VOLUME LI, No. 9 APRIL 29, 1954

THE JOURNAL OF PHILOSOPHY

CONCEPT AND THEORY FORMATION IN THE SOCIAL SCIENCES [1]

THE title of my paper refers intentionally to that of a Symposium held in December, 1952, at the annual meeting of the American Philosophical Association.[2] Ernest Nagel and Carl G. Hempel contributed highly stimulating comments on the problem involved, formulated in the careful and lucid way so characteristic of these scholars. Their topic is a controversy which for more than half a century has split not only logicians and methodologists but also social scientists into two schools of thought. One of these holds that the methods of the natural sciences which have brought about such magnificent results are the only scientific ones and that they alone, therefore, have to be applied in their entirety to the study of human affairs. Failure to do so, it has been maintained, prevented the social sciences from developing systems of explanatory theory comparable in precision to those offered by the natural sciences and makes debatable the empirical work of theories developed in restricted domains such as economics.

The other school of thought feels that there is a basic difference in the structure of the social world and the world of nature. This feeling led to the other extreme, namely the conclusion that the methods of the social sciences are *toto coelo* different from those of the natural sciences. In order to support this position a variety of arguments was proffered. It has been maintained that the social sciences are idiographic, characterized by individualizing conceptualization and seeking singular assertory propositions, whereas the natural sciences are nomothetic, characterized by generalizing conceptualization and seeking general apodictic propositions. The latter have to deal with constant relations of magnitude which can be measured and can perform experiments, whereas neither measurement nor experiment is practicable in the social sciences. In general, it is held that the natural sciences have to deal with material objects and processes, the social sciences, how-

[1] Paper presented at the 33rd Semi-Annual Meeting of the Conference on Methods in Philosophy and the Sciences, New York, May 3, 1953.

[2] Published in the volume *Science, Language and Human Rights* (American Philosophical Association, Eastern Division, Vol. I), Philadelphia, University of Pennsylvania Press, 1952, pp. 43–86 (referred to as SLH).

ever, with psychological and intellectual ones and that, therefore, the method of the former consists in explaining, that of the latter in understanding.

Admittedly, most of these highly generalized statements are untenable under closer examination, and this for several reasons. Some proponents of the characterized arguments had a rather erroneous concept of the methods of the natural sciences. Others were inclined to identify the methodological situation in one particular social science with the method of the social sciences in general. Because history has to deal with unique and non-recurrent events, it was contended that all social sciences are restricted to singular assertory propositions. Because experiments are hardly possible in cultural anthropology, the fact was ignored that social psychologists can successfully use laboratory experiments at least to a certain extent. Finally, and this is the most important point, these arguments disregard the fact that a set of rules for scientific procedure is equally valid for all empirical sciences whether they deal with objects of nature or with human affairs. Here and there, the principles of controlled inference and verification by fellow-scientists and the theoretical ideals of unity, simplicity, universality, and precision prevail.

This unsatisfactory state of affairs results chiefly from the fact that the development of the modern social sciences occurred during a period in which the science of logic was mostly concerned with the logic of the natural sciences. In a kind of monopolistic imperialism the methods of the latter were frequently declared to be the only scientific ones and the particular problems which social scientists encountered in their work were disregarded. Left without help and guidance in their revolt against this dogmatism, the students of human affairs had to develop their own conceptions of what they believed to be the methodology of the social sciences. They did it without sufficient philosophical knowledge and stopped their effort when they reached a level of generalization which seemed to justify their deeply felt conviction that the goal of their inquiry could not be reached by adopting the methods of the natural sciences without modification or implementation. No wonder that their arguments are frequently ill-founded, their formulations insufficient, and that many misunderstandings obfuscate the controversy. Not what social scientists *said* but what they *meant* is therefore our main concern in the following.

