sciences, ignore their historical development, and ignore Toulmin's point that their exactness comes not from theory being "true", but from the exact specification of the conditions under which we can consider something to fulfill a theoretical ideal, can we maintain this distinction between "science" and "the rest" of inquiry. But the specification of the so-called hard sciences, like all specifications, occurs within a social field, with the aid of human technology, in terms of ideals that are of some pragmatic value to certain social groupings.

If we think of "science" as being an academic and value-free venture, we can think of it as being unrelated to consequences. And the scientistic dichotomies between objective and subjective, theory and practice, value and fact all reinforce such a belief. But all inquiry, whether in the natural, physical or social sciences, has implications for us. Collenge's formal understanding of physical science, where it is supposedly simply a question of whether an "explanation does, or does not, fit the facts", abstracts aspects of the activity of science out of their social and political context. It is therefore unable to scrutinize the implications of this context for inquiry. If inquiry is to be rooted in actual
events, and a working logic to help assess practical arguments is to be established, problems implied by the context of the activity of science will have to be included in the subject matter of science itself. There is nothing, except a continued belief in the ideology and logic of scientism and the university, as it functions, to stop us from extending inquiry into such matters.

But Collenge was trapped within the scientistic dichotomies. He broadened his interest in problems in knowledge to include the problems of the multiversity, but never situated the multiversity in its social context. He argued that academics are political, though this is rhetorically in bad form. But what are they political for or about? What positions do they, in the main, hold within the "ideological struggles" of the society and globe? Collenge's metaphor falsely implied that they are value-free and purely academic, and that their politics is a means to this end. But from the very beginning of their socialization and training, academics are learning a class of problems, methods and theories, and a logic to complement such a "paradigm", which has a particular social and political function and is related to certain social and human consequences. Since they are unable to understand problems rooted in their own experience in the university, we cannot expect anything but obscurity when they analyze "other people's" problems. Their social and political function might even be considered to be the creation of obscurity.

We are all a part of social, biological and physical systems. Science in all realms has implications for "changing ourselves". Like Winch in this regard, Collenge tried to distinguish between physical and social science in terms of human
values, norms or morality. But we are all involved in the globe - its ecology, its geography, its social structures, etc. - and we as a species have affected all these things. If we are to control the consequences of all forms of science and technology in ways we wish, then we will quickly have to break from scientific dichotomies - including that between "science" and "humanities" - and treat inquiry as a human endeavour that ultimately rests on our freedom to make judgments about and control consequences. The issue of human survival is quickly reconciling the general and the particular question of what values, as goals or as an end-in-view, we must have for all inquiry. Our judgments may have mainly been in error to this point in the history of science, and this is greatly because the ideology and logic of scientism within academia have inhibited such a critical, relevant form of inquiry from developing. This, however, does not alter the urgent need to establish such inquiry.

The ideology and logic of scientism is not rooted in the cognitions of academics. It is rooted in the schizoid uses of language and underlying praxis that are daily reinforced by the obvious events of the university. Once metaphors that have a particular ideological leaning and are related to the function of a particular form and content of knowledge become formalized, we can deceive ourselves into believing that we can solve problems in the realm of pure theory. Because the university trains us to use language in a reified, academic way, we are unable to situate theoretical problems within the ideological struggles in the world. If we are ignorant of the ideological roots of our metaphors, then we cannot evaluate ideas in terms of their relation to living consequences. College's formal analysis
of the politics and logic of the multiversity, though exposing some problems, obscured the underlying problem of ideology and the implications of this for logic. A formal "logic of ethics" is not a solution to the problems of the university or of knowledge. Academics could debate such a notion and still maintain their schizoid praxis. A university with courses on the "logic of ethics" would still nurture the ideology and logic of scientism and fulfill its function within the political economy of state capitalism. Changing the structures and the social and educational relations that lead to this schizoid praxis, and to formal solutions to formally conceived problems, is the solution to the political and logical problems of the multiversity.

