Like other scientists sociologists co-operate within the framework of their field in order to produce knowledge. The primary object of sociological research is man's action. In Max Weber's definition human behavior has the quality of action only to the extent to which the actor's consciousness is involved. Social action is then related to some form of human knowledge. Disregarding for the time being all distinctions between the various forms, we can conclude that sociologists are not only producers of, but also investigators into the knowledge of mankind.

The distinction between forms of knowledge that can be the object of sociological research, and others that can be its result is of obvious significance. This distinction does not exclude the possibility, however, that a sociologist may make the results of past research the object of future research. The constant process of critical reviewing of that type of knowledge which claims to be sociological is possible because the community of sociologists has established with a fairly high degree of consensus certain standards that must be fulfilled by any such research result if it is to be accepted as a contribution to the science of sociology. We thus have available a set of criteria by which we determine the form of knowledge that is permissible as a product of sociology.

In dealing with knowledge as an object for sociological research, however, a limitation to specific forms of knowledge is not only unnecessary but even harmful to the progress of our science. In order to improve the ability of sociological theory to help understand and explain man's social action, all forms of human knowledge without distinction may be considered legitimate objects for sociological inquiry.

I.

The distinction between various forms of human knowledge is as old as sociology itself. Auguste Comte as well as Karl Marx have suggested such distinctions, each of them from a different point of view. As Turgot and Saint Simon before him, Comte describes the evolution of man's social existence in three stages. For Comte they are characterized by the type of knowledge prevailing, and accordingly named theological, metaphysical and positive. Max Scheler accepts Comte's threefold dis-
tinction, but he rejects the evolutionary theory linked to it. In Scheler's view the three forms of knowledge are not consecutive stages in time but they coexist simultaneously.¹) That which Comte had called theological, metaphysical and positive knowledge becomes 'Heilswissen', 'Bildungswissen', and 'Leistungswissen' in Scheler's terminology.

There is an indication in Marx' 'German Ideology' that he too thought in terms of a threefold distinction of knowledge: "The concepts at which these individuals arrive are concepts either on their relationship to nature, or on their relationship with each other, or on what they themselves are."²) Marx' main interest, however, centered on the dichotomy of social existence and consciousness. Within the scope of consciousness then he distinguished between various levels of knowledge according to their relative distance from physical reality. Even the most remote level, however, is part of the social environment: "It is true that consciousness and its manifestation in religion and science is part of the 'existing conditions', but in the way of a lesser reality as 'their moral sanction, their solemn complementation, their general solace and justification'."³)

Comte's division of theology, metaphysics, and positive knowledge, Scheler's distinction between 'Heilswissen', 'Bildungswissen' and 'Leistungswissen' and Marx' manifestation of consciousness in religion, philosophy and practical application have a common frame of reference which relates these concepts to modern social theory. The collective consciousness of values, norms and empirical facts represents that complex of knowledge which shapes and is shaped by social action. Values furnish the basis on which a collectivity decides which course of action is desirable. Empirical facts consist of the data that determine which course of action is possible. Norms link the possible to the desirable in mapping out the interaction process by which the collectivity moves on the basis of the empirical facts in the direction of the values shared by its members.

II.

The relationship between knowledge and action, between theory and its practical application, and between consciousness and physical reality represents another traditional topic in sociology. Auguste Comte knew that in the social history of France the monotheistic theology of Christianity had failed to keep individuals in the Christian feudal society from exploiting each other. He also knew that the social philosophy of the eighteenth century had provoked and stimulated the revolution which brought France a sequence of chaos, tyranny and regression to feudalism. While theology had been without any appreciable effect on social reality, metaphysics did induce collective action. It was, however, destructive in its nature and did not result in a lasting new social order.