The writings of the late Felix Kaufmann [3] and the more recent

[3] Especially his *Methodology of the Social Sciences,* New York, Oxford University Press, 1941.

contributions by Nagel [4] and Hempel [5] have criticized many fallacies in the arguments proposed by social scientists and prepared the ground for another approach to the problem. I shall here concentrate on Professor Nagel's criticism of the claim made by Max Weber and his school that the social sciences seek to "understand" social phenomena in terms of "meaningful" categories of human experience and that, therefore, the "causal functional" approach of the natural sciences is not applicable in social inquiry. This school, as Dr. Nagel sees it, maintains that all socially significant human behavior is an expression of motivated psychic states, that in consequence the social scientist cannot be satisfied with viewing social processes simply as concatenations of "externally related" events, and that the establishment of correlations or even of universal relations of concomitance cannot be his ultimate goal. On the contrary, he must construct "ideal types" or "models of motivations" in terms of which he seeks to "understand" overt social behavior by imputing springs of action to the actors involved in it. If I understand Professor Nagel's criticism correctly, he maintains:

1. That these springs of action are not accessible to sensory observation. It follows and has frequently been stated that the social scientist must imaginatively identify himself with the participants and view the situation which they face as the actors themselves view it. Surely, however, we need not undergo other men's psychic experiences in order to know that they have them or in order to predict their overt behavior.

2. That the imputation of emotions, attitudes, and purposes as an explanation of overt behavior is a twofold hypothesis: it assumes that the agents participating in some social phenomenon are in certain psychological states; and it assumes also definite relations of concomitance between such states, and between such states and overt behavior. Yet none of the psychological states which we imagine the subjects of our study to possess may in reality be theirs, and even if our imputations should be correct none of the overt actions which allegedly issue from those states may appear to us understandable or reasonable.

3. That we do not "understand" the nature and operations of human motives and their issuance in overt behavior more adequately than the "external" causal relations. If by meaningful explanation we assert merely that a particular action is an instance of a pattern of behavior which human beings exhibit under a

[4] *SLH*, pp. 43–64.
[5] *SLH*, pp. 65–86.

variety of circumstances and that, since some of the relevant circumstances are realized in the given situation, a person can be expected to manifest a certain form of that pattern, then there is no sharp gulf separating such explanations from those involving merely "external" knowledge of causal connections. It is possible to gain knowledge of the actions of men on the evidence supplied by their overt behavior just as it is possible to discover and know the atomic constitution of water on the evidence supplied by the physical and chemical behavior of that substance. Hence the rejection of a purely "objective" or "behavioristic" social science by the proponents of "meaningful connections" as the goal of social sciences is unwarranted.

Since I shall have to disagree with Nagel's and Hempel's findings in several questions of a fundamental nature, I might be permitted to start with a brief summary of the no less important points in which I find myself happily in full agreement with them. I agree with Professor Nagel that all empirical knowledge involves discovery through processes of controlled inference, and that it must be statable in propositional form and capable of being verified by anyone who is prepared to make the effort to do so through observation [6]—although I do not believe, as Professor Nagel does, that this observation has to be sensory in the precise meaning of this term. Moreover, I agree with him that "theory" means in all empirical sciences the explicit formulation of determinate relations between a set of variables in terms of which a fairly extensive class of empirically ascertainable regularities can be explained.[7] Furthermore, I agree wholeheartedly with his statement that neither the fact that these regularities have in the social sciences a rather narrowly restricted universality, nor the fact that they permit prediction only to a rather limited extent, constitutes a basic difference between the social and the natural sciences, since many branches of the latter show the same features.[8] As I shall try to show later on, it seems to me that Professor Nagel misunderstands Max Weber's postulate of subjective interpretation. Nevertheless, he is right in stating that a method which would require that the individual scientific observer identify himself with the social agent observed in order to understand the motives of the latter, or a method which would refer the selection of the facts observed and their interpretation to the private value system of the particular observer, would merely lead to an uncontrollable private and sub-

[6] *SLH*, p. 56.
[7] *SLH*, p. 46.
[8] *SLH*, pp. 60 ff.

jective image in the mind of this particular student of human affairs, but never to a scientific theory.[9] I merely submit that I do not know of any social scientist of stature who ever advocated such a concept of subjectivity as that criticized by Professor Nagel. Most certainly this was not the position of Max Weber.