Pragmatic Inquiry and Social Change

This analysis of the university - of its boundaries and schizoid praxis, its repressive tolerances, its function in the political economy, its myths and the inability of academics to understand its problems at their roots - should dispel any reformist notion that a minor change here, and another there, could turn the university into a center of pragmatic inquiry. I agree with Veblen's prognosis that a total structural change in the university, and, because of its incorporation into state capitalism, a change in the complete social structure, would be required before it could become a place of learning. The ideology and logic of scientism is not only fundamental to academia, but also to the corporate society, and it will not be replaced until that society is in the process of fundamental transformation.

If we believe that the argument of this study has some value and that it not only exposed the fallacies of the ideology and logic of scientism, but pin-
points the roots and consequences of it, then we should not formalize the argu-
ment into an academic language and create new critical rhetoric to co-exist with-
in the boundaries of academia. The tendency to do this is very strong because
our conditioning to abstract language predisposes us to even abstract a critique
of this very tendency. To counter this it is necessary to return to C.W. Mills' ques-
tion about the levers of change available for the task of humanizing science.
Since this has not been a study of the radical movement and the corporate society,
or of the Canadian movement and social structure, in particular, any generalizations
about social change and revolution would amount to grand theory and nothing more.
And it is too early to tell what the effects on the university will be from a con-
tinuation and growth of the student movement, or what the possibility of transform-
ing the corporate society are at this time.

But this study nevertheless does have some bearing on Mills' question about
strategy. If we reflect back on the theorists who provided real insights into the
problems of ideology and logic, from which I developed my characterization and cri-
tique of the ideology and logic of scientism, we can gain vital clues about approaches
to analysis that, if consistently realized, can themselves act as an aspect of the
strategy for accomplishing the social-scientific revolution needed in our society.
For example, it was Marx who continually emphasized that "not criticism, but revolu-
tion is the driving force of history". Such can be a warning to not treat ideas
in an academic way, but to always situate method and theory in problems that are
rooted in ongoing events. Once we do this - and make praxis the beginning and end
of inquiry - we are not likely to forget another statement by Marx, that the "...
products of consciousness cannot be dissolved by mental criticism". 131

Unless we combine this anti-academic orientation with an anti-reductionistic one, there is the possibility that we will become sectarian in our analyses. Unlike vulgar marxists of today, Marx recognized that the categories of theory are pragmatic; that they serve to clarify problems and courses of action for humans. Knowledge does not define human or social essences. To believe that it can is to abstract method and theory from praxis and to revert to metaphysical obscurities. That is why, in reference to those he named "capitalists", Marx emphasized that "we do not mean ... that (they) cease to be persons". 132

Nor was Marx a grand theorist unaware of his own praxis. He realized in his time what I have attempted to analyze in our own: that an alienated, schizoid praxis cannot be the basis of humanistic, pragmatic knowledge. When he wrote that "social relationships take on an independent existence (and) there appears a division within the life of each individual", 133 he was concerned with what I have called a schizoid existence. Like Laing, Marx was aware that isolated individuals never clarify, but only mystify, the roots and consequences of events. His statement that "conditions ... had won an independent existence over against the separate individuals just because of their separation as individuals ... and through their separation had become a bond alien to them ..." 134 applies to any university you wish to name.

But what are we to do with Marx's statement that "revolutionary ideas ... predispose a revolutionary class"? 135 Many people, those Sarte called the "Lazy
Marxists", would like to revert back to the reified categories of vulgar marxism. The need for historically specific inquiry, however, can never be surpassed. In this regard, I agree with Sartre who has said that

"... the student revolt is perhaps the first manifestation of the new themes and new class conflicts of our society ... every revolutionary movement in a new society invents its practice but does not invent as quickly its theory. And so it resorts to the previous revolution. In 1848 people used the language of the French Revolution of 1789. This kind of continuity is natural and today the new student revolution must use the language of the workers' revolution, the Leninist revolution ... Thus the students have tended to deny their bourgeois origins and claim to be at the service of the people ... The workers say fine, but do not burn my car. In fact, however, students are their own avant-guard. And the more the students study the more they will attack and contest." 136

The theory and practice of the student revolution will have to undergo continuous transformation until a radical consciousness of the roots and consequences of corporate structures complements strategies to bring about the needed social-scientific revolution. Historically specific pragmatic studies will be required to challenge revolutionary rhetoric rooted in Leninism, and to bring about a real unity of theory and practice.

