SOCIAL FACTS AND THEORY CONSTRUCTION IN SOCIOLOGY

by

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Social Facts and Theory Construction in Sociology

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ABSTRACT

This paper is concerned with the methodology of sociology: with the nature of sociological theory and sociological explanation. There is a longstanding tradition in sociology, as represented by Émile Durkheim and his followers, which argues for the application of paradigms of theory construction and explanation drawn from natural science. This paper examines and evaluates such ambitions, and also asks whether there are alternatives to the Durkheimian method.

We proceed in three stages. First, we elucidate and articulate Durkheim's conception of social fact as empirical bedrock. Since the concept of social fact is crucial to the construction of theories, we next discuss whether theory construction in the manner of natural sciences—as outlined by C. Hempel—is possible given our previous result. Finally, we explore the possibility of an alternative mode of theorizing and explanation in sociology.

The conclusion is that sociological theory construction, as advocated by Durkheim, is an impossible task. The Hempelian model of theory and explanation, which is explanation by reduction to covering laws, is not only impossible in sociology but unnecessary. It is argued that the mode of explanation in sociology is "by description," since the dimension of social reality which consists of human behavior, attitudes, beliefs,
etc., is drastically different from the dimension of the reality of natural facts. In the final chapter, explanation by description is also shown to presuppose an objective background of rationality which anchors sociological explanation to the bedrock of human knowledge.
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CHAPTER I -- Social Facts

In Chapter One of *The Rules of Sociological Method* Durkheim defines social facts as:

"ways of acting, thinking, and feeling that present the noteworthy property of existing outside the individual consciousness. These types of conduct or thought are not only external to the individual but are, endowed with coercive power by virtue of which they impose themselves upon him, independent of his individual will."

He further characterized social facts' power of coercion in terms of "the existence of some specific sanction . . . against every individual effort that tends to violate it." Social facts can also be recognized in terms of their "diffusion within the group," and as having the ability "of exercising on the individual an external constraint." Hence social facts are recognized by the characteristic features of (1) externality, (2) constraint, (3) generality.

Given such a formulation, an incredibly wide spectrum of phenomena can be subsumed under the notion of social fact, ranging from the technological development of the society to its legal and economic system, its traditional beliefs, religions and patterns of group behavior as well as individual behavior. Social facts can be arranged in the form of a continuum covering the most general and "objective" social phenomena down to the more specific group and individual's behavioral patterns. And each phenomenon can be recognized, presumably, in terms of the
characteristics of externality, constraint, and generality. Laws can be found existing objectively in law books and in the practices of courthouses and of prisons; the economy of any given society shapes the lives of all the members of the society and is independent of any individual's will and desire; religious and traditional beliefs are embodied in individual's attitudes, outlooks, and sentiments; and the everyday behavior of the individual is shaped by all these external constraints and is a manifestation of them after they have been internalized by the subjective consciousness of the individual.

In this section, I would like to argue that, according to Durkheim's formulation, there are two different aspects to the existence of social facts. They are the external and internal aspects. By external aspect, I mean any state of affairs that existence of which is relatively unrelated to the observer's subjective state. By internal aspect, I mean any state of affairs the observation of which is closely related to and to a certain extent determined by the observer's subjective state. These two aspects of the existence of the Durkheimian social fact renders ambiguous the very concept of social fact itself and at times, as I hope to show, they are incompatible.

As I have noted earlier, the notion of social fact encompasses a wide spectrum of social phenomena, which can be ordered into a continuum. Prima facie, there is no obvious difficulty in understanding such a notion and it does not seem
to imply any contradiction or inconsistency. Trouble arises, however, when one takes into account Durkheim's methodology for the observation of social facts.

He first insists that "social phenomena (facts) are things and ought to be treated as things." Then he outlines two principles for the observation of social facts.

The first principle: all preconceptions must be eradicated. The second principle: the subject matter of every sociological study should comprise a group of phenomena defined in advance by certain common external characteristics; and all phenomena so defined should be included within this group.  

While Durkheim suggests that social facts are "things," he has also given a detailed account of what a "thing" is:

What, precisely, is a "thing"? A thing differs from an idea in the same way as that which we know from without differs from within. Things include all objects of knowledge that cannot be conceived by purely mental activity, those that require for this conception data from outside the mind, from observations and experiments, those which are built up from the more external and immediately accessible characteristics to the less visible and more profound.  

Hence a "thing" is contrasted with an "idea" as the external is contrasted with the internal, the "without" is contrasted with the "within." And as to the observation of "things" Durkheim suggests that:

To treat the facts of a certain order as things is . . . to assume a certain mental attitude towards them on the principle that when approaching their study we are absolutely ignorant of their nature.  

3
This formulation here comes dangerously close to the naive position that the quality of "thinghood" is that of being external to the observing mind; and while this observing mind is preconceptionless, the knowledge of the nature of the observed things can be directly implanted into it. If social facts indeed consist, as formulated by Durkheim, of both the external and internal aspects, then their observation cannot be carried out in the manner just described. An internal tension can be observed in Durkheim's approach between the notion of social fact and the attempt to treat them simply as "things." To elaborate on this, let us consider the three characteristic features of social fact individually.

First, let us look at externality. We can observe that there are social phenomena that are external to any single individual. But are there social facts that are external to all individuals? That is, can they be independent of the existence of all individuals? This brings into question the ontological status of social facts. It can be argued that since physical things like mountains and rivers can exist without any individual's perception of them, then social facts as things should have the same ontological status. Such an interpretation would reduce social facts to some super-entities existing independently of people completely. I don't believe this is what Durkheim intends and, as he says in the preface to the second edition of *The Rules of Sociological Method*: "... in order
that there may be a social fact, several individuals, at the very least, must have contributed their action; and in this joint activity is the origin of a new fact." It is clear that social facts exist insofar as there are social activities, and social activities naturally imply people and communities with social organizations. In this sense the characteristic of externality cannot be interpreted as external to all individuals' existence. But then how should it be interpreted? It seems to me that it should be understood as an explanatory device with which social behaviors are accounted for by something other than individuals' psychology or concepts of individual's intention and so on. This is a move to establish an independent domain of explanation which is labelled as "social fact." The workings of this explanatory device--social facts--bring us to its second feature, constraint.

The external aspect of constraint is quite clear. The law has the coercive power to control individual's behavior. The explicit exercise of authority and the conformity of the individuals to the authority is a clear case of the nature of constraint of social facts. But Durkheim also speaks of social facts as "ways of acting, thinking, and feeling" and the question is how are these "ways of acting, thinking, and feeling" results of the constraining nature of social facts.

The constraining effects of social facts can be classified in the following ways. (1) Legal constraint: in spite of the
fact that we can choose either to break the law or not to break
the law, both decisions have far reaching consequences in our
behavior. (2) Psychological constraint: our behavior as
determined by the situations within which we interact. To use
Durkheim's examples: there are sudden and uncontrollable
emotions of patriotism, mob mentality, brotherly love, etc., in
a group or crowd situation. (3) The conceptual framework
constraint: this is a complex concept involving language,
traditional belief, knowledge, cultural heritage as
deterministic factors on an individual's behavior. According to
Webster's New World Dictionary (second college edition),
"constraint" means "confinement or restriction, compulsion or
coercion, a repression of natural feelings or behavior, forced,
unnatural manners, awkwardness." And it seems to me that only
(1) legal constraint, can be understood as the clear case of the
existence of certain social facts constraining individual
behavior. H.L.A. Hart, Professor of Jurisprudence at Oxford, in
his paper "Prolegomenon to Principles of Punishment," discusses
in some detail the constraining effect of law. He asks and
answers the question:

Why are certain kinds of actions forbidden by law and so
made crimes or offences? The answer is: To announce to
society that these actions are not to be done and to
secure that fewer of them are done. 5

The basic premises assumed here are first that there is a
choice between breaking and not breaking the law; and secondly,
that the individual has the ability to choose. Given these two premises punishment is justified in the sense that the law can hold the offender responsible for the offence. We do not have to go into the details of the argument of the utilitarian conception of punishment and the "strict liability" argument. What is clear is that the individual's awareness of the choice and that he is free to choose are presupposed in the legal system of punishment. To quote Hart at length:

Criminal punishment, as an attempt to secure desired behavior, differs by taking a risk from the manipulative techniques of the Brave New World and from the simple incapacitation of those with anti-social tendencies. . . . This is a method of social control which manages individual freedom within the coercive framework of law in a number of different ways, or perhaps, different senses: First, the individual has an option between obeying or paying . . . Secondly, this system not only enables individuals to exercise this choice but increases the power of individuals to identify beforehand periods when the law's punishment will not interfere with them and to plan their lives accordingly.6

The constraining effect of law, then, is based on the ideas of individual's freedom and responsibility and hence the belief that the individual would shape his behavior accordingly. Hart has also discussed situations in which the individual cannot be held responsible for his behavior. An individual's action can be "excused" if it is established that the action committed is unintentional, or involuntary, or due to types of mental abnormality and so on. In other words, the legal constraint of one's behavior is rendered ineffective if it is discovered that
the same individual behaves under certain psychological constraints in which he is either unaware of the choice (of breaking or not breaking the law) or incapable of acting otherwise. At this point we come to a curious juxtaposition of the legal and the psychological constraints. What is clear from our discussion is that these two constraints operate with different, if not directly opposing, presuppositions. If legal constraint is a clear case in which the use of the term "constraint" is unambiguous and can be shown as the effect of the external existence of social facts, then both the psychological and conceptual framework constraints are notions that are ambiguous and hence their use is far from justified.

We can observe that there are psychological factors in relation to an individual's behavior pattern, but the crucial question here is to decide in what sense are they deterministic and independent of the individual's will. Psychological factors can be said to be constitutive of an individual's behavioral pattern, but this is not the same as the claim that these factors are external, and hence, constraining, to the individual. The same is the case with the linguistic, cultural and epistemological factors.

There is a definite distinction between factors that are constraining to and factors that are constitutive of individual's behavior. Factors that are constraining to people's behavior can be quite legitimately termed as external to the
behavior in question, such as those discussed above in the legal system of punishment. The same cannot be said of the factors that are constitutive of people's behavior.

We can outline a number of ways of using the term "constraint," from the most obvious and unequivocal use to the more ambiguous ones, to illustrate the point made above. It seems to me the most obvious use of the term is in the case of physical constraint. For example, one is indeed constrained when one is tied up on a chair with steel cables. One is also constrained when one is told to do certain things with a loaded gun pointing at him. When one's life is threatened in such a way, it is clear that one's behavior is constrained (if one wants to preserve his life) to what is being told or permitted by the gunman. And then we can have legal constraint as discussed above. Legal constraint can be reduced further in terms of physical constraint. The violation of the law can bring about legal sanction in the form of imprisonment, i.e. physical constraint; or even capital punishment. In such a situation the element of constraint is real and in fact, physical. More importantly, as pointed out by Professor Hart, there is always the possibility of a choice that is open to all concerned. One can choose to break or not to break the law and hence one can be held responsible for one's actions. Now, in the case of psychological constraint, it is tempting to understand it in the same way as we understand physical and legal constraints. For
instance, A is an extremely emotional character and he has demonstrated again and again that he is "constrained" by his uncontrollable emotions in his behavior. But, upon closer analysis, we can see that there is a very subtle but significant distinction between such a use of the term "constraint" and the way it is used in all the previous situations. If A has no control over his emotions then his emotions are not only "constraining" to his behavior but are also constitutive of his behavior. Furthermore, if it is clear that he cannot behave in any different way, i.e., to get rid of his violent emotions or suppress them when necessary, then we cannot really hold him responsible for his behavior if his violent emotions lead him to act violently. We can put him under psychiatric care and so on when his behavior becomes destructive but it seems obvious to me that we cannot punish him in the same way that we can punish a professional assassin for murder. The use of the term "constraint" here becomes a very fuzzy one and it no longer refers simply to factors that are external to the individual. A's violent emotions are considered as part of his personality and hence as constitutive of his behavior. And in our description of people's behavior, i.e., whether the behavior in question is "constrained" or not "constrainted," we are not just observing the behavior but also interpreting it. We speak of A's behavior as "constrained" because such emotions and behavior are considered as anti-social. In this sense, A is seen as
"prevented" from being normal by his emotions. Imagine a society in which violent emotions and behavior are everyday normal affairs. In that case people are just behaving normally in their violent outbreaks of emotions and nobody's actions would be considered "constrained." Thus, the term "constraint" used in the psychological sense is not only an ambiguous one but it is also interpretive—largely depending on the observer's subjective point of view.