Yet I submit also that our authors are prevented from grasping the point of vital concern to social scientists by their basic philosophy of sensationalistic empiricism or logical positivism, which identifies experience with sensory observation and which assumes that the only alternative to controllable and, therefore, objective sensory observation is that of subjective and, therefore, uncontrollable and unverifiable introspection. This is certainly not the place to renew the age-old controversy relating to the hidden presuppositions and implied metaphysical assumptions of this basic philosophy. On the other hand, in order to account for my own position, I should have to treat at length certain principles of phenomenology. Instead of doing so, I propose to defend a few rather simple propositions:

1. The primary goal of the social sciences is to obtain organized knowledge of social reality. By the term "social reality" I wish to be understood the sum total of objects and occurrences within the social cultural world as experienced by the common-sense thinking of men living their daily lives among their fellow-men, connected with them in manifold relations of interaction. It is the world of cultural objects and social institutions into which we all are born, within which we have to find our bearings, and with which we have to come to terms. From the outset, we, the actors on the social scene, experience the world we live in as a world both of nature and of culture, not as a private but as an intersubjective one, that is, as a world common to all of us, either actually given or potentially accessible to everyone; and this involves intercommunication and language.

2. All forms of naturalism and logical empiricism simply take for granted this social reality, which is the proper object of the social sciences. Intersubjectivity, interaction, intercommunication, and language are simply presupposed as the unclarified foundation of these theories. They assume, as it were, that the social scientist has already solved his fundamental problem, before scientific inquiry starts. To be sure, Dewey emphasized, with a clarity worthy of this eminent philosopher, that all inquiry starts and ends within the social cultural matrix; to be sure, Professor Nagel is fully aware of the fact that science and its self-correcting

[9] *SLH*, pp. 55–57.

process is a social enterprise.[10] But the postulate to describe and explain human behavior in terms of controllable sensory observation stops short before the description and explanation of the process by which scientist B controls and verifies the observational findings of scientist A and the conclusions drawn by him. In order to do so, B has to know what A has observed, what the goal of his inquiry is, why he thought the observed fact worthy of being observed, *i.e.*, relevant to the scientific problem at hand, etc. This knowledge is commonly called understanding. The explanation of how such a mutual understanding of human beings might occur is apparently left to the social scientist. But whatever his explanation might be, one thing is sure, namely, that such an intersubjective understanding between scientist B and scientist A occurs neither by scientist B's observations of scientist A's overt behavior, nor by introspection performed by B, nor by identification of B with A. To translate this argument into the language dear to logical positivism, this means, as Felix Kaufmann [11] has shown, that so-called protocol propositions about the physical world are of an entirely different kind than protocol propositions about the psycho-physical world.

3. The identification of experience with sensory observation in general and of the experience of overt action in particular (and that is what Nagel proposes) excludes several dimensions of social reality from all possible inquiry.

(a) Even an ideally refined behaviorism can, as has been pointed out for instance by George H. Mead,[12] merely explain the behavior of the observed, not of the observing behaviorist.

(b) The same overt behavior (say a tribal pageant as it can be captured by the movie-camera) may have an entirely different meaning to the performers. What interests the social scientist is merely whether it is a war dance, a barter trade, the reception of a friendly ambassador, or something else of this sort.

(c) Moreover, the concept of human action in terms of commonsense thinking and of the social sciences includes what may be called "negative actions," *i.e.*, intentional refraining from acting,[13] which, of course, escapes sensory observation. Not to sell certain merchandise at a given price is doubtless as economic an action as to sell it.

[10] *SLH*, p. 53.

[11] *Op. cit.*, p. 126.

[12] *Mind, Self and Society*, Chicago University Press, 1937.

[13] See Max Weber, *The Theory of Social and Economic Organization*, translated by A. M. Henderson and Talcott Parsons (New York, 1947), p. 88.

(d) Furthermore, as W. I. Thomas has shown,[14] social reality contains elements of beliefs and convictions which are real because so defined by the participants and which escape sensory observation. To the inhabitants of Salem in the seventeenth century, witchcraft was not a delusion but an element of their social reality and is as such open to investigation by the social scientist.

(e) Finally, and this is the most important point, the postulate of sensory observation of overt human behavior takes as a model a particular and relatively small sector of the social world, namely, situations in which the acting individual is given to the observer in what is commonly called a face-to-face relationship. But there are many other dimensions of the social world in which situations of this kind do not prevail. If we put a letter in the mailbox we assume that anonymous fellow-men, called postmen, will perform a series of manipulations, unknown and unobservable to us, with the effect that the addressee, possibly also unknown to us, will receive the message and react in a way which also escapes our sensory observation; and the result of all this is that we receive the book we have ordered. Or if I read an editorial stating that France fears the re-armament of Germany, I know perfectly well what this statement means without knowing the editorialist and even without knowing a Frenchman or a German, let alone without observing their overt behavior.