C.W. Mills is one of the few models we have in North America for historically specific inquiry. Though he lacked the political milieu of Sartre, he developed a similar critique of academic and vulgar approaches to knowledge. He recognized that the end-of-ideology was a "mechanistic response to the ideology of Stalinism". 137 And, rather than the decline of socialism in the 1930's being the end of all ideology, he pointed out that it was "the ending of political reflection itself as public fact" in North America. 138

But Mills never articulated the problem of ideology or the problems this
presented for matters of logic, as problems. He treated "ideology" in a general way, as either "justifying or criticizing certain institutions and practices". Though he did develop a perspective that dealt with the dialectics of milieux and structures in society, the task of translating this perspective into an ideological project to challenge all forms of scientism remained for Sartre.

In our time it is Sartre who represents the struggle against both scientism and the social structures that nurture this dogma. Sartre has waged an ideological struggle against both liberal positivism and vulgar marxism. The aim of his ideological project has been to "reduce the part of indetermination and non-knowledge"\textsuperscript{139} and, as such, to enhance human freedom. His goal was to transform the method of the social sciences so that the existential dimension becomes fundamental to our studies. This is not a mystification of "existence", but a perspective consistent with that of Mead and Dewey and their emphasis on the social field of science. As Sartre said: "The object of existentialism ... is the particular man in the social field, in his class, in an environment of collective objects and of other particular people."\textsuperscript{140} Like Marx, Sartre believed that "man, alienated, mystified, reified, etc. still remains a man".\textsuperscript{141}

Unless "science" is of some value, that is, indicative of jobs to be done, it cannot be considered to be knowledge. Scientism does not constitute knowledge because it does not situate its ideas about fact, value or theory in ongoing events. Ignoring or denying their own praxis, and how it is interrelated with milieux and structures, the ideologists of scientism create reified, mystified views of the world. In contrast to this Sartre realized that the "sociologist ... is an object
of history" and that problems, methods and theories come from an objectification, totalization and universalization of one’s relationship to ongoing events. It is because of this that the social scientist does not define but rather encounters society in all his or her work. And, as Sartre stressed, "To understand is to change, to go beyond oneself."

To develop the kind of social science envisioned by Marx, Mills, Sartre, Mead and Dewey, the dichotomies of the ideology and logic of scientism will have to be discarded. They impede the kind of inquiry needed to develop both the form and content appropriate to a humanistic social science. While academics fragment the world and their experience into objective and subjective, theoretical and practical, value and fact, the structures that nurture and reinforce these dichotomies continue to expand. If this is allowed to continue, the ideology and logic of scientism and the structures that complement it may culminate in a self-fulfilling, totalitarian society where not only academia but all institutions will obscure the roots and dire consequences of the policies of the dominant society.

This scientistic totalitarianism is already developing to the south, in the heartland of scientistic education. In a publication entitled *Learning and Creativity* circulated to "science" teachers in the United States, two academics gave the following advice:

"As already pointed out, a teacher can reinforce, shape, and chain behavior, as well as place it under stimulus control. Each student is in a complex world of reinforcement schedules. His behavior is shaped and controlled by reinforcement schedules in the home, community, and peer group, as well as in the classroom. The teacher will experience difficulty when his reinforcement schedules for the student must compete with other schedules that exercise a more powerful control over student behavior. Good students have their lives arranged so that they have a consistent set
of reinforcement schedules that are congruent with those provided by the school. Fortunate are both the students and the teachers who live in a scientific community, such as those around missile bases, in which the school, the family, and the community all reinforce the learning of science. The advantage for a student living in a boarding school, such as an English public school, is that the whole pattern of life activities is run on schedules of reinforcement that are consistent with those of the educational activities."

If and when the missiles fire the training of these "good students" in the ideology and logic of scientism will have no pragmatic value, whatsoever, for their or our survival.