We cannot recognize this internal aspect of social facts, such as those involving people's behavioral patterns, by direct observation alone. Observation here becomes an interpretive process. And insofar as this internal aspect is concerned, it would be misleading to say that both the psychological factor and conceptual framework are "constraining."

A further confusion arises, as already mentioned above, when we consider the observation of people's behavior. The observer's subjective state, his conceptual framework, so to speak, determines what he sees in terms of how he structures and classifies the observed phenomena. The observer's language, cultural and traditional beliefs, knowledge, and concepts available to him are all influences on the way he understands what he sees. And hence, what is considered constraining or not constraining in behavior in general is not as objective and external as the existence of mountains and rivers. While some observers might think of certain "ways of acting, thinking, and
feeling" as results of the constraining nature of some social facts, other observers might disagree and both groups of observers can be just as rational. For example, an utopian anarchist might argue that we are all "constrained" by money in our everyday lives. Money would indeed be constraining if it can be shown that the very existence of the course, this is precisely what the anarchist's position is. However, from a different theoretical perspective—a more realistic one—the monetary system might be seen as a necessary device for the incredibly complex trading and exchange activities in the world today. In this sense, it is absurd to speak of it as "constraining." Thus, this internal aspect of the existence of social facts is not independent of the observer's subjective state.

Lastly, the feature of generality of social facts is open to the same ambiguous interpretation. By generality, Durkheim means "norms" of behavior and social practices as independent of any single individual but observed by all. But this characterization shares the same ambiguity between norms as imposed externally, as in the case of legal constraints, or norms as internalized by individuals in their "ways of acting, thinking, and feeling."

In summary, we may conclude that the observation of social facts is not the same as the observation of things. I have attempted to show that the observing of social facts is not as
straight forward as the observation of natural facts, especially
in the large segment of social phenomena the observation of
which involves the behavior of individuals. There is no question
that there are social phenomena and that they can be observed.
But the point is that they cannot be observed simply as things,
let alone be treated as things. And this conclusion has far
reaching consequences in our discussion of theory construction
in sociology.
Footnotes for Chapter One


2. Ibid., p. 31.

3. Ibid., p. XLIII.

4. Ibid., p. 45.


6. Ibid., p. 178.
CHAPTER II -- Durkheim's Suicide

Suicide, published two years after The Rules of Sociological Method, is meant to be an application of the methodology formulated in The Rules in the study of the phenomenon of suicide. Suicide is a classic in the literature of sociology and volumes after volumes of scholarly work have been devoted to the analysis and criticism of it. In this chapter, I have no intention of analysing it in any great detail. My purpose here is to examine how successful Durkheim is in applying his methodology and specifically in what way the notion of social fact is instrumental in the study of suicide.

In Suicide, Durkheim aims to derive a sociological explanation of the variation of suicide rates and consequently, the nature of suicide itself.

Suicide has been chosen as its subject, among the various subjects that we have had occasion to study in our teaching career, because few are more accurately to be defined. On the other hand, by such concentration, real laws are discoverable which demonstrate the possibility of sociology better than any dialectical argument.

Durkheim's choice of the subject is, as evident in the above quotation, no random decision. He believes that the subject of suicide can be approached from a sociological perspective and should be approached as such. It is part of his assumption that suicide rates can be seen as social facts and
hence that a sociological explanation is needed. It would be a special triumph for sociology if suicide, which is commonly held to be a private, individual act, could be explained satisfactorily from a sociological point of view. In his investigation of the statistics of suicide rates he comes to the conclusion that:

The suicide rate is therefore a factual order, unified and definite, as is shown by both its permanence and its variability. . . these statistical data express the suicidal tendency with which each society is collectively afflicted. . . Each society is predisposed to contribute a definite quota of voluntary death. This predisposition may therefore be the subject of a special study belonging to sociology.

His conviction about the nature of suicide rates as self-evident social facts leads him to speak of them as "real, living, active forces" and to use of the term "suicidogenic current." It is his task to approach the phenomenon of suicide as represented by the social facts of suicide rates as a social phenomenon that has to be explained in terms of the causal relationships between suicides and the social facts that cause them.

From such a perspective, Durkheim proceeds to reject a number of theories of suicide as false. These are theories based on mental illness, alcoholism, genetic and racial causes, climates, seasons, and individual motivations. These theories are false because they fail to account for suicide as a social fact. Once understood as such, as Durkheim insists, suicide
rates then depend on certain states and circumstances of the social environment. After the rejection of these theories, Durkheim offers his explanation. I shall be very brief about it since it is not the details but the nature of the explanation that is of interest to us here.

Durkheim's "theory" consists of an explication of three major social causes of suicide. Each of these three causes represents a set of factors causally linked to the suicide rates of the society. They are: egoism, altruism, and anomie. Egoistic suicide is understood as a product of excessive individualism and lack of social integration. In such a situation the individual finds little meaning for life and existence. Altruistic suicide is seen as the antithesis of egoistic suicide. It is that of over-integration. While the value of the group or the community is seen as above the value of the individual, the existence of the individual is seen as relatively insignificant in contrast to the group's. Hence, individuals would give up their lives very readily for the group. Anomic suicide is caused by the lack of regulation in a society and hence the victim is seen as suffering from the "malady of infinite aspiration." Such unchecked individual passions, coupled with the inability to control desires, would lead to severe disappointment when those desires and passions are left unfulfilled, and in turn may lead to suicide.
The nature of Durkheim's explanation is an attempt to account for the differential suicide rates in terms of social facts such as "social causes," "real, living, active forces," and "suicidogenic currents." According to S. Lukes, Durkheim's theory purports to show:

... that under adverse social conditions, when men's social context fails to provide them with the requisite sources of attachment and/or regulation, at the appropriate level of intensity, then their psychological or moral health is impaired, and a certain number of vulnerable suicide-prone individuals respond by committing suicide.

It is with this perspective that Durkheim attempts to formulate "laws" connecting the phenomenon of suicide with factors such as "social forces" and "suicidogenic currents." Two steps will be taken here in a critical analysis of Durkheim's thesis. I will first attempt to show that some of his premises are unwarranted. And then I will discuss the nature of his "theory."

Let us begin with Durkheim's definition of suicide. He defines it as "any death which is the direct result of a positive or negative act accomplished by the victim himself." This definition presents a few problems. On the one hand, unsuccessful attempts of suicide are not, and cannot be accounted for; and on the other hand, there possibly could be cases of death which may appear to be suicides that are in fact without suicidal intent. In his definition of suicide Durkheim is anxious to avoid using any subjective elements such as
intentions and motives. He hopes to establish a definition that would provide an objective criterion for the identification of suicides. But this avoidance of any subjective element in the definition of suicide renders the definition itself ambiguous and runs counter to our intuitive understanding of suicide. (Webster Dictionary defines "suicide" as the "the act of killing oneself intentionally.")

The ambiguity in definition brings forth another, but more significant problem: that is, the collection of the data of suicide rates. Durkheim assumes that such data are clearly defined and can be collected and classified without difficulty. But it can easily be shown that this is not the case. Suicide data are collected by government officials who are also members of the society. Often a decision has to be reached as to whether a death is a case of suicide or not. How is such a decision reached? The official has to investigate the circumstances of the death and collect information from the victim's family, relatives, friends, and so on. The people interviewed by the official could produce information of what they know of the victim's life and, inevitably, their opinions about the victim. In other words, such information can very rarely be value-neutral. For example, the victim's wife might want to show that her husband's death is accidental even if she has to hide certain relevant information since she wants to preserve his reputation. The situation can be made more complex if the victim
is Catholic. And since all informants are basically of the same society, their observations are inevitably tainted with the social values of the time. It is safe to assume that if the society's attitude towards suicide is an extremely negative one, then there is a stronger tendency for relatives of the victim to hide the fact that he has committed suicide. Here, the decision reached by the officials is itself a reflection of the value of the society and is dependent upon a number of contingent factors. In this sense, the collection of suicide rates is itself a social phenomenon. Suicide rates cannot be treated as simple and self-evident facts.

If Durkheim's basic assumptions about the definition of suicide and treating suicide rates as social facts can be shown to be unwarranted, then the nature of his "theory" itself is also riddled with ambiguities. His "theory" of suicide includes the following basic causal connections. The nature of the social interactions of individuals and its intensity determine the strength of social regulation and integration. The strength of social regulation and integration determines the individual's ability to find meaning in life and to direct and restrain his desires and passions in proper perspective. This ability or the lack of it on the part of the individual in turn determines the social suicide rates. These connections are supposedly causal in nature and each of these stages presumably denotes a certain social reality. But as Whitney Pope points out in his book...
Durkheim's Suicide: A Classic Analysed, the relationship between integration and regulation, in spite of the crucial positions occupied by both concepts in Durkheim's "theory," has never been made clear by Durkheim himself. 6 This is an area of controversy and debate among Durkheim scholars and Pope cites a number of examples of eminent sociologists holding different and sometimes opposing views in the matter. 7 Durkheim's initial attempt to draw a distinction between the two is a well established fact in Suicide. He talks about the causes producing anomie and egoism as having different effects.

Anomie, therefore, is a regular and specific factor in suicide in our modern societies . . . So we have here a new type to distinguish from the others. It differs from them in its dependence, not on the way in which individuals are attached to society, but on how it regulates them. Egoistic suicide results from man's no longer finding a basis for existence in life, altruistic suicide, because the basis for existence appears to man situated beyond life itself. The third sort of suicide, the existence of which has just been shown, (anomic suicide) results from man's activity's lacking regulation and his consequent suffering. 8

Here, the contrast between, on the one hand, the failure to find meaning in life as resulting from lack of integration, and, on the other hand, unchecked passions and desires as resulting from lack of regulation is clear. And there are also a number of differences between the two that can be identified. For example, egoistic suicide is often associated with the highly developed individualism which has a lot to do with education, intellectual outlook and so on. Anomic suicide, on the contrary, is
associated with the sudden and unexpected change in one's life prospect such as those occurring in an economic crisis. But the real problem is that the difference between them as sociological causes (social facts) of suicide has not been made clear. Durkheim himself has never identified the sociological distinction between integration and regulation. Since these two concepts are the two basic variables in his "theory," this ambiguity has a serious effect on his formulation as a whole.

To make matters worse Durkheim himself, as pointed out by Pope, often confuses the two in his explanation. Pope identifies three instances in which Durkheim first examines a social condition in connection with domestic egoism only to decide later that it would be more appropriate to analyse it in terms of regulation. Durkheim explains the suicide rates of widows using the concept of egoism and then he refers to it later as due to domestic anomie resulting from the death of husband or wife. And in explaining the suicide rates among very young husbands and childless married women he considers them first as egoistic suicides and then in order to eliminate the inconsistency between his theoretical postulation and the data, he identifies them as fatalistic suicides. And finally, according to Pope, Durkheim's discussion of egoism and political crisis parallels his discussion of acute anomie and economic crisis. As Pope concludes:

The willingness to explain a configuration in terms of
egoism, only to claim subsequently that it is really due to anomie, further undermines any sense of a distinction between egoism and anomie. 10

Above and beyond the ambiguities, Durkheim has also flatly stated in several occasions that egoism and anomie are really the same thing. In Chapter Six of Book Two in Suicide, where he discusses individual forms of the different types of suicide, he says that: "Two factors of suicide, especially, have a peculiar affinity for one another: namely, egoism and anomie." And also in Chapter Three, Book Three, he talks of them as produced by the same cause. Statements as such imply that integration and regulation are the same thing. Pope's conclusion is to choose to interpret them as being identical.