In terms of common-sense thinking in everyday life men have knowledge of these various dimensions of the social world in which they live. To be sure, this knowledge is not only fragmentary since it is restricted principally to certain sectors of this world, it is also frequently inconsistent in itself and shows all degrees of clarity and distinctness from full insight or "knowledge-about," as James[15] called it, through "knowledge of acquaintance" or mere familiarity, to blind belief in things just taken for granted. In this respect there are considerable differences from individual to individual and from social group to social group. Yet, in spite of all these inadequacies, common-sense knowledge of everyday life is sufficient for coming to terms with fellow-men, cultural objects, social institutions—in brief, with social reality. This is so, because the world (the natural and the social one) is from the outset an intersubjective world and because, as shall be pointed out later on, our knowledge of it is in various ways socialized. Moreover, the social world is experienced from the outset as a meaningful one.

[14] See W. J. Thomas, *Social Behavior and Personality,* edited by E. H. Volkart (New York, Social Science Research Council, 1951), p. 81.

[15] *Principles of Psychology,* Vol. I, pp. 221 f.

The other's body is not experienced as an organism but as a fellow-man, its overt behavior not as an occurrence in the space-time of the outer world, but as our fellow-man's action. We normally "know" what the other does, wherefore he does it, why he does it at this particular time and in these particular circumstances. That means that we experience our fellow-man's action in terms of his motives and goals. And in the same way we experience cultural objects in terms of the human action of which they are the result. A tool, for example, is not experienced as a thing in the outer world (which of course it is also) but in terms of the purpose for which it was designed by more or less anonymous fellow-men and its possible use by others.

The fact that in common-sense thinking we take for granted our actual or potential knowledge of the meaning of human actions and their products, is, so I submit, precisely what social scientists want to express if they speak of understanding or *Verstehen* as a technique of dealing with human affairs. *Verstehen* is, thus, primarily not a method used by the social scientist, but the particular experiential form in which common-sense thinking takes cognizance of the social cultural world. It has nothing to do with introspection, it is a result of processes of learning or acculturation in the same way as the common-sense experience of the so-called natural world. *Verstehen* is, moreover, by no means a private affair of the observer which cannot be controlled by the experiences of other observers. It is controllable at least to the same extent to which the private sensory perceptions of an individual are controllable by any other individual under certain conditions. You have just to think of the discussion by a trial-jury whether the defendant has shown "pre-meditated malice" or "intent" in killing a person, whether he was capable of knowing the consequences of his deed, etc. Here we even have certain "rules of procedure" furnished by the "rules of evidence" in the juridical sense and a kind of verification of the findings resulting from processes of *Verstehen* by the Appellate Court, etc. Moreover, predictions based on *Verstehen* are continuously and with high success made in common-sense thinking. There is more than a fair chance that a duly stamped and addressed letter put in a New York mailbox will reach the addressee in Chicago.

Nevertheless, both defenders and critics of the process of *Verstehen* maintain, and with good reason, that *Verstehen* is "subjective." Unfortunately, however, this term is used by each party in a different sense. The critics of understanding call it subjective, because they hold that understanding the motives of another man's action depends upon the private, uncontrollable, and unverifiable

intuition of the observer or refers to his private value system. The social scientists, such as Max Weber, however, call *Verstehen* subjective because its goal is to find out what the actor "means" in his action, in contrast to the meaning which this action has for the actor's partner or a neutral observer. This is the origin of Max Weber's famous postulate of subjective interpretation, of which more will have to be said in what follows. The whole discussion suffers from the failure to distinguish clearly between *Verstehen* (1) as the experiential form of common-sense knowledge of human affairs, (2) as an epistemological problem, and (3) as a method peculiar to the social sciences.