Footnotes

1A thorough study would analyze the "interest groups" (administration, faculty, staff and students) of a university; the relation of a university to provincial-regional and national-continental structures and its function within them; its historical development in terms of the above two matters, and the political conflicts occurring in and around the university as part of broader political and ideological struggles now occurring.

2British Columbia Department of Education, Division of Curricula Guidance, p. 49.


4See p. 112 above.


8. See C. Wright Mills and Hans Gerth: *Character and Social Structure*, op. cit., especially pp. 19-22 for a perspective on how human perceptions, emotions and motivations develop out of organic sensations, feelings and impulses; and pp. 81-84 and pp. 137-39 for a discussion of the development of language that complements the approach taken in this chapter.


10. See William D. Temby: Suicide, in Graham B. Blaine et al.: *Emotional Problems of the Student*. Garden City, N.Y., Anchor (1966), pp. 147-69. This discussion of suicide reflects applied scientism. Searching for the cause of student suicides, the author concluded that "the incidence of death of a parent ... is statistically significant". (Ibid., p. 152.) This neo-Freudian with his computer did mention that "the most common location chosen for the suicidal act was the college" (Ibid., p. 154,) but nowhere did he situate suicide, as an act that should speak loudly, in the kind of social relations that students face in university. When the ideology and logic of scientism is applied to problems within the university, its shallowness is over-exposed.


12. Ibid., p. 120.

13. Ibid., p. 121.

14. Ibid.

15. Ibid.

16. Ibid.


20. Ibid., p. 76.

21. Ibid., p. 77.

22. Ibid., p. 66.
23 Ibid., p. 82.

24 Ibid., p. 102.


26 Ibid.


29 For a discussion on how inquiry is always rooted in a social field, see pp. 440-44 above.

30 We Want A University. The Berkeley Free Speech Movement, 1964.


33 Herbert Marcuse: Repressive Tolerance, op. cit., p. 96.


35 Marcuse, op. cit., p. 96.

36 Ibid., p. 99.

37 Ibid., p. 113.

38 Ibid., p. 112.

39 Ibid., pp. 100-1.

40 Ibid., p. 112.


Marcuse himself tends towards a version of the value-free doctrine. When he stated "that this distinction (between liberating and repressive teaching) is not a matter of value-preference but of rational criteria" (Repressive Tolerance, op. cit., p. 101) he accepted the scientistic dichotomy between value and fact; and, in effect, between reason and experience. His abstract, unrealistic criticism of education is rooted in his academic orientation.


Yeblen, op. cit., p. 163.

Ibid., p. 77.

Ibid., p. 121.


For a discussion of "grantmanship" in the universities, see Robert Engler: Social Science and Social Consciousness: The Shame of the Universities, in T. Roszak (ed.): The Dissenting Academy. New York, Pantheon (1967). About the textbook industry Engler writes: "Publishers scramble into the lucrative textbook market (approximately one third of all industry sales) and they become listed on the market. 'Textbooks', reports the chairman of Collier and Macmillan, 'may reasonably be expected to constitute the single most important classification of product for the next ten years.'" (Ibid., p. 187.) Ironically, the publisher of The Dissenting Academy was mentioned in the following context: "RSA has taken over Random House, which had previously acquired Knopf and taken over Pantheon." (Ibid., p. 188.) If an analysis of the monopolization of the textbook industry and inter-locking directorships was done on the publishers listed in the bibliography of this study, perhaps the tedious work of footnoting might be abolished and all references replaced with the phrase "The Company". Need I add that the monopolization of books is a very good basis for censorship?

Yeblen, op. cit., p. 93.

Ibid., p. 135.

Ibid., p. 129.

Ibid., p. 132.


59. Ibid., p. 225.


63. An excellent example of such rhetoric is in the Educational Policy for the Liberal Arts, Regina Campus, University of Saskatchewan: "Above all, the role of critic, of examiner of institutions and ideas, belongs to the modern university functioning as a community of scholars. Its criticism should be sustained by constant reference to essential human values, which demands a deliberate renewal of the study of the nature of love, of justice, freedom, beauty, science: in fact, all those values which give meaning and substance to life. This implies a de-emphasis of mere topicality in the subject matter of the liberal arts curriculum. Further, this examination requires that all liberal arts students should be involved with a wide range of subject matter, so presented that the study may be enabled to synthesize his total experience in the liberal arts college. Such a program will frequently call for a kind of intellectual slum-clearance, a breaking up of those conventional myths which are frequently identified with reality. This constant critique must be applied first to the structure and function of the university itself." For a case study of the contradictions between university rhetoric and reality, see *Rhetoric and Reality In the University: A Case Study of Regina Campus*. Port Arthur, Department of Psychology, Lakehead University, mimeographed, 1967.