The unsuccessful nature of existing attempts to distinguish between egoism and anomie, Durkheim's own failure in this regard (especially in contrast with the many indications in Suicide that anomie and egoism are essentially the same), the similarity of Durkheim's empirical examples, his failure to control for either in analysing the relationship between the other and suicide, and the possibility of coupling the links between suicide and either major independent variables with those of others strongly argue for the essential similarity of integration and regulation. 11

What is of relevance to our discussion here is the question of how does this problem affect the very formulation of Durkheim's "theory" and his intention of "discovering real laws." As evident from the first quotation in this chapter, Durkheim aims at establishing "real laws" in order to explain suicide from a sociological perspective in Suicide. And according to his formulation suicide is caused by individuals'
inability to find meaning in life and the imbalance in his desires and ambitions. Such inability and imbalance are caused in turn by the strength of social integration and regulation and such strength is determined by the social environment at large. If laws are to be deduced from this chain of connection, presumably causal in nature, then Durkheim has to specify under what conditions integration and regulation are identical in their causal effects; that is, how it is that either of the two can produce either egoistic suicide or anomic suicide. And if both egoistic and anomic suicides are social facts and as such can be identified and classified by their external characteristics, then Durkheim also has to clarify why they can be produced by identical causes. All these questions would have to be answered or shown to be answerable before any attempt can be made to generate laws from Durkheim's discussion in Suicide. And given the above analysis, we can conclude that no "laws" have been generated from it. Concept of social fact turns out to be not so objective and self-evident after all. It is not simply a matter of direct observation that we can identify "social fact" of integration and regulation, nor can we establish, as suggested by Durkheim, a distinction between the two as sociological causes of suicide in virtue of their external characteristics. The terms used to refer to these concepts lack clear denotations and it is not just a question of vagueness of meaning. As we have discussed in Chapter One, the observation of
social facts is not as straightforward as the observation of natural facts and the problems in *Suicide* as outlined above demonstrate precisely this point.

At this point, several matters need clarification. Since I have argued that "laws" cannot be derived from Durkheim's discussion of suicide, I have to make clear what I mean by "laws" and more importantly, the closely related concept "theory." I shall proceed to do this in the next chapter.
Footnotes for Chapter Two


2. Ibid., p. 51.

3. A fourth one, fatalism, is mentioned only in a footnote as no longer relevant to modern society.


5. E. Durkheim, op. cit., p. 44.


7. Ibid., pp. 88-95.


10. Ibid., p. 114.

11. Ibid., p. 118.
CHAPTER III -- Theory Construction in Sociology

Robert K. Merton in his paper "The Bearing of Sociological Theory on Empirical Research" outlines six kinds of activities which, according to him, are subsumed indiscriminately under the title of sociological theory. They are (1) methodology, (2) general sociological orientation, (3) analysis of sociological concepts, (4) post factum sociological interpretations, (5) empirical generalization, and (6) construction of theories. This account of the six kinds of activities as given by Merton is very clear and useful. But I feel that there is an important distinction which has not been made. This is the distinction between two qualitatively different categories of activities in the labor of sociologists. I would like to classify activities (2) to (5) into the first category and activity (6) as the second category with activity (1) as a "meta-theoretical consideration" of such a distinction. Before the discussion of this important distinction, I would like to give a more detailed account of these six kinds of activities.

Methodology deals with the so called "logic of scientific procedure." I call it "meta-theoretical consideration" because it is not the sociologists' labor per se. Methodology is understood here as the sociologists' systematic reflection on his and other sociologists' activities, including the evaluation
of the validity of his as well as his colleagues' approaches. Take for example Durkheim's *The Rules of Sociological Method*. In this work Durkheim outlines what he thinks of as the scientific way of doing sociology. Durkheim has no doubt about the possibility of conducting the study of sociology in a manner similar to that in the natural sciences. This can be termed "Durkheim's methodological position." But this is not the same as his study of social phenomena such as suicide, division of labor, and so on. Hence, in our present discussion I do not include methodology in my classification of the two categories of sociological activities.

The second kind of activity, general sociological orientation, is supposed to provide a broad framework for empirical enquiry in sociology. This is, in fact, the starting point of sociology. It establishes a perspective from which the social world can be studied sociologically. This point will be discussed in some more detail later. The third kind of activity, analysis of sociological concepts, presupposes that such concepts are being introduced. This is closely related to the general sociological orientation. The analysis of sociological concepts is the articulation of the subject matter of the study within the broad framework of sociology. For example, when Durkheim introduces the concept of "anomie," he is identifying a certain group of social phenomena with such a concept and in doing so he is also making explicit their characteristic features.
and their relations to other relevant social phenomena.

The fourth kind of activity, post factum sociological interpretations, consists of interpretations after observations have been made. Such interpretations do not necessarily involve any systematic explication of the general subject, but are simply isolated cases of attempts to classify and generalize the observed phenomena. Such post factum interpretations are not to be confused with the empirical testing of some pre-designated hypotheses, although in the process of interpretation it is conceivable that some hypotheses are employed. Empirical generalizations, the fifth kind of activity, are propositions summarising observed uniformities of social phenomena. And of course, in order for such generalizations to be possible, there has to be, first, a general sociological framework from which the study can be initiated; second, the relevant sociological concepts which serve to structure and highlight the focal points of the observation. Post factum interpretations can also be elaborated into empirical generalizations when the interpretations in question are found applicable to other phenomena of the similar kind. In other words, activities (2), (3), (4), and (5) are very closely related and (5), empirical generalizations, is a result of the accumulated effort of (2), (3), and (4). What about the construction of theories?

According to M. Brodbeck, a theory is:

a deductively connected set of empirical
generalizations. These generalizations, no matter how well established they may be, are always subject to possible refutation by future experience and are, therefore, hypothetical. 2

If a theory consists of such a connected set of empirical generalizations, then what is the difference between empirical generalizations within a theory and those discussed above and classified as the fifth kind of activity? In the same paper, Merton argues that what distinguishes ordinary empirical generalizations and empirical generalizations within a theory is the presence of "theoretical pertinence" in the latter. In virtue of their higher abstract order, the theoretically pertinent empirical generalizations are more widely applicable and hence more fruitful. He also states that in order for such generalizations to attain the status of theory, they must be sufficiently precise so that they are denotationally definite, and thus, testable. Such a demand, I believe, is impossible for sociology to satisfy. To illustrate this point, let us examine how theory construction is done in the natural sciences.

A useful paradigm of theory construction in the natural sciences is provided by C. Hempel. 3 According to him, there are two major component parts to a theory: the internal principles and the bridge principles. The internal principles express the inter-relations among theoretic entities in the form of laws as posited by the theory, and at the same time provide them with definitions, or the bases for more developed and explicit
definitions. The bridge principles connect the internal principles with observable phenomena and hence constitute a mechanism for use in explaining and predicting these phenomena. The facts, the observable natural phenomena, are causally connected with the theoretic entities and their inter-relationships as described by the internal principles. Insofar as a scientific theory postulates the existence of theoretic entities, the theoretic terms employed by the theory purport to have definite denotations. And, presumably, the theoretic entities as denoted by the theoretic terms are causally connected with the observable phenomena. Hence, the theory can be tested, confirmed or disconfirmed by future experiences. The testability of a theory is closely connected with, and in part based upon the causal relations between the theoretic entities and observable phenomena, and thus the assumed existence of these theoretic entities as part of objective reality. Take for example the phenomena of an iron bar expanding when heated. Theoretic entities such as molecules and atoms and electrons and so on are postulated by the theory describing the molecular structure of matter. The increase in volume of the iron bar is causally connected with the molecular activities of the iron bar involved in its increase in temperature. The observable phenomenon in this case is the iron bar expanding. And this is causally connected to the above mentioned theoretic entities which are understood as
constituents of the iron bar.

Given the discussion about the ambiguous status of the existence of social facts in Chapter One, it can easily be shown that the testability of sociological "theory" is radically different, if it is at all possible, from that of theories in natural sciences. It is very difficult, if not impossible, to argue cogently that the theoretic postulates (theoretic entities) in sociological theories exist as part of objective reality independent of human subjectivity. And thus it can be argued that the relation between these postulates and the observable social phenomena is not of the same causal nature as that assumed by theories in natural sciences.

It is necessary at this point to discuss the kind of objection, as championed by Kuhn and Feyerabend, to Hempel's formulation of theory construction in natural science. If Kuhn and Feyerabend are correct in their arguments about the incommensurability of theories, then my radical distinction between scientific theories and sociological "theories" would be rendered untenable. The reasons are straight forward. Kuhn argues that (as in The Structure of Scientific Revolution) the same scientific term cannot have the same reference in different paradigms and hence, at least in this aspect, terms used in scientific theories are denotationally indefinite. And yet theories are constructed successfully in natural sciences using such denotationally indefinite terms. Analogously theory
construction in sociology should be possible in spite of the fact that the terms used are denotationally indefinite because the social facts that they purport to refer to cannot be observed directly as things but are dependent, at least in part, on the observer's subjective states of mind. In order to block this line of reasoning, I shall attempt to show that even if Kuhn's and Feyerabend's theses are correct, there is still an unbridgeable gap between the theories of natural science and the attempts at theory construction in sociology.

Kuhn discusses in length in *The Structure of Scientific Revolution* the idea of our conceptual scheme as paradigm-bound. Scientific theories belong to different paradigms which correspond to different "worlds." These different "worlds" as represented by different paradigms do not necessarily converge. Take for example the term "electron" as used in the Bohr-Rutherford theory of the early 1900s. This term does not refer to what we now call "electron" because the theory about "electron" has changed, and the reference of a term is taken to be a function of the theoretical principles in which it occurs. Hence, the term "electron" as used in Bohr-Rutherford theory does not refer to anything that we can identify in our present theory and in fact, it does not refer to anything at all from the perspective of the present theory. So the reference of scientific terms is, among other things, paradigm-bound.
Hilary Putnam in his latest work Meaning and the Moral Sciences, discusses both Kuhn's and Feyerabend's approaches in the philosophy of science. He sums up Feyerabend's position (as represented in his book Against Method), as follows:

Feyerabend arrives at his position by the following reasoning, . . . the experts who use [a scientific term] accept certain laws as virtually necessary truths about the putative referent. Feyerabend treats these laws, or the theoretical description of the referent based on these laws, as, in effect, a definition of the referent (in effect, an analytic definition). So if we ever decide that nothing fits the exact description, then we must say that there was "no such thing." . . . Moreover, if the theoretical description of an electron is different in two theories, then the term 'electron' has a different sense in the two theories. In general, Feyerabend concludes, such a term can have neither a shared referent nor a shared sense in different theories. (the incommensurability of theories)

Although Kuhn and Feyerabend arrive at their respective conclusions via very different routes, I would like to refer to their positions jointly as the "incommensurability thesis."

Given the force of the argument for the incommensurability thesis, how do we account for the success of science? The Bohr-Rutherford theory had been "successful" in its own right and it had provided relatively successful explanations and predictions. Another example is Newtonian physics which was able to explain and predict phenomena for centuries. Are all these success stories mere illusions now that we have replaced the Bohr-Rutherford theory with quantum mechanics and Newtonian physics with Einsteinan physics? Can we judge the past theories as completely erroneous from the perspective of the present
theories because they are incommensurable? To do this would make the success of science a miracle. It would be miraculous indeed for Newtonian physics to be able to have done what it did if it turns out that the terms used in Newtonian physics simply do not refer to anything at all.