So far we have concentrated on *Verstehen* as the way in which common-sense thinking finds its bearing within the social world and comes to terms with it. As to the epistemological question: "How is such understanding or *Verstehen* possible?" I have to answer, alluding to a statement Kant made in another context, that it is a "scandal of philosophy" that so far the problem of our knowledge of other minds and, in connection therewith, of the intersubjectivity of our experience of the natural as well as the socio-cultural world, has not found a satisfactory solution and that, until rather recent times, this problem has even escaped the attention of philosophers. But the solution of this most difficult problem of philosophical interpretation is one of the first things taken for granted in our common-sense thinking and practically solved without any difficulty in each of our everyday actions. And since human beings are born of mothers and not concocted in retorts, the experience of the existence of other human beings and of the meaning of their actions is certainly the first and most original empirical observation man makes.

On the other hand, philosophers as different as James, Bergson, Dewey, Husserl, and Whitehead agree that the common-sense knowledge of everyday life is the unquestioned but always questionable background within which inquiry starts and within which alone it can be carried out. It is this *Lebenswelt,* as Husserl calls it, within which, according to him, all scientific and even logical concepts originate; it is the social matrix within which, according to Dewey, unclarified situations emerge, which have to be transformed by the process of inquiry into warranted assertibility; and Whitehead has pointed out that it is the aim of science to produce a theory which agrees with experience by explaining the thought-objects constructed by common sense through the mental constructs or thought objects of science. For all these thinkers agree that any knowledge of the world, in common-sense thinking as well as in science, involves mental constructs, syntheses, generaliza-

tions, formalizations, idealizations specific to the respective level of thought organization. The concept of Nature, for instance, with which the natural sciences have to deal is, as Husserl has shown, an idealizing abstraction from the *Lebenswelt,* an abstraction which, on principle and of course legitimately, excludes persons with their personal life and all objects of culture which originate as such in practical human activity. Exactly this layer of the *Lebenswelt,* however, from which the natural sciences have to abstract, is the social reality which the social sciences have to investigate.

This insight sheds a light on certain methodological problems peculiar to the social sciences. To begin with, it appears that the assumption that the strict adoption of the principles of concept and theory formation prevailing in the natural sciences will lead to reliable knowledge of the social reality, is inconsistent in itself. If a theory can be developed on such principles, say in the form of an ideally refined behaviorism—and it is certainly possible to imagine this—, then it will not tell us anything about social reality as experienced by men in everyday life. As Professor Nagel himself admits,[16] it will be highly abstract, and its concepts will apparently be remote from the obvious and familiar traits found in any society. On the other hand, a theory which aims at explaining social reality has to develop particular devices foreign to the natural sciences in order to agree with the common-sense experience of the social world. This is indeed what all theoretical sciences of human affairs—economics, sociology, the sciences of law, linguistics, cultural anthropology, etc.—have done.

This state of affairs is founded on the fact that there is an essential difference in the structure of the thought objects or mental constructs formed by the social sciences and those formed by the natural sciences.[17] It is up to the natural scientist and to him alone to define, in accordance with the procedural rules of his science, his observational field, and to determine the facts, data, and events within it which are relevant for his problem or scientific purpose at hand. Neither are those facts and events pre-selected, nor is the observational field pre-interpreted. The world of nature, as explored by the natural scientist, does not "mean" anything to the molecules, atoms, and electrons therein. The observational

[16] *SLH,* p. 63.

[17] Some of the points dealt with in the following are presented more elaborately in my paper, "Common-Sense and Scientific Interpretation of Human Action," in *Philosophy and Phenomenological Research,* Vol. XIV (September 1953), pp. 1–37.

field of the social scientist, however, namely the social reality, has a specific meaning and relevance structure for the human beings living, acting, and thinking therein. By a series of common-sense constructs they have pre-selected and pre-interpreted this world which they experience as the reality of their daily lives. It is these thought objects of theirs which determine their behavior by motivating it. The thought objects constructed by the social scientist, in order to grasp this social reality, have to be founded upon the thought objects constructed by the common-sense thinking of men, living their daily life within their social world. Thus, the constructs of the social sciences are, so to speak, constructs of the second degree, namely constructs of the constructs made by the actors on the social scene, whose behavior the social scientist has to observe and to explain in accordance with the procedural rules of his science.

Thus, the exploration of the general principles according to which man in daily life organizes his experiences, and especially those of the social world, is the first task of the methodology of the social sciences. This is not the place to outline the procedures of phenomenological analysis of the so-called natural attitude by which this can be done. We shall briefly mention only a few problems involved.