68. Ibid.

69. The Universities Act of British Columbia, 1963, reads that "The management, administration, and control of the property, revenue, business and affairs of the University are vested in the Board." With the dominance of corporate directors on University Boards, the State is, in effect, handing over control of higher education to the corporations.

70. O'Connor, op. cit., p. 15.


72. It would be fruitful to undertake a thorough examination of the way Porter related or didn't relate his data and his claims. In his study, there is no explicit development of a thesis, as Mills did in The Power Elite, but an accumulation of data without directing principles even being made explicit. Thus we get statements like: "Marx's class theories have in the main been abandoned by contemporary theorists for the good reason that the facts do not fit the theory." (Ibid., p. 18.) We have already criticized this deductive notion of theory. The important thing to note is how Porter stated his "ideas" separate from an evaluation of the significance of his observations. In a sense, Porter establishes no facts about class and power in Canada. This job has still to be done.

73. Porter, op. cit., p. 301.


75. Ibid., p. 282.

76. Ibid., p. 284.

77. Ibid., p. 291.

78. Ibid., p. 292.

79. Throughout this study, especially in Chapter Eleven, I have argued that vulgar marxism and liberal positivism are both variations of the ideology and logic of scientism. If we think only of the United States as a state capitalist system, then this argument seems weak. For a convincing argument that the U.S.S.R. must also be considered a state capitalist system, see Raya Dunayevskaya: Marxism and Freedom. New York, Twayne Publishers (1964), Chapter XIII.
Throughout the 1940s and 1950s, direct investments in Canada by U.S. corporations rose from 2.5 to 16.8 million. In 1946 Canada was the second highest area for direct investments from U.S. corporations (Latin America was highest with 3.1 million), but by 1966 Canada had become the area with the most direct investments. Europe was second in 1966 with 16.2 and Latin America was third with 9.9 million. (Saturday Review, Nov. 22, 1969.) Seeley has argued that Canadian universities are not immune from the authoritarian type of rule that occurs in U.S. universities. (John Seeley: The "Berkeley Issue" In Time And Place, in H. Adelman and D. Lee: The University Game. Toronto, Anansi (1968), pp. 137-45.) For a discussion of the kind of authoritarianism that occurs in Canadian universities, where the reasoning of a University President is compared with that in Mein Kampf, see John R. Seeley: California Correctional Facility (Minimum Security Wing): The University of California. Berkeley Teach-In, Nov. 17, 1967.

Social criticism that stems from first principles ends up as social realism. Abstract criticisms of "society" in theory complement the concrete acceptance of social institutions in the lives of academic radicals.

Genovese, op. cit.

Ibid.
For data that begins to provide a perspective on how channelling occurs within Canadian education, see Porter, op. cit., Chapter Six.

Genovese, op. cit.

Ibid.

Ibid.

Leviathan, op. cit., p. 17.

Ibid., p. 18.

Max Lerner: Education and a Radical Humanism. Columbus, Ohio State University (1962), p. 3. Another conservative scholar who is critical of the liberal university is George Grant: The University Curricula. The University Game, op. cit., pp. 47-68. Grant argues "So monolithic is the agreement of society about ends, so pervasive the ideology of liberalism which expresses that agreement, that the question about knowing cannot be raised seriously." (Ibid., p. 48.) Though he did not analyze what I called "the tautology between milieu and structure" he did argue that "... the university curriculum, by the very studies it incorporates, guarantees that there should be no serious criticism of itself or of the society." (Ibid., p. 66.)


Ibid., p. 4.

Ibid., p. 15.

Ibid., pp. 19-20.

Ibid., p. 20.