The solution to this dilemma, according to Putnam, is to use the principle of "the benefit of the doubt." To begin with, it has to be argued that the reference of scientific terms is not determined by the laws in which they appear. That is to say the reference of scientific terms is not to be taken as determined by descriptions associated with them, and hence changes in such descriptions do not necessarily mean a change of referents. The distinction and relation between the notion of reference and description is a controversial subject in the philosophy of language and this is no place to pursue it. It is my belief that the reference of a scientific term is not determined by descriptions associated with it, although it is true that we used such descriptions to help "pick out" the referent. The notion of reference thus seems to imply that there is something out there independent of all descriptions. And it is often the case that when a referent is specified by a description by a speaker, and when such a description fails to refer because of mistaken factual belief on the part of the speaker; then it is reasonable to assume that the speaker would accept a reformulated description when it is demonstrated that
he has made a mistake. To re-evaluate the Bohr-Rutherford theory with the principle of benefit of the doubt we should say that although there is nothing in the world that exactly fits the Bohr-Rutherford description of an electron, there are particles that approximately fit such a description. And hence we should treat Bohr's description as referring to these particles. Thus, we can answer Kuhn and Feyerabend by saying that in the circumstances of theory change and paradigm change we should say that we now have a different theory about the "same" entities referred to by the previous theory.

But the problem raised by the incommensurability thesis does not stop here and it cannot be answered fully by the use of the principle of benefit of the doubt. A meta-induction can be derived from this thesis and if such an induction cannot be blocked, then the very notion of reference would simply collapse. Now let us look at this meta-induction closely.

The meta-induction takes the logic of the incommensurability thesis one step further. To quote Putnam:

One reason this is a serious worry is that eventually the following meta-induction becomes overwhelmingly compelling: just as no term used in the science of more than fifty (or whatever) years ago referred, so it will turn out that no term used now (except maybe observation terms, if there are such) refers.

This is to say that there is the logical possibility that scientific theories simply do not converge and thus "reference" collapses. The use of the principle of benefit of the doubt is
no help here. There is also the possibility that such a principle can be used unreasonably. We do not want to go so far as to say that the term "phlogiston" referred to any entity. And if there is simply no convergence, then it is not possible to have any reasonable modification of the theoretical descriptions of various entities given by past theories. And this would mean that from the perspective of present theories the theoretic entities described by past theories do not exist. To block this disastrous meta-induction, Putnam introduced what he calls the "quasi-intuitionist" interpretation of logical connectives. It is to this question that we not turn.

This "quais-intuitionist" interpretation is derived from mathematical intuitionism which is a school of mathematical philosophy developed by Brouwer and Heyting. Putnam outlines mathematical intuitionism as follows:

A key idea of the intuitionists is to use the logical connectives in a 'non-classical' sense. (Of course, intuitionists do this because they regard the 'classical' sense as inapplicable to reasoning about infinite or potentially infinite domains.) They explain this sense—that is, they explain their meanings for the logical connectives—in terms of constructive provability rather than (classical) truth. Such a move means that the theorems of classical propositional calculus can be translated into logical connectives will be understood in terms of provability and not truth and falsity. When "PV P" is interpreted in the classical way, it says that either P is the case or it is not the case; when interpreted by
the intuitionist, it says that we either have a proof of P or a proof of P's absurdity. In general, asserting P becomes tantamount to "P is provable," "P . Q" to "P is provable and Q is provable," "P ∨ Q" to "There is a proof of P or a proof of Q and we know which one," and "P ⊤ Q" to "There is a method which, when applied to any proof of P yields a proof of Q."

The important point here is that both the notions of truth and falsity are avoided in logic and mathematics in any sense that goes beyond what we can prove, on some appropriate construal of "proof."

Now, the question is what bearing does mathematical intuitionism have in blocking the disastrous meta-induction mentioned above? Putnam's idea is that we should extend this interpretation of logical and mathematical assertions to also cover the assertions of empirical science, by replacing the notion of "constructive provability" with the notion of "constructive provability or perhaps warranted assertability from the postulates of the empirical science accepted at the time." To quote Putnam at length:

If B(1) is the empirical science accepted at one time and B(2) is the empirical science accepted at a different time, then, according to this 'quasi-intuitionist' interpretation, the very logical connectives [in the assertion of B(1) and B(2)] would refer to 'provability in B(1)' when used in B(1), and to 'provability in B(2)' when used in B(2). The logical connectives would change meanings in a systematic way as empirical knowledge changed.
When the classical notion of truth is replaced by provability, reference can be retained in spite of the possibility that the incommensurability thesis may be correct. The following shows how it is done.

On the Tarski definition of truth and reference,
(a) 'electron' refers, is equivalent to
(b) There are electrons.
But if 'there are' is interpreted intuitionistically (b) asserts only
(c) There is a description D such that 'D is an electron' is provable in B(1). 10

Although this is clearly in the spirit of the incommensurability thesis, it has the effect that the above mentioned "meta-induction" can be blocked. But insofar as reference can be retained, the principle of benefit of the doubt can be applied.

Reference is retained because the effect of reinterpreting the logical connectives in the manner of mathematical intuitionism is that "existence" because intra-theoretic. Given such an interpretation of logical connectives, we can accommodate Kuhn's and Feyerabend's incommensurability thesis without being trapped in a position in which we have to give up the notion of reference and the closely related notion of truth. Even if scientific theories change in the radical manner as suggested by Kuhn and Feyerabend, even if old theories and new theories do not converge, even if the principle of benefit of the doubt cannot be applied as often as we wish to; the fact remains that scientific terms purporting to refer to theoretical
entities as postulated by the theory have definite denotations. Scientific theories are successful in light of what makes a theory successful, because of its testability, and the fact that the scientific terms as postulated by the theory typically refer.

But I have argued earlier that such definite denotation (in the use of sociological terms purporting to refer to social facts) cannot be demanded from sociological theories, and hence theory construction—as understood in the Hempelian paradigm of theory construction—is an impossible task. What needs to be argued for here is why terms used in sociology cannot have such definite denotation and this question turns up on the ambiguity in the observation of social facts.

What I argued in Chapter One was that the observation of social facts is not the same as the observation of natural facts. We can now make the further qualification that the ambiguity in the observation of social facts is an ambiguity that exists even within the same paradigm or conceptual framework. In the domain of social facts we have to deal with human behavior and social relationships. The individual's "ways of acting, thinking, and feeling" are subject to the interpretation of the observer. When there is a mountain in front of a group of observers the possibility of a real debate among them about the existence of the mountain is next to zero. Of course one can always entertain philosophical skepticism in
its extreme form, but I believe such skepticism has been rendered bankrupt by Wittgenstein among others, and in any case for practical non-philosophical purposes it can be ignored. Now, imagine the same group of observers watching a crowd of soccer fans terrorizing the stadium after the team lost the match. Depending on a number of factors among which is the observer's subjective state of mind, a number of interpretations can be derived as to what is the "fact" that is being observed: faithful and loyal soccer fans in action, emotionally suppressed people letting off steam, crowd behavior manifesting the "social current" a la Durkheim, and so on. Of course, it would require further debate as to which of these interpretations is more accurate or more reasonable but the point I want to make here is that the observation of social facts is interpretive in nature. And insofar as it is an interpretive process, theoretical terms purporting to refer to social facts would not be able to have the same kind of definite denotation as those used in the natural sciences.

This contrast between sociology and natural sciences can be further illustrated in terms of the relation between reference and description. When a description of a certain theoretic entity is given in a scientific theory, the description refers to the entity. Competing descriptions can arise only when there is a paradigm change or theory change. Within the same paradigm such a description refers without further qualification. The
situation in sociology is drastically different. It is possible to have competing descriptions, all purporting to refer to the same theoretic entity (e.g. "anomie"), even within the same paradigm. In other words, competing interpretations can be derived from the observation of the same social phenomenon.

One can object to this argument, however, by the following reasoning. Theory construction in sociology is hampered by the primitive stage of the development of this discipline. We simply do not know enough about human behavior, and thus the observation of the kind of social fact that deals with human behavior would have to be interpretive. But there is nothing "in principle" impossible for theory construction in sociology. It is conceivable that sometime in the future our knowledge of human beings in general will be so advanced that human being as a species becomes "transparent," so to speak, to an observer. (Such a state of knowledge would have to include all the laws governing he species "human being's" physiological mechanism with the assumption that all his mental and psychological activities can be accounted for physiologically.) Hence, theories which can explain and predict human behavior as successfully as that of physics could in principle be constructed.

To counter this argument, let us first examine what such a theory would require. The best way to do this is to look at an ideal explanatory model of physics as suggested by Putnam. In
the case of "hydrogen atom" (using Hempel's model of scientific theory) the theory that can explain and predict the behavior of hydrogen atom would consist of a set of laws, the laws of quantum mechanics, and a description of the natural kind "hydrogen atom" as consisting of one electron and one proton in a bound state (the internal principles) plus bridge principles that would link these internal principles, through the use of very elaborate laboratory equipment, with the observable phenomena. To take into consideration the incommensurability thesis, we can add that the laws of quantum mechanics are undoubtedly only approximately true and as a result of the principle of benefit of the doubt would have to be applied in the case that any system consisting of a proton as we define "proton" and an electron as we define "electron" may not turn out to be a hydrogen atom. And one also has to specify that the "reference" of these terms is to be judged from within the conceptual system to which the theory in question belongs. Following this example, let us attempt to construct an explanatory model of the natural kind "human being." We may indeed be able to come up with a set of laws describing adequately all the physiological mechanism of human being (although this is doubtful), it remains a formidable task for us to come up with a description of the natural kind "human being." As Putnam points out, human being is not simply a description of a "physical system consisting of elementary particles." Such an
explanatory model would have to specify not only a "physical system" as governed by laws of physiological mechanism but also the species "human being." Such a specification would have to satisfy the condition that anything that might satisfy the description in question would be a member of the natural kind (human being) in question. In physics we see that such detailed explanatory models of natural kind "human being"?

The complexity of the structure of the description for the natural kind "human being" accounts for the interpretive nature of social facts. Without a detailed explanatory model of "human being" the reference of theoretical terms used to refer to the social facts involving human behavior cannot be denotationally definite. But what we have done so far is to point out the extreme difficulty of obtaining such a detailed explanatory model for the natural kind "human being."

What about the question of what is "in principle" possible and impossible? Putnam outlines three traditional notions of "possibility":

What is possible in the sense of 'logically possible'; what is physically possible in the sense of 'not contrary to any natural laws'; and what is technically possible given our existing technology. "

In the discussion of whether it is "in principle" possible for an ideal theory of human behavior to be constructed based on a detailed explanatory model of the natural kind "human being," Putnam suggests that a new sense of "in principle" should be
introduced. It is not a question of logical possibility nor is it a question whether it is physically possible for a computing system to do it. His idea is that we should consider whether it is physically possible for an optimal computing system to do such calculations fast enough that they can be used to make predictions. The question here is whether it is possible to make such a computation in "real time." "Real time computability" is a computer-theoretic notion. For example, a friend is telling me a joke. And let us also assume that it is a joke with very subtle humor which takes into account the cultural background of the speaker, the immediate circumstances, and personal histories of the speaker as well as that of the listener. Upon hearing the joke, I understand it and laugh. Given the ideal theory and an optimal computing system, it might take a tremendously long time (a few hundred years?) for it to come up with the simple deduction as to the meaning of the joke that I am able to do immediately. What is true for prediction is also true for explanation.

Putnam has a final, I think highly significant, comment about its being "in principle impossible" for us to render human nature transparent to our observation by means of an ideal theory. He notes that although his sense of "in principle impossible" is empirical, it is empirical in a way that is constitutive of our present nature, behavior and institutions. Imagine what would happen to us if such an ideal theory became
available and we could apply it in "real time" in a significant
number of cases. Putnam asks:

Would it be possible to love someone, if we could actually carry out calculations of the form: 'If I say X, the possibility is 15 percent she will react in the manner Y'? Would it be possible even to have friendships or hostilities? Would it be possible even to think of oneself as a person? 13

 Whatever the answers to these questions may be, what is clear is that if we are to become transparent to ourselves, then there will have to be very drastic changes in our nature as well as our social institutions such as art, politics, religions, and even science. They will be altered beyond recognition. What underlies our entire history and hence our social development is the fact that we are partially opaque to ourselves: in Putnam's words "We don't have the ability to understand one another as we understand hydrogen atoms."