The world, as has been shown by Husserl, is from the outset experienced in the pre-scientific thinking of everyday life in the mode of typicality. The unique objects and events given to us in a unique aspect are unique within a horizon of typical familiarity and pre-acquaintanceship. There are mountains, trees, animals, dogs—in particular Irish setters and among them my Irish setter, Rover. Now I may look at Rover either as this unique individual, my irreplaceable friend and comrade, or just as a typical example of "Irish setter," "dog," "mammal," "animal," "organism," or "object of the outer world." Starting from here, it can be shown that whether I do one or the other, and also which traits or qualities of a given object or event I consider as individually unique and which as typical, depends upon my actual interest and the system of relevances involved therein—briefly, upon my practical or theoretical "problem at hand." This "problem at hand," in turn, originates in the circumstances within which I find myself at any moment of my daily life and which I propose to call my biographically determined situation. Thus, typification depends upon my problem at hand for the definition and solution of which the type has been formed. It can be further shown that at least one aspect of the biographically and situationally determined systems of

interests and relevances is subjectively experienced in the thinking of everyday life as systems of motives for action, of choices to be made, of projects to be carried out, of goals to be reached. It is, so I submit, this insight of the actor into the dependencies of the motives and goals of his actions upon his biographically determined situation which social scientists have in view when speaking of the subjective meaning which the actor "bestows upon" or "connects with" his action. This implies that, strictly speaking, the actor and he alone knows what he does, wherefore and why he does it, and when and where his action starts and ends.

But the world of everyday life is from the outset also a social cultural world in which I am interrelated in manifold ways of interaction with fellow-men known to me in varying degrees of intimacy and anonymity. To a certain extent, sufficient for many practical purposes, I understand their behavior, if I understand their motives, goals, choices, and plans originating in *their* biographically determined circumstances. Yet only in particular situations, and then only fragmentarily, can I experience the others' motives, goals etc.—briefly, the subjective meanings they bestow upon their actions, in their uniqueness. I can, however, experience them in their typicality. In order to do so I construct typical patterns of the actors' motives and ends, even of their attitudes and personalities, of which their actual conduct is just an instance or example. These typified patterns of the others' behavior become in turn motives of my own actions, and this leads to the phenomenon of self-typification well known to social scientists under various names.

Here, I submit, in the common-sense thinking of everyday life, is the origin of the so-called constructive or ideal types, a concept which as a tool of the social sciences has been analyzed by Professor Hempel in such a lucid way. But at least at the common-sense level the formation of these types involves neither intuition nor a theory, if we understand these terms in the sense of Hempel's statements.[18] As we shall see, there are also other kinds of ideal or constructive types, those formed by the social scientist, which are of a quite different structure and indeed involve theory. But Hempel has not distinguished between these two kinds.

Next we have to consider that the common-sense knowledge of everyday life is from the outset socialized in many respects.

It is, first, structurally socialized, since it is based on the fundamental idealization that if I were to change places with my

[18] *SLH*, pp. 76 ff. and 81.

fellow-man I would experience the same sector of the world in substantially the same perspectives as he does, our particular biographical circumstances becoming for all practical purposes at hand irrelevant. I propose to call this idealization that of the reciprocity of perspectives.

It is, second, genetically socialized, because the greater part of our knowledge, as to its content and the particular forms of typification under which it is organized, is socially derived, and this in socially approved terms.

It is, third, socialized in the sense of social distribution of knowledge, each individual knowing merely a sector of the world and common knowledge of the same sector varying individually as to its degree of distinctness, clarity, acquaintanceship, or mere belief.

These principles of socialization of common-sense knowledge, and especially that of the social distribution of knowledge, explain at least partially what the social scientist has in mind in speaking of the functional structural approach to studies of human affairs. The concept of functionalism—at least in the modern social sciences—is not derived from the biological concept of the functioning of an organism, as Nagel holds. It refers to the socially distributed constructs of patterns of typical motives, goals, attitudes, personalities, which are supposed to be invariant and are then interpreted as the function or structure of the social system itself. The more these interlocked behavior-patterns are standardized and institutionalized, that is, the more their typicality is socially approved by laws, folkways, mores, and habits, the greater is their usefulness in common-sense and scientific thinking as a scheme of interpretation of human behavior.