Ibid., p. 24. "From one aspect the world is passing through a power crisis; from another it is a crisis of collective will and belief; from still another a crisis of human values." (Ibid., p. 3.)

Ibid., p. 47. The notion that education is an encounter is far more accurate than any of the common one-dimensional definitions. A school-centered, subject-centered, teacher-centered or student-centered definition amounts to the same thing because it does not account for the potential change in all - institutions, people and knowledge - if educational relationships are non-authoritarian. The fad around student-centered teaching (Carl R. Rogers: Student-Centered Teaching, in Client-Centered..."
Therapy. Boston, Houghton Mifflin (1951), pp. 384-428.) in the past few years is, in consequence, a new method of social control in the classroom. It leaves unquestioned the boundaries, schizoid praxis, tautology between structure and milieu and business-like control of the university.


Frank B. Collenge: University? Impossible! Burnaby, British Columbia. Focus, Vol. 1, No. 1, March-April, 1969, pp. 24-29. By "radical", Collenge meant that the university is impossible for both what he called "empirical-contingent" and "logically necessary" reasons. Our analysis suggests that Collenge's formal analysis of university problems does not "go to the roots", but is indicative of disillusionment with the liberal notion of university without abandoning the myth entailed.

Ibid., p. 24.

Ibid.

Ibid., p. 25.

Ibid.


Ibid.

In September, 1968, when Acting President of Simon Fraser University Strand stated publically: "Perhaps I am old fashioned, but I believe university problems can be resolved through reason rather than power." (Address, Sept. 9, 1968.) In November, after the crisis over admissions policies, the administration issued, in part, the following statement: "It was the persons occupying the building who replaced reason by force when they chose to occupy the administrative building and it was the occupants of the building who decided that, if they were to be removed, they would be removed by force." (SFU Press Release, Nov. 27, 1968.) George Orwell has written: "Political language ... is designed to make lies sound truthful and murder respectable, and to give an appearance of solidarity to pure wind." (The Politics of Bureaucracy, op. cit.) Now, as Permanent President, Strand still addresses his memos "To all members of the university community".

Collenge, op. cit., p. 26. Collenge's belief that the authoritarian nature of university administrations is rooted in the fragmented nature of the university is
contradicted by Kerr's analysis of the multiversity. For example, Kerr wrote that "the universities themselves will have to exercise more stringent controls by centralizing authority, particularly through the audit process. In a few situations, self-restraint has not been enough restraint; as one result, greater external restraint will be imposed in most situations." (See Hal Draper: The Mind of Clark Kerr, Independent Socialist Club, Berkeley, 1964.)

117 Ibid.
118 Ibid., p. 27.
119 Ibid.
120 Ibid.
121 Ibid.
122 Ibid., p. 29.
123 Ibid.
124 Ibid.
125 For a specific discussion of these relationships, see my The New Radicals In British Columbia, in D. Roussopoulos and Paul Audley (eds.): The New Radicals In Canada. Toronto, Copp-Clark (1970).
126 The Dissenting Academy, op. cit.
127 College, op. cit., p. 28.
128 Ibid.
130 See p. 18 above.
131 See p. 18 above.
132 See p. 20 above.
133 See p. 20 above.
134 See p. 19 above.
135 See p. 19 above.


137 See p. 160 above.

138 See p. 159 above.

139 See p. 179 above. For a discussion of the significance of Sartre's ideological project see Andre Gorz: Sartre and Marx. New Left Review. No. 37, May-June, 1966, pp. 33-52. Sartre's ideological project is often called a philosophical anthropology. Konrad Lorenz has written "Philosophical anthropology of a type neglecting biological fact has done its worst by imbuing humanity with that sort of pride which only comes before, but causes, a fall." (On Aggression. Toronto, Bantam (1966), p. 288.) This legitimate warning does not apply to Sartre, but it does, for example, to Richard M. Zaner: An Approach To A Philosophical Anthropology. Philosophical and Phenomenological Research. Vol. 27, 1966-67, pp. 55-68.

140 See p. 177 above.

141 See pp. 175-76 above.

142 See p. 180 above.

143 See p. 183 above.

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