To sum up briefly I think two points have been made with substantial force. First, the observation of social facts is, in a way distinct from the observation of natural facts, an interpretive process. This is closely related to the second point that theory construction is "in principle impossible" (no prediction in real time) in sociology. But, if so, then what should sociologists do in their studies and investigations of our social world? Being barred from any realistic hope of theory construction on the one hand and having to cope with the interpretive nature of the observation of social facts on the
other, does it follow that sociologists are handicapped in the pursuit of knowledge in their discipline?

It is my belief that the answer to the last question can definitely be a negative one if we can move away from the rigid association of knowledge with theory (a point that I shall explore in detail in the next chapter). To return to Merton's classification, we can now see that there is a crucial difference between theory construction—activity (6) on Merton's list—and the other four activities: general sociological orientation, analysis of sociological concepts, post factum sociological interpretations, and empirical generalizations. (The first kind of activity, methodology, is excluded in our present discussion.) Without getting ahead of ourselves, I would like to discuss here how these four kinds of activities can constitute the bulk of the sociologists' labor without entertaining the unrealistic hope of constructing theories in the manner of the natural sciences.

I propose to group these four kinds of activities into one category and call it "genuine sociological investigation." There are two salient points in this category of activities. In the general sociological orientation the sociologist has to introduce, directly or indirectly, the subject matter of investigation, relevant concepts, and the proper application of these concepts. This is the first salient point. It identifies the proper area and the subject matter for the investigation. It
provides a vantage point for a sociological way of looking at
the world. The introduction of sociological concepts classifies
our world from a social point of view and hence it gives us a
new and unique way of understanding our behavior. Take
Durkheim's *Suicide* for example. We have discussed in the
previous chapter how he has failed in his ambitious attempt to
construct laws that would explain suicide, but it does not mean
that Durkheim has not succeeded in approaching the problem from
a new and useful way. He has managed to establish a perspective
from which suicide can be viewed as a social phenomenon. He
further introduces possible connections, in spite of numerous
ambiguities, between social conditions at large and individuals
in general and their psychological health in particular. This
brings us to the second salient point, concerning empirical
generalization. Given the interpretive nature of the observation
of social facts, empirical generalization is possible insofar
that it does not aspire unrealistically to achieve the status of
theory. And in this sense, post factum sociological
interpretations are not so different from empirical
generalizations. This use of empirical generalizations would
produce correlations of various social phenomena and the
specifications of their inter-relationships. For example, a post
factum sociological interpretation might correlate the factors
of general poverty, the creation of a standard of condemnation
on the part of the masses, the emergence of a leading group of
rebels with cohesive leadership, the corrupt and insensitive authority with the social phenomenon of revolution. The correlation can be elaborated further generalization about revolution. For instance, the above mentioned factors can be classified into distinguishable but related processes. According to Barrington Moore Jr., in the process of growth and emancipation of the masses (which might lead to a revolution) there are roughly three subjective factors. 1) At the level of the individual human personality it is necessary to overcome certain forms of dependence on others and acquire controls over impulses so as to channel them into organized actions. 2) At the level of social organization people have to learn to create new forms of solidarity and new networks of co-operations. 3) At the level of cultural norms and shared perceptions it will be necessary to overcome the illusion that the present state of affairs is just, permanent, and inevitable. If these subjective factors are concurrent with the objective factors of a rising moral conviction for the changing of social order along with alternations in the economic structures and a marked increase in the suffering of the lower strata; then the possibility of a revolution is quite real. Obviously this is not a theory (as understood in a Hempelian sense) of revolution. But empirical generalizations such as this one are clearly useful and they do explain, as this one explains revolution.
How do these empirical generalizations provide explanations? In order to answer this question, we would have to discuss in detail the notions of explanation and explanatory power which are the subjects of the next chapter.
Footnotes for Chapter Three


5. By "meta-induction" I mean the logical consequences that can be derived from the incommensurability thesis.


8. By logical connectives I mean simply notations such as ",", "v", "", "", and so on.


10. Ibid., p. 29.

11. Ibid., p. 63.

12. What is meant by "explanation" here is explanation by reduction to covering laws—the explication of which is the subject of our discussion in the next chapter.


CHAPTER IV -- Two Modes of Explanations

In an article entitled "What is Explanation?" John Hospers argues that a genuine explanation should satisfy at least two conditions. The first is a deductive relation between the thing to be explained and the explanation and the second is to bring the thing to be explained under a law. Take, for example, the phenomenon of electricity flowing through a copper wire. In order to explain this phenomenon, two premises need to be stated. Premise one states that "all copper conducts electricity" and premise two states that "this wire is made of copper." From these two premises one can deduce the result that the copper wire conducts electricity. The first premise can be traced to the law governing the characteristics of certain metal being conductors of electricity, and the second premise gives the particular condition, i.e., the wire is made of copper.

According to Hospers, a genuine explanation requires more than just the presence of the deductibility relation because it should be able to explain phenomena other than those it is invoked to explain. This is what Hospers means by the second condition of bringing the thing to be explained under a law.

I shall call Hospers' account of explanation as "explanation by reduction to covering laws." It is clear that according to this account, an explanation is genuine, i.e., has
explanatory power, when it is an instance of explanation by reduction to covering laws. It is also clear that this mode of explanation is typical of explanations in the natural sciences. Laws are propositions stating certain uniformities of nature which are testable, hence they can be confirmed or disconfirmed by future experiences. As a result, the explanations themselves are testable.

A model of explanation by reduction to covering laws is as follows. If a is the observable phenomenon to be explained, then a is first to be identified as a manifestation of some underlying structures that can be accounted for in terms of laws. Hence a is explained if a is identified as an instance of a class of phenomena A, B, C, . . . N, each of which are manifestations of some underlying structures that are described by law X. X is testable and can be confirmed or disconfirmed by experience or experimentation. Formulated in this way, it becomes obvious that this mode of explanation is closely related to theories (Hempelian theory) and theory construction. To cast this model in Hempelian paradigm of theory construction, we can further add that the formulation of X may involve postulates of theoretical entities that may be unobservable and unfamiliar to us. In which case X would be part of the internal principles of the theory. The bridge principles connect the observable phenomenon "a" with the entities and/or their internal relationships postulated in X.
It is important at this point to restate that the important distinction between laws and empirical generalizations. This is a much debated area in the philosophy of science and any detailed discussion here would go beyond the scope of this paper. It would serve our purpose here to point out that laws are empirical generalizations that are either embedded in theories or have the potential of being generalized into theories. According to Hempel, laws are true for what has occurred, i.e., what has been empirically verified, and are also true for particular instances that might occur, or might have occurred but did not. Not so with other empirical generalizations, such as "All the coins in my pocket are made of copper."

But if it is correct that a genuine explanation has to be an explanation by reduction to theoretically embedded covering laws, then, given our discussion of the impossibility of theory construction in sociology, we would find ourselves caught in the dilemma that if we do not have Hempelian theories in sociology, if follows that we do not explain anything in sociology. We would argue that sociologists do explain social phenomena and we would also maintain that theory construction in sociology in the manner of natural sciences is an impossible task. In order to maintain these claims simultaneously we have to show that Hospers' account does not cover all possible modes of explanations.
It seems to me that it is a mistake to suppose that knowledge has to be a product of Hempelian theories. A rigid connection between Hempelian theories, explanation by reduction to covering laws, and theoretical knowledge that precluded anything not fitting into the model of Hempelian theories from being knowledge would be an example of what Wittgenstein once called a "one sided diet" when he talked about how "one nourishes one's thinking with only one kind of example." 3

What I would like to do here is to show that along with theoretical knowledge—knowledge derived from explanation by reduction to covering laws, there is such a thing as practical knowledge. By "practical knowledge" I mean a kind of knowledge that is not derived from Hempelian theories, neither presently nor in the foreseeable future, but genuine knowledge nonetheless. To demonstrate this possibility, I would like to use an example provided by Putnam.

I think I know that the Hebrew term "shemen" means oil. How could I find out if "shemen" really means oil? A good way is to try out the term "shemen" in Israel. I could simply drive up to a gas station in Israel and say to the attendant "bedok et hashemen"—which, presumably, means "check the oil." If the attendant punches me in the nose, then I am quite sure that "bedok et hashemen" does not quite mean "check the oil." But this, as I shall show, is not an instance of the testing of hypothesis in accordance with the model of Hempelian theory.
There are a whole set of assumptions that I use here. I assume that 1) the attendants wants to sell gas, 2) it is not offensive not to say please when on asks the gas station attendant to check the oil, 3) it is usually the case that when one wants to sell oil and when another asks "check the oil" in the language of the seller, the seller would check the oil, 4) someone driving up to a gas station would be treated as a customer. These four are just some of the basic assumptions that I make and there are more subtle ones. For example, it makes a lot of difference if the attendant looks despondent, or angry, or slightly mad. Then I have to judge whether it is possible that in Israel most gas station attendants are angry or slightly mad (due to political pressure and so on). Furthermore, every time that I go to a different gas station, a whole new list of assumptions, both psychological and sociological in nature, would have to be made and more importantly, this list of assumptions cannot be made in advance. The point of this example is that the paradigm of scientific testing of hypothesis does not even fit some of the simplest facts that we known. Testing of hypotheses in natural sciences has the characteristic feature that scientists use measuring instruments and controlled laboratory conditions that they understand. The instruments and laboratory conditions are set up in accordance with the scientific theory in question. In the domain of practical knowledge we are using ourselves as the measuring instruments,
and as we have discussed in the last chapter, we are not transparent to ourselves. That is, we do not have an explicit theory about how these "measuring instruments" (ourselves) work.

If theoretical knowledge derives from explanation by reduction to covering laws, then from what does practical knowledge derive? In what follows, I argue that practical knowledge derives from "explanation by description."

Doubts can be raised as to how a mere description could explain. In order to clarify what I mean by explanation by description, I would like to draw a distinction between mere report and description. The Oxford Dictionary gives the following senses of description: "1) The action of setting forth in words by mentioning recognizable features or characteristic marks, verbal representation or portraiture, 2) A statement which describes, sets forth or portrays: a graphic or detailed account of a person, thing, scene, etc., 3) The combination of qualities or features that marks out or serves to describe a particular class, a sort, species, kind, or variety, capable of being so described." By description I mean not only the mentioning of characteristic features of the events or things in question, but also giving an account of the relations of these features to other relevant factors and informations. In contrast to such a description, a report would merely tell what has occurred. Of course, we cannot give a description without reporting what has occurred. But a description may give much
more than a report. The significance of explanation by
description becomes more important when we consider the
investigation of human behavior. In the description of human
activities there is a constant attempt to render intelligible
why people behave in such and such a way. Such a descriptive
process necessarily involves arguments, interpretations, and
evaluations, and hence, "explanations." These arguments,
interpretations, evaluations, typically concern the
interrelationships among relevant social phenomena. The
possibility of describing such interrelationships presupposes
that such relevant phenomena are not only related but that their
relationships are meaningful from a sociological perspective.
(The use of the terms "relevant" and "meaningful" here demands
clarification and I will attempt to do so in the paragraphs that
follow.) It is such meaningful description of the
interrelationships of social phenomena that gives the
description its "explanatory power."