These are, very roughly, the outlines of a few major features of the constructs involved in common-sense experience of the intersubjective world in daily life, which is called *Verstehen*. As explained before, they are the first-level constructs upon which the second-level constructs of the social sciences have to be erected. But here a major problem emerges. On the one hand, it has been shown that the constructs on the first level, the common-sense constructs, refer to subjective elements, namely the *Verstehen* of the actor's action from his, the actor's, point of view. Consequently, if the social sciences aim indeed at explaining social reality, then the scientific constructs on the second level, too, must include a reference to the subjective meaning an action has for the actor. This is, I think, what Max Weber understood by his famous postulate of subjective interpretation, which has, indeed, been observed

so far in the theory-formation of all social sciences. The postulate of subjective interpretation has to be understood in the sense that all scientific explanations of the social world *can,* and for certain purposes *must,* refer to the subjective meaning of the actions of human beings from which the social reality originates.

On the other hand, I agreed with Professor Nagel's statement that the social sciences, like all empirical sciences, have to be objective in the sense that their propositions are subjected to controlled verification and must not refer to private uncontrollable experience.

How is it possible to reconcile these seemingly contradictory principles? Indeed, the most serious question which the methodology of the social sciences has to answer is: How is it possible to form objective concepts and an objectively verifiable theory of subjective meaning-structures? The basic insight that the concepts formed by the social scientist are constructs of the constructs formed in common-sense thinking by the actors on the social scene offers an answer. The scientific constructs formed on the second level, in accordance with the procedural rules valid for all empirical sciences, are objective ideal typical constructs and, as such, of a different kind from those developed on the first level of common-sense thinking which they have to supersede. They are theoretical systems embodying testable general hypotheses in the sense of Professor Hempel's definition.[19] This device has been used by social scientists concerned with theory long before this concept was formulated by Max Weber and developed by his school.

Before describing a few features of these scientific constructs, let us briefly consider the particular attitude of the theoretical social scientist to the social world, in contradistinction to that of the actor on the social scene. The theoretical scientist—qua scientist, not qua human being (which he is, too)—is not involved in the observed situation, which is to him not of a practical but merely of a cognitive interest. The system of relevances governing common-sense interpretation in daily life originates in the biographical situation of the observer. By making up his mind to become a scientist, the social scientist has replaced his personal biographical situation by what I shall call, following Felix Kaufmann,[20] a scientific situation. The problems with which he has to deal might be quite unproblematic for the human being within the world and vice versa. Any scientific problem is determined by the actual state of the respective science, and its solution has

[19] *SLH,* pp. 77 ff.

[20] *Op. cit.,* pp. 52 and 251.

to be achieved in accordance with the procedural rules governing this science, which among other things warrant the control and verification of the solution offered. The scientific problem, once established, alone determines what is relevant for the scientist and therewith the conceptual frame of reference to be used by him. This and nothing else, so it seems to me, is what Max Weber means when he postulates the objectivity of the social sciences, namely their detachment from value patterns which govern or might govern the behavior of the actors on the social scene.

How does the social scientist proceed? He observes certain facts and events within social reality which refer to human action and he constructs typical behavior or course-of-action patterns from what he has observed. Thereupon he co-ordinates to these typical course-of-action patterns models of an ideal actor or actors, whom he imagines as being gifted with consciousness. Yet it is a consciousness restricted so as to contain nothing but the elements relevant to the performing of the course-of-action patterns observed. He thus ascribes to this fictitious consciousness a set of typical notions, purposes, goals, which are assumed to be invariant in the specious consciousness of the imaginary actor-model. This homunculus or puppet is supposed to be interrelated in interaction patterns to other homunculi or puppets constructed in a similar way. Among these homunculi with which the social scientist populates his model of the social world of everyday life, sets of motives, goals, roles—in general, systems of relevances—are distributed in such a way as the scientific problems under scrutiny require. Yet —and this is the main point—these constructs are by no means arbitrary. They are subject to the postulate of logical consistency and to the postulate of adequacy. The latter means that each term in such a scientific model of human action must be constructed in such a way that a human act performed within the real world by an individual actor as indicated by the typical construct would be understandable to the actor himself as well as to his fellow-men in terms of common-sense interpretation of everyday life. Compliance with the postulate of logical consistency warrants the objective validity of the thought objects constructed by the social scientist; compliance with the postulate of adequacy warrants their compatibility with the constructs of everyday life.