Practical knowledge is a product of the many skills that we
have which we can perform without being able to formally
characterize them in theories. In the field of sociology, the
sociologist has to use himself and/or his fellow observers as
measuring instruments to describe what he observes, and in doing
so attempts to make sense out of the observed phenomena. It is
in this way that practical knowledge derives from explanation by
description.
We intend our notion of explanation by description to take into account the interest-relativity of our sociological explanations. Putnam has given three examples to illustrate the "interest-relativity" of explanation in general. The first example is that a professor X is found naked in the girls' dormitory at twelve midnight. An explanation is given after the model of scientific method—explanation by reduction to covering laws. Premise one: X is stark naked at twelve midnight—E. Premise two: X can neither leave the dormitory nor put his clothes on by midnight without exceeding the speed of light. The covering law states that nothing can exceed the speed of light. Therefore X is found naked in the girls' dormitory at twelve midnight. But this is a terrible explanation, if it can be counted as an explanation at all. Our interest is professor X's behavior is "why" he is found in such a shocking condition. We would like to know what motives, or intentions, has brought about this state of affairs. Seeking an explanation of professor X's behavior in this case presupposes a certain background interest. In the second example a one inch square peg goes through an one inch square hole and not through an one inch round hole. An explanation by reduction to covering laws can again be given. Premise one: the peg consists of certain elementary particles in a certain lattice arrangement. Premise two: given all the possible trajectories when forces are applied to the peg, some trajectories take the peg through the square
hole and no trajectories take the peg through the round hole. Therefore the peg does not go through the round hole. The covering laws in this case would be laws of physics. But this is also a terrible explanation. We can simply state the geometrical fact that one inch square does not fit into one inch circle. This is not only simpler but it can also be generalized to apply to a much wider range of cases. This second example violates what Putnam calls "methodological" interest, i.e., we are not interested in an explanation given in terms of the theory of molecular structures here. In both of these examples the requirement of the "Hempelian method" is satisfied by the explanations but we, the readers, are not satisfied. The third example gives an enlightening contrast. Willie Sutton, the famous bank robber, is reported to have been asked "Why do you rob banks?" His answer was "That's where the money is." Now, Putnam suggests, that we imagine a) a priest asked the question; and b) a robber asked the question. The priest's question is: why does he rob banks as opposed to not robbing at all? The robber's question, on the other hand is: why does he rob banks instead of gas stations? The idea here is that such why-questions always presuppose a range of alternatives relative to the interests of the inquirers. What is true for explanation in general is true for sociological explanation in particular.

Explanation by description when employed in sociology begins with the observation of the social reality, by the
sociologist, from a sociological perspective which is derived from his "general sociological orientation." This sociological perspective is embodied in the sociologist's interest in the kind of explanation he is after. It is through this "general sociological orientation" that the subject matter of the investigation is identified specifically from a sociological point of view and subsequently, relevant sociological concepts are introduced. Once this step has been taken, the sociologist can proceed to explain by descriptive correlations the phenomenon in question.

When a sociologist is observing and attempts to explain certain social phenomena, he has in mind a number of why-questions, and a particular range of alternative answers for each. This in turn suggests that there are two factors that any study of the social world would have to consider. As we have discussed above, the first factor is that the sociologist would have to use himself as a measuring instrument. The second factor is that he is not simply looking for explanations, but specifically the kind of explanation that he and his fellow colleagues (or people who share his concern) are interested in. Explanation by description is a method that can take into consideration these two factors. This mode of explanation employs the method of correlating the observed social phenomena in as a systematic fashion as possible. It moves away from theories and the subsumption under causal laws as in explanation.
by reduction to covering laws. I am not saying that the correlations of social phenomena in the sociologist's explanation are not causal in nature. It might well be the case that any acceptable correlations would turn out to be causal. The point I want to make here is that the prospects are poor for subsuming such correlations under causal laws. I have two reasons. First, the causal relations existing between any two correlated social phenomena are practically inexhaustible. By this I do not mean that there is actually an infinite number of causal relations existing between them. What I mean here is that when we take into account the interpretive nature of social facts, the opacity of human nature, and the fact that the sociologists have to use themselves as measuring instruments, an attempt to exhaust all the causal relations in question would have to exhaust all the possible interpretations of the social facts in question, and that is equivalent to being able to render human nature transparent by an ideal theory. But this is highly unlikely now and in the foreseeable future. Secondly, due to the uniqueness of social phenomena, there is no way of testing whether any described causal network (that is, assuming that such a network has been described) is completely described. Although in some sense history sometimes "repeats itself," (even this claim is controversial) there are factors involved in the events of history, hidden as well as apparent, that are not repeated, or at least not in the same context. Because of this
uniqueness of historical and social events, any conjectures as to the causal network linking the various relevant social phenomena cannot be tested. Hence, although the sociologist can safely assume that his descriptive correlations are causal in nature, he is not obliged to express this by reduction to covering laws. In other words, he cannot expect to express this by means of laws.

Durkheim's *Suicide* can be used as an example of such a description. Correlations are made between suicide rates and the social conditions of the society. In his observation, Durkheim shows that there are important relations between social conditions and individuals' patterns of behavior. With the establishment of such relationships a new dimension to our understanding of suicide is introduced. It is Durkheim's insight that suicide is viewed, among other things, as a social phenomenon. Of course, as discussed above, Durkheim's attempt to formulate "laws" connecting suicide with social conditions are by no means successful. And discovering more about the nature of such connections is an open area for research and investigation. The dynamic connection between individual behavior and social conditions is obviously a complex one. But the important point for our discussion here is that the description of the relationship between these two types of phenomena opens up a new dimension in our understanding of the both of them.
In order to further answer the skeptics' doubts whether explanation by description really has explanatory power, I would like to cite an example given by Professor K. Dixon. He points out that:

... it may still be admitted that historians write sentences of the form: 'The time was ripe for revolution...' filling in the social and economic conditions which pointed to its possibility—even though a revolution did not in fact occur. Special reasons are then given for its 'failure to appear.' These kinds of statements can be interpreted in different ways. 6

Professor Dixon then outlines four such possible interpretations. On the first interpretation, the revolution was inevitable but it was delayed by the negation of one or more of the necessary conditions for the revolution to occur. The second interpretation is that the revolution did not occur although it was the strongest possibility among all possible alternatives. The third interpretation provides a superficial analysis of the situation which indicates that revolution was a possibility. The fourth interpretation is a detail analysis of the situation, describing what are considered to be the crucial sets of circumstances.

The first interpretation is obviously false. The only sensible way to understand the statement "the revolution is inevitable" is that given a chain of events had been started no single individual acting on his own could stop it. And this is
different from arguing that historical events occur in accordance with laws so that given a number of stated necessary and sufficient conditions the revolution is inevitable. Stating simply that the revolution was inevitable is an attempt to interpret historical events by reference to general laws—that is, to use explanation by reduction to covering laws. The second interpretation is a possible one but as Professor Dixon points out, it involves a particular historical judgement. "Revolution" is understood as the strongest possibility because there was a previous revolution which occurred under similar circumstances. This previous revolution sets up the expectations that given the same situations the same sets of crucial events might re-occur. And yet it is perfectly conceivable that given exactly the same circumstances the revolution would fail to occur. That very fact that the revolution did not occur requires special explanation and it is not enough to point out that revolution was the strongest possibility. The third interpretation is superficial and superficiality is defined as "the neglect of important considerations which might have materially altered the outcome of an event." The last interpretation is the most acceptable one to understand an historian's phrases like "the time as ripe for . . . yet . . ." To understand complex social and historical events and the interrelationships between different groups and different people involved in different sets of social phenomena often presupposes a number of general expectations and intuitive
assumptions. All these expectations and assumptions need to be qualified carefully. The detailed descriptions of these events and their correlations provided generalizations and systematizations which render these complex situations intelligible. As evident in the above example, explanation by description is the most fruitful one in the explanation of complex historical and social events. Such descriptive correlations can provide generalizations on one hand and accommodate the contingent nature of social historical events on the other. That is to say descriptive correlations can provide a kind of open-ended "law"-like generalization which can specify a restricted range of contingently associated phenomena as particularly significant. Such open-ended "law"-like statements cannot be regarded as laws since counter-evidence does not negate their usefulness in explaining other events. Professor K. Dixon states in the same discussion that:

The role of empirical generalization in the social sciences seems to lie less in their generality than in their claims to have uncovered new sets of relationships which are relevant factors in the explanation of behavior. The complex relationships between socio-economic status and educational opportunity and attainment may be expressed in a series of stochastic empirical propositions but it is less the form in which the relationship is expressed than the actual relationship itself which is important.
Knowledge and insight can be gained in sociology by what I call "explanation by description." Explanation by description, as I have tried to show, requires no theory construction as in natural sciences; its explanatory power lies in the establishing of correlations, often in the form of empirical generalizations and open-ended "law"-like statements, between relevant social phenomena and events.

But there remains the question of the objectivity of this mode of explanation. I have pointed out earlier that explanation is interest-relative, and the sociologist has to use himself as the measuring instrument, and hence explanation by description may appear to be a subjective process. What needs to be clarified here are the criteria for the judgment of the adequacy of this mode of explanation.

By "adequate" explanation I mean the kind of explanation that brings together the "relevant" phenomena and events such that their relationships can be shown to be "meaningful" ones. Here we encounter the terms "relevant" and "meaningful" again. And now we can examine the use of these two terms in some detail in the context of the adequacy of explanation. It is clear that precise definitions for these two terms are difficult to arrive at. Perhaps no such definitions are possible. But I want to suggest that these two terms can have a clear use in our present context in spite of the lack of precise definitions.
What social phenomena and events are considered relevant in an explanation by description is determined by the "distance" between them. Obviously the term "distance" is used here in a metaphorical sense, although it is not difficult to visualize it either. Imagine the "distance" between the air that we breathe and the moral concepts that we have. I would be outrageous to claim that there is a correlation between the two. The sheer distance between the two renders such a claim irrelevant, let alone insubstantial, in an explanation of the phenomenon of existing moral concepts. But the distance between the existing moral concepts and the politico-economic structures of liberal democracy is not so great that a correlation cannot be formulated. However, if a major scientific breakthrough shows that the emotional disposition of man is effected by the purity of the air that he breathes, a case may possibly be made which argues that there is some relevance between air and man's moral concepts. What this shows is that "relevance" as illustrated in terms of "distance" is embedded in a more general framework of the existing body of human knowledge at large. Important changes in this body of knowledge would effect our perception of the distance between phenomena. Obviously we do not have a clear standard as to exactly what is an acceptable distance within which the correlated phenomena are relevant. But there are clear cases of acceptable and unacceptable distances and there are also the ambiguous borderline cases which need to be argued and
explicated. Such arguments and explications again presuppose an existing body of human knowledge. And any discussion about a "body of knowledge" presupposes an implicit rationality in the use of the notion of relevance in correlating phenomena. It is against this background of rationality that we can judge the relative distance between the explanation and the explained.

The question about the "meaningfulness" of the correlation in the description can be understood in terms of generalizations made in reference to an existing division of academic labor. Generalizations in descriptive correlation are meaningful when they are established more or less on the same level of discourse. For example, it is not very convincing to argue that the social phenomenon of fascism can be entirely explained in terms of individual psychology. Individual psychology may well be related to fascism but it is only part of the explanation. Durkheim's study of suicide as a social phenomenon attempts to explain it from a sociological point of view, and hence it has succeeded in opening up a new dimension of our understanding. This point is closely related to the previously discussed notion of explanation as interest-relative. What we consider as meaningful or meaningless is an explanation presupposes the perspectives that we have adopted. The "meaningfulness" of the explanation is under challenge if a social phenomenon is reduced to a psychological one as it is explained. Such "cross-level" reduction often renders the attempted explanation meaningless.
To explain an event is not to explain away the event. And of course, the ideas of levels of discourse and degrees of meaningfulness are again contingent upon the structure and scope of the existing body of human knowledge.

To sum up, the "practical knowledge" of sociology derives from explanation by description. Explanation by description in sociology involves the observation of the social world from a sociological perspective which is derived from what we have discussed earlier as general sociological orientation. Given this point of departure, the observation of social phenomena takes the form of descriptive correlation. Relevant phenomena are correlated in a systematic and meaningful way. Relevance and meaningfulness are relative to the interest inherent in the sociologist's inquiry on the one hand, and the existing body of human knowledge on the other, a body of knowledge which serves as the background to rational human inquiry. And it is to this question of rationality that we not turn.
Footnotes for Chapter Four


5. According to Putnam, a philosopher, Alan Garfinkel, invented the case.


7. Ibid., p. 110.
CHAPTER V -- Explanation and Rationality

Steven Lukes, in his article "Some Problems about Rationality," discusses the need and the importance to differentiate two types of rationality in the investigation of social phenomena involving the understanding and explanation of human behavior, beliefs, and attitudes. He suggests that:

... some criteria of rationality are universal, i.e., relevantly applicable to all beliefs, in any context, while others are context-dependent, i.e., are to be discovered by investigating the context and are only relevantly applicable to beliefs in that context.

By "criterion" of rationality Lukes means a rule that specifies what would count as a reason for believing something or acting in a certain way. He calls "universal rationality" rationality I and "rationality-in-context" rationality II.

The participants in any social situation in any culture are, under normal circumstances, rational and their actions can be made intelligible. To explain people's actions and beliefs in terms of universal rationality would require that an ideal theory about human nature has been made available and hence everything can be causally accounted for. We have already discussed the problem of this ideal theory and of the impossibility in rendering human nature transparent. Thus, the recognition of a necessary distinction between rationality I and II permits attributions of rationality even when causal accounts
are unavailable. As Lukes points out, the criteria used in rationality II may or may not violate the canons of logic and when they do, these beliefs are called "mysterious," "magical," and so on. But this is not to say that rationality II is entirely independent of rationality I, nor that an evaluation of rationality II by I is impossible. In fact, it is important to point out that in order to avoid the trap of cultural relativism, it must be recognized that in the final analysis rationality II is subject to the evaluation and criticism in terms of rationality I. Now, let us look at this question closely.

Professor K. Dixon, in arguing against cultural relativism, distinguishes four basic components of the concept of rationality. 2

(a) the set of assumptions presupposed as necessary to giving any intelligible account whatsoever of human action (procedural dimension).

(b) the set of assumptions deemed necessary to give legitimate explanations of behavior (substantive dimension) where: (b1) the overriding legitimate mode of explanation is that inherent in the logic and content of scientific inquiry.

(c) the set of assumptions deemed necessary to distinguish between an independently operating logic of enquiry and the sociology or psychology of enquiry; or between accounts which allow for the significance of universal reasons for actions as against purely causal analysis.

(d) the set of assumptions deemed necessary to evaluate
behavior as either (d1) morally appropriate or (d2) explicable by a superior explanatory mode. 3

(a) is evident in our everyday interactions with other people. If a speaker is saying something that seems to be totally unintelligible, his listeners would attempt to make sense of what he says by switching frames of reference, or even by trying to find out whether he is telling a joke. If all these efforts fail, then his listeners would have to terminate the conversation. Even so they would probably make some sort of evaluation of the speaker coming to the conclusion, for example, that he is suffering from mental disorder and so forth. In other words, in every situation of normal human interaction, there is always a mutual commitment by all participants alike to make their behaviors, actions, and utterances intelligible to the others. According to Professor Dixon, this commitment can be understood as consisting of two component parts. First, there is the commitment to some shared concept, however undefined, of what is to count as an intelligible act, utterance, or mode of discourse. Secondly, there is the commitment to some shared meanings which embody the substantive norm as presupposed by both meaningful discourse and the explanation of behavior. These two components are called by Professor Dixon the procedural norm and the substantive norm especially.

(b) posits a universal mode of rationality which has an explanatory over all other modes, such as those that are culture
or context-bound. The core of this mode of rationality consists of the canons of logic and also, as denoted by (b1), the logical form of scientific enquiry. Given this character of universality of (b), evaluation of explanation, both from within one's own culture and from outside cultures are rendered possible. This point leads directly to (c).

In (c) a very significant relation between rationality I and II is pointed out, namely, that the notion of universal rationality "necessarily involves the claim to superiority of judgement in explanatory terms over some participant accounts." This is to say that the kind of explanation that employs the universal criteria of rationality is necessarily superior to the explanation that employs only rationality II. The latter can always be evaluated and criticized in terms of the first.

In (d), the point just made about the explanatory superiority of rationality I over II is made explicit. In fact, any commitment to the idea of a principle of rationality implies a non-relativist assumption that human knowledge has its own logic and it is not merely a contingent product of the social circumstances.

It is my belief that (a), (b), (c), and (d) are indeed contained in our concept of rationality. What I am not certain about is (d1), which brings into question the moral element. It is debatable whether there are built-in moral criteria in the concept of rationality, and in any case, for the purpose of our
present discussion we can safely avoid (d1) as unnecessary.

Hence, Professor Dixon's account of rationality can be described as consisting of four major claims. The first is that there is a commitment to intelligibility by participants in their social actions and interactions, and also in their accounts of these actions. The second claim is that there is a distinction between universal rationality--consisting of the canons of logic and the methods as well as some of the content of scientific enquiry--and rationality-in-context which attempts to understand the significance of the rational dimension of human behavior. The third claim is that this rational dimension of human behavior--the reasons for actions as given by the participants' accounts--cannot be explained (away) causally. The fourth claim is that in spite of such a distinction and the autonomous significance of rationality-in-context, universal rationality has the explanatory superiority which can provide criteria with which any given rationality-in-context can be evaluated.

My objective in this chapter is to show that explanation by description presupposes the concept of rationality. If the concept of rationality is as just outline, then my task is to elaborate how explanation by description is grounded in rationality on this construal.

Since the distinction and relation between these two types of rationality is of crucial importance, therefore, before I
proceed to describe in detail how explanation by description is grounded in rationality, I would like to draw as clear a picture as I can of the relation between the appeals to rationality I and II. As we have discussed above, rationality II concerns the reasons and beliefs given by the participants’ accounts in any social situation. That is to say that rationality II provides criteria—contextually bound criteria—of meanings shared by the participants and of their reasons for holding certain beliefs. What counts as good a reason to hold a certain belief can vary contextually. The same reason that is counted as a good one in context X can become a bad or irrelevant one in context Y. For example, for the natives who are involved in the apocalyptic millenarian religious movements of Melanesia known as the "cargo cult" (a case study that we shall return to in detail) there are good reasons to believe that if they build a stretch of road that resembles the runway of an airfield on their beaches and speak into a box that resembles a radio, then there will be airplanes descending from the sky bringing them all sorts of goods. I say there are good reasons for them to believe so because, given their background knowledge of magic and religion, and given what they understand as the "magical" connections between building an airstrip, talking into a radio, and an airplain arriving; then their belief is not irrational. This is an application of rationality II. And if my next door neighbour Mrs. Jones is doing exactly the same thing as the Melanesian
natives in her backyard, then the same application of rationality II would yield different results. We might suspect Mrs. Jones of something like playing a practical joke, or suffering from mental disorder. But, of course, the Melanesian natives' beliefs, and as well as Mrs. Jones', can be examined in terms of rationality I. In the case of the Melanesian natives, this would involve a study of the entire Melanesian culture in terms of the belief system, the ability to differentiate man made conventions and natural laws, and many other aspects of the social structure. That is, we can judge in the final analysis that the Melanesian natives' behavior and beliefs are misguided because some of their basic assumptions are false. The point is that any significant understanding of the Melanesian culture would have to involve both rationality I and II. While rationality I is indispensable and serves as the regulatory core of the concept of rationality, the application of rationality II can grasp the meaning and significance of beliefs and behavior in concrete situations. What, then, is the position occupied by the natural sciences in this picture? I have mentioned above that the form of scientific enquiry belongs to rationality I. But what about the content of scientific knowledge? I would like to argue that the degrees of certainty of the various branches of scientific knowledge vary from case to case. In fact, certain knowledge is so well established and so central that their degree of certainty could be ranked among the canons of logic.
For example, we know that under normal circumstances people do not and cannot walk through walls. This in turn points to the fact that the scientific theories in physics have a degree of certainty that come close to that of the canons of logic. Based on this knowledge we have to apply rationality II to understand a report, say, of certain tribesmen who believe that they can walk through walls if they perform certain rituals. In other words, because we know that people cannot walk through walls we cannot accept the report at face value. We have to examine the many other assumptions and premises held by the tribesmen, understanding their beliefs about materiality, the distinction between mind and body, and in fact, about walls. A statement like "people cannot walk through walls" is so well established that it calls for the use of rationality II. But there is also scientific knowledge that we would not hesitate to consider as culture-bound. What I have in mind are examples drawn from the medical science, especially in the field of psychiatry. Psychiatry and psychoanalysis would undoubtedly appear strange to people of other cultures--cultures other than that of the Western World--and it is by no means clear that they can be applied cross-culturally. One final comment about the role of natural sciences in the context of rationality is that the relation between the procedure of scientific enqury and the empirical content of science is not always a straightforward one. In the case of quantum mechanics, the body of knowledge
that we have gained has posed questions about the hitherto unchallenged assumptions that we have about the relation between evidence and observation. Thus, we have a situation in which the different branches of the body of scientific knowledge possess different degrees of certainty, some are to be ranked among the canons of logic and some others are more controversial.

Explanation by description presupposes this background picture of rationality as describe above. Every valid correlation that is given by this mode of explanation is grounded in either rationality I or rationality II, sometimes both. A correlation of phenomena is deemed relevant because it is meaningful and enlightening against this background of rationality. Every correlation that is made has an implicit assumption about part of our shared knowledge. The level of abstraction and generalization of the background knowledge can vary from case to case. Often a new correlation is made based on some previously accepted correlation's of phenomena. Sometimes an accepted correlation can be shown to be too far-fetched and irrelevant when some previously ignored background knowledge is brought to light. And the reverse situation can also happen. Some correlations that were considered as irrelevant before can demand to be re-evaluated due to the emergence of a new piece of knowledge. The interrelation between explanation by description and the background of rationality is a complex one. And it is the complex but indispensible relationship that anchors
explanation by description—in spite of its many subjective appearances (sociologists using themselves as measuring instruments, explanation as interest-relative, etc.)—-in a background of objectivity.

As an illustration of the relation between explanation by description and its background of rationality, I would like to cite the case study of the cargo cults as analysed by Ian Jarvie. He calls his method, after K. Popper "logic of the situation." By that he merely means that why people acted in such and such a way can be rationally reconstructed. And in advocating this situational logic, he argues that one should refrain from grand theories, such as functionalism, and it is the detailed analysis of the concrete situation that is important and fruitful. It seems obvious to me that the mode of explanation implicit in the situational logic is explanation by description. I would like to achieve two things in the following study of Ian Jarvie's account of the cargo cult. Firstly, I would like to show that his method of explanation is what I call explanation by description and secondly, the explanatory power of this mode of explanation is intimately connected with the concept of rationality as discussed above.

The phenomenon of cargo cults is a Millenarian religious movement that has been practised on the islands of Melanesia only since the first world war. These cults are colorful and widespread. They are recognizable as some form of offshoot of
one or another brand of Christianity. Usually a native prophet would arise and proclaim that the Millennium would come if the people could fulfill certain conditions. The cults are known as cargo cults because a central theme is that when the millennium arrives it will consist of the arrivals of ships and airplanes loaded up with cargo which are material goods that the natives desire. Sometimes the cargo will consist of material goods as well as the natives' ancestors. Another theme of the cult is that with the coming of the millennium the order of society will be returned to its original state, which is described in the "First page of the Bible" which is believed by the natives to have been torn out by the white missionaries. The natives believe that the missionaries wanted to suppress the fact that in the original state of society (according to the "First page of the Bible") black people were God's chosen and He sent the rewards in the form of cargo. But whites came and they intercepted and misappropriated the shipments of cargo. When the millennium comes, the blacks will rule the whites, the cargo will go to the natives who are the rightful owners. The conditions to be fulfilled vary from case to case. Some prophets use semi-religious rituals to induce ecstasy and revivalist hysteria. Some other prophets would proclaim a complete break with the past by overthrowing the taboos. And still some others would condemn possession of stocks of food as sinful and often the cult is accompanied by squandering and deliberate wasting of
food and goods, which is also interpreted as a demonstration of faith in the arrival of the millennium. Part of the preparation for the arrival of millennium consists of the construction of some pathetic imitations of airstrips and piers to receive the planes and ships bearing the cargo and the natives’ ancestors. Often the prophets would utter sounds into a box (the imitation radio) to invoke the arrival of the cargo.