As the next step, the circumstances within which such a model operates may be varied, that is, the situation which the homunculi have to meet may be imagined as changed, but not the set of motives and relevances assumed to be the sole content of their consciousness. I may, for example, construct a model of a pro-

ducer acting under conditions of unregulated competition, and another of a producer acting under cartel restrictions, and then compare the output of the same commodity of the same firm in the two models.[21] In this way, it is possible to predict how such a puppet or system of puppets might behave under certain conditions and to discover certain "determinate relations between a set of variables, in terms of which . . . empirically ascertainable regularities . . . can be explained." This, however, is Professor Nagel's definition of a theory.[22] It can easily be seen that each step involved in the construction and use of the scientific model can be verified by empirical observation, provided that we do not restrict this term to sensory perceptions of objects and events in the outer world but include the experiential form, by which common-sense thinking in everyday life understands human actions and their outcome in terms of their underlying motives and goals.

Two brief concluding remarks may be permitted. First a key concept of the basic philosophic position of naturalism is the so-called principle of continuity, although it is under discussion whether this principle means continuity of existence, or of analysis, or of an intellectual criterion of pertinent checks upon the methods employed.[23] It seems to me that this principle of continuity in each of these various interpretations is fulfilled by the characterized device of the social sciences, which even establishes continuity between the practice of everyday life and the conceptualization of the social sciences.

Second, a word on the problem of the methodological unity of the empirical sciences. It seems to me that the social scientist can agree with the statement that the principal differences between the social and the natural sciences have not to be looked for in a different logic governing each branch of knowledge. But this does not involve the admittance that the social sciences have to abandon the particular devices they use for exploring social reality for the sake of an ideal unity of methods which is founded on the entirely unwarranted assumption that only methods used by the natural sciences, and especially by physics, are scientific ones. So far as I know no serious attempt has ever been made by the proponents of the "unity of science" movement to answer or even to ask the

[21] See Fritz Machlup, *The Economics of Seller's Competition; Model Analysis of Seller's Conduct*, Baltimore, The Johns Hopkins Press, 1952, pp. 9 ff.

[22] *SLH*, p. 46; see also p. 260 above.

[23] See Thelma Z. Lavine, "Note to Naturalists on the Human Spirit," this JOURNAL, Vol. L (1953), pp. 145–154, and Ernest Nagel's answer, *ibid.*, pp. 154–157.

question whether the methodological problem of the natural sciences in their present state is not merely a special case of the more general, still unexplored, problem how scientific knowledge is possible at all and what its logical and methodological presuppositions are. It is my personal conviction that phenomenological philosophy has prepared the ground for such an investigation. Its outcome might quite possibly show that the particular methodological devices developed by the social sciences in order to grasp social reality, are better suited than those of the natural sciences to lead to the discovery of the general principles which govern all human knowledge.

ALFRED SCHUTZ

NEW SCHOOL FOR SOCIAL RESEARCH

ON SO-CALLED "COUNTERFACTUAL CONDITIONALS"

CURRENT statements of the so-called "problem of counterfactual conditionals" (or "problem of contrary-to-fact conditionals") rest on the committing of a serious grammatical error. Let us briefly re-state the problem, point out the error, and suggest how the correction of this error would affect the problem.

As a representative of the current discussions of the "counterfactual conditional" we shall consider Nelson Goodman's clear and full statement entitled "The Problem of Counterfactual Conditionals" as it occurs in Linsky's recently published anthology, *Semantics and the Philosophy of Language,* University of Illinois Press, 1952, pp. 231–246. This essay is the most complete statement of the problem now available.

THE PROBLEM

To quote Goodman (*ibid.*, p. 231):

> What . . . is the problem about counterfactual conditionals? [Let us] . . . say of a piece of butter that was eaten yesterday, and that had never been heated,
>
> > If that piece of butter had been heated to 150° F., it would have melted.
>
> Considered as truth-functional compounds, all counterfactuals are of course true, since their antecedents are false. Hence
>
> > If that piece of butter had been heated to 150° F., it would not have melted.
>
> would also hold. Obviously something different is intended, and the problem is to define the circumstances under which a given counterfactual holds while the opposing conditional with the contradictory consequent fails to hold . . .