The cultists have been brutally suppressed by the European administrators of the area because of their anti-white attitude. During the second world war, the Japanese invaders acted in the same way. Finally, the American liberating forces were seen as a new hope, especially with the presence of black American soldiers. But they left and the colonial rule returned, and the cults continued.

The questions raised by the cargo cults are, according to Jarvie, (a) why do cargo cults occur? (b) Why do they have the doctrines that they do? (c) Why are they similar? (d) Why are they apocalyptic and millenarian? Before he proceeds to answer these questions, Jarvie argues that social change cannot be accounted for simply by stating changes in terms of the objective and external factors affecting the society in question, e.g., the arrival of the white men, the white men leaving, etc., because these factors have social consequences only when they affect the situation in which individuals have to consider such changes in their beliefs and behavior. A simple
casual explanation would not do. We have to look carefully into concrete situations, to discover how the individuals' aims, actions, are related to their circumstances, and furthermore, what are the unintended consequences of their actions which would affect them in the long run. In other words, Jarvie is suggesting that both rationality I and II are needed in understanding human behavior in concrete situations. Hence, one is dealing with one situation at a time. This approach is equivalent to that of describing in details the circumstances and the relevant factors in relation to the social phenomenon in question. And this is what I call explanation by descriptions. In Jarvie's own words: "... to realize we want to explain this or that social change and need not bother with the explanation of social change allows us to breathe more freely."

The following is a brief summary of Jarvie's answer to the four questions as posed above. In answering (a), Jarvie introduces the Popperian concept of "closed society." It is a situation in which a small, economically, politically and culturally homogenous society is suddenly thrust into a colonial confrontation. The appearance of the white men is a surprise. They are wealthy, successful and powerful; and, more importantly, they don't act towards the natives as men are expected to act. White men's behavior, in connection with their possessions, has the power which is envied by the natives. The natives' question is how to get the power and be as successful as the white men.
Given this social situation, when a man endowed with some charismatic power comes along and claims that he has the solution, then it is not difficult to see that his words would ring true in many receptive ears. This is to suppose, as Jarvie points out, that ideas, especially liberating ideas, have tremendous power and influence. And this is also to argue that as the closed societies of Melanesia are reacting to externally imposed new changes, new social institutions (cargo cults) are being set up to obtain certain specific ends (cargo). Such a change, argues Jarvie, is the first step towards the open society in the sense that the merging of nature and convention is broken, although the new institution created is still clothed in the language of magic and religion.

The answer to (b) is given in the form of a detailed description of the confrontation between the natives and the white colonialists. The cargo cult is created to solve a problem: why does the white society get the wonderful material things it has? Hence, the cargo cult is meant to provide the natives with the knowledge that certain actions would bring the same material goods for the black societies as well. The situation is quite straightforward. The native sees the white man in his luxurious house (the native could well be the kitchen help in that house) talking to a box and later a ship arrives loaded with all kinds of wonderful goods. The native associates the two events: the white man talking into a box and expecting a
ship to appear, and later on a ship appearing. To the native, this is very powerful magic indeed. Then the very same native would go off into the jungle to inform the people about the secret of the white men's magic. He would make a crude model of the box and talk into it and tell everybody to build a jetty on the seashore to wait for the ship. This is the explanation at its simplest. However, we can bring into consideration some more complicated factors. It is perfectly possible for the natives to associate European power with Christianity. They convert to the European religion in the hope that they will be rewarded with the same benefit. When the expected benefit fails to materialize, it is not unnatural for the natives to suspect that the Europeans have denied them some important secrets in the religion. This claim is that much more convincing when one considers that the natives are not allowed to attend the same church as the white men. The idea that the first page of the Bible has been deliberately torn out of all natives' Bibles is a wide-spread belief among the natives. This can also be explained in terms of the fact that while the missionaries greatly stress the truth of the Bible, the natives are puzzled because they are not mentioned at all in the Bible. This leads the natives to suspect that the white men have suppressed some of God's words, which means that some of the important injunctions or spells are not available to the natives which consequently prevent them from acquiring cargo. As a result of such reasoning, cargo
cultists would set up their movement, claiming that they have discovered the content of the missing passages and they have fathomed the white men's secret magic.

To answer (c), Jarvie introduces both the concepts of evolution and of diffusion. He argues that both of these concepts can be applied within the framework of situational logic to explain the similarities of the cults. The concept of evolution can be applied in the sense that it is possible to assume that the cultural and linguistic homogeneity of Melanesia might have a lot to do with the fact that originally similar peoples populated the area. They have to face similar sorts of situations and evolve in very similar ways. The concept of diffusion can be applied in the sense that the Melanesian peoples are all exposed to the culture of the white men, the traders, the missionaries, the administrators. And these white men along with their radios, planes, and boats are the vehicles of diffusion. But Jarvie cautions that both the concepts of evolution and diffusion are to be used in a limited way. They are not to be imported as the grand theories which can explain all. It is more of a situation in which certain insights drawn from both concepts are found useful and they are used selectively to explain (c).

The answer to (d) is formulated in terms of the relation between change and the long standing stability that is characteristic of the closed societies. In other words, if any
kind of change is to happen to a closed society in general, be it externally or internally caused, either the change is so strong that it would assume the form of violent intrusion into the society or it cannot occur at all. Cargo cult is such an intrusion. Given the background of the system of magic and religious beliefs, as well as the introduction of Christianity and the Bible, it is understandable that the cargo cult movement would take the form of a sudden, apocalyptic upheaval. And the religious hysteria cultivated by some particular prophets and the violent breaking of old taboos and the introduction of new ones often caused sudden release of emotional energy. Jarvie quotes W. Sargent in discussing the relations between rhythmic stimulation, abnormalities of brain function, states of tension, and convulsive fits to support this view.

To sum up, Jarvie’s explanation of the four problems about the cargo cults centre around the description of aims and means of the actors—the Melanesian natives—in relation to their behavior. The circumstances of the natives’ situation and their subjective viewpoints are analysed in great detail. Jarvie does not produce a theory a la Hempel about the cult movement in general and he refrains from discussing social change in the abstract. As he states it in the beginning of his discussion, he is dealing with a group of concrete phenomena known as the cargo cults. And it is clear from his answers that he does not explain the natives’ behavior by reduction to certain covering laws. His
method, the situational logic, is explanation by description in action. How are his explanations connected with the concept of rationality? In order to answer this question and to sustain my claim that any valid explanation by description is necessarily grounded in a background of rationality, I would like to examine in some detail Jarvie's explanations.

In answering the question of why cargo cults occur, he introduces the concept of a closed society. The concept is not defined in the way that the terms of natural science are defined. It can best be understood as a heuristic device with which to highlight certain prominent features of the observable social reality. There are no societies that exactly fit Popper's concept. There has never been, at least to our knowledge, an absolutely closed society; and it is clear that there has never been an absolutely open society. But there are societies more closed than others. In a certain sense, as heuristic devices, both concepts are products of explanation by descriptions. The concept of a closed society correlates a certain group of social structures while the concept of an open society correlates quite a different group. As a result of such descriptive correlations, the complex social-historical reality (the cargo cults and the Melanesian societies being a case in point) is rendered more intelligible. Insofar that these two Popperian concepts are accepted as part of our understanding of the social reality, Jarvie's correlations of the phenomena of the closed societies
of the Melanesia with the colonial confrontation is a well-founded one. His correlation of social change and the charismatic leaders—the prophets of the cults—can be supported by literatures in social science, notably Weber's study of charisma and leadership. Jarvie's claims here are not immune from attacks from the camp of historical determinism, but insofar as historical determinism depends on explanation by reduction to covering laws, we can safely ignore such attacks in the light of our own previous discussion of the subject.

Jarvie's second answer is a vivid demonstration of the appeal to rationality II. The Melanesian natives' subjective understanding of their situations—the arrival of the white men, their treatment by the white men and their ability to comprehend the white men's ways as severely limited by their cultural background—is correlated with the natives' aim which is to acquire the same power and material wealth as the white men's, and further correlated with the means (a system of magic) that is at the natives' disposal to achieve their aim. And hence, the natives' behavior is made intelligible to us. This process of descriptive correlation which explains why the cults appear in the way they do is connected with and supported by our understanding of how under normal circumstances man's actions are consistent with his aim and with the means available to him.

In his third answer Jarvie brings in certain insights that he finds useful and applicable to the present problem from
evolutionism and diffusionism. As I have argued earlier, he is not attempting to solve the problem with these two theories. In fact, he criticizes both theories as too rigid and he has made it clear that he is drawing from them only what he considers as useful. The result is two sets of correlations grounded in the theories of evolutionism and diffusionism respectively. With insights drawn from evolutionism, the similarity of the cults is correlated with the similarities existing between the Melanesian societies in terms of their social structure, language, and beliefs. And with insights drawn from diffusionism, the similarity of the cults is correlated with the similarity of the social conditions confronting the Melanesian societies. The arrival of white administrators as overlords, the intrusion of Christianity through the missionaries, and the travelling of the white traders and missionaries from island to island are such conditions. Hence, these detailed descriptions are intimately connected with the relevant background of the theories of evolutionism and diffusionism.

In his answer to the fourth question, Jarvie's descriptive correlations are based on two assumptions. The first is again an application of rationality II. The apocalyptic form of the cults is due to the fact that the means available to the natives are on one hand their deeply-rooted belief system of magic, and on the other hand the association of white men's power with Christianity. The Christian religion is taken as a superior
magic and the millennium is interpreted by the natives as the arrival of the cargo and their ancestors.

The second assumption is based on what we know in psychology about the phenomenon of the release of long suppressed emotional energy. In the closed societies of Melanesia, the violation of old taboos and the creation of new ones would surely greatly upset people's behavioral patterns and the emergence of religious hysteria is perfectly understandable.

Of course, this presentation of Jarvie's explanations of cargo cults does not mean that these explanations are entirely correct and that no future improvements can be made. Since I understand his situational logic as consisting of explanation by description, it is my task to show that the detailed descriptive correlations provided by Jarvie are grounded in our commonly shared background of rationality. But this is not the same as to say that the relations between these descriptive correlations and the concept of rationality are of a fixed nature. In fact, any future findings about the Melanesian societies on the one hand, and future development of any of the related knowledge on the other would undoubtedly affect the explanations of cargo cults.

As a final comment, I would like to return to the question of social facts. In the light of our discussion, I think we are in a position to reformulate the concept of social fact. I have argued in this paper against Durkheim's idea of social facts as
external to the individuals and as exerting social forces on them in a deterministic manner. In my rejoinder to Durkheim I have also argued that social facts are by nature interpretive. It seems to me that we can now add two further observations on the matter. The first is to point out that although social facts are interpretive, the range of interpretation for some is wider than others. This is related to the concept of rationality as a regulative anchorage in our investigation of social reality. Some social facts' interpretations are so standardized and are so closely connected with the universal aspects of rationality that they are rarely disputed. And then there are those the interpretations of which vary drastically from one instance to another. The second observation is that although the causal relation between social facts and peoples' behavior as argued by Durkheim has been shown to be untenable, it can nevertheless be reconstructed in terms of correlations. Such a move would free us to explore with less "theoretical" constraint the concrete details of every particular situation and capture the shades and nuances of the specific phenomenon in question. This is not to concede defeat in the study of social phenomena but to advocate a more lively and imaginative and hence more fruitful approach. To quote Professor K. Dixon: "In sociology it seems best to trim the sails of one's theoretical pretensions to the winds of contingent possibility."
Footnotes for Chapter Five


3. Ibid., p. 85.

4. Ibid., p. 84.


7. Ibid., p. 114.

8. A closed society, according to K. Popper, is a society in which the distinction between what is natural and what is conventional is not clearly made. The distinction between natural occurrences, like the annual cycle of seasons, or the succession of night and day, are not marked off from human conventions, like the political organization of the society, the taboos, and so on. Everything is assimilated into the natural category. The idea of humanly invented convention is unknown, and it is characteristic of the closed society that what we know of as human conventions are often surrounded by an aura of magic and taboo which insulate them from criticism and change.

Bibliography