What mankind needed therefore was, in Comte's view, neither a conceptual system

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¹) Scheler, Max: Die Wissensformen und die Gesellschaft, Francke Verlag, Bern und Muenchen, 1960, p. 29.
³) Landshut, Siegfried: Kritik der Soziologie, Duncker & Humblot, Muenchen und Leipzig 1929, p. 67.
of pure speculation without any relevance or consequence for the social order, nor on that was dreamed up by imaginative but unrealistic metaphysists, and that when applied in political action, creates conditions worse even than those which it set out to abandon. He hoped for 'positive politics' to be developed and carried out by those who would take into consideration the empirical basis on which alone man can build his future. In order to collect knowledge on this foundation for continuing on these data and laws of social forces, a new science was necessary, the science of sociology. To make sure that deviance into metaphysics would not reoccur Comte prescribed that man make his mind the mirror of physical reality.4) Thereby the connection between knowledge and reality which Comte had found lacking or unsatisfactory with theology and metaphysics could be secured in the case of positive knowledge.

With this intellectual program Comte had come very close to the 'German Ideology' which Marx criticizes: "This demand of a change of consciousness boils down to the demand to interpret the existing conditions in a different way, i.e. to acknowledge them by means of a different interpretation."5) In contrast to Comte, who was motivated by the desire to terminate the revolution, Karl Marx was impatiently expecting one. He had been exiled by the reactionary political system of Prussia, and the chance for a return to his native country was linked to his hope for a revolution in Germany. Marx was looking to find a 'moving factor' that might finally stimulate collective action, but he could not see any such stimulation arise out of the existing forms of knowledge. The consciousness of the capitalist society is nothing but a reflex of the existing conditions: "It is not the consciousness which determines the life, but the life which determines the consciousness."6) Conservative knowledge is too much in agreement with social reality. Therefore no tension is to be expected in the relationship between bourgeois thinking and bourgeois existence, which might give rise to a revolution. Rather religion, philosophy and political ideas serve the purpose of justifying and stabilizing the social order that ousted Marx. But a consciousness of the effects of which in social action are irrelevant is thereby also unreal: "The question whether or not human thought has the quality of objective truth is not a theoretical but a practical question. In its practical application man must prove the truth, i.e. reality and power, innerworldliness of his thinking."7) With this statement Marx acknowledges that human thought as it manifests itself in the communication of conceptual systems of collective knowledge has the potential of generating action. When its translation into action is achieved, a concept is verified.

Reinhard Bendix has reminded us of the significance of Hegel's discussion on the relationship between 'Master and Servant' in his 'Phänomenologie des Geistes'.8) Neither master nor servant acts out in his relationship with the other the attitude which he takes toward himself. The master loses what George Herbert Mead has called the "ability to take the roles of, or 'put himself in the place of', the other

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6) op. cit., p. 349.
7) op. cit., p. 339.
individuals." The servant produces a material form, the meaning of which is given it by the master. Only when the servant himself gives meaning to the form he produces has he emancipated himself. This model of an antagonistic relationship between two individuals is applied by Karl Marx to the conflict between two collectivities. The relationship between master and servant is translated into the class struggle between capitalists and laborers.

When Marx writes about two classes fighting each other, he outlines a political program, but he does not give a description of empirical reality. The social conflict in the middle of the nineteenth century in Europe did not involve two classes but an established society on the one hand and a mass of disintegrated outsiders on the other. Marx called upon these isolated individuals to unite into a class, which shows that they were no class at the time. The dialectical model of class struggle therefore is not like a war between two nations. Rather it captures the antagonism between the class and the nonclass, or in other words, between the collectivity and the individual.

From this point of view the steps in the dialectical development can be sketched as follows: Thesis: The bourgeoisie is the class in a bourgeois society out of which former craftsmen and peasants have disintegrated to form the unstructured mass of isolated outsiders. Antithesis: The proletariat will be the class in a socialist society once the former bourgeoisie has dissolved into isolated individuals. Synthesis: When all individuals can be integrated into one harmonious society, the dialectic ends and classless society has arrived.

If seen as the individual acting outside the established social structure and thereby favoring social change, Marx's proletarian has something in common with Simmel's 'stranger' and with Robert E. Park's 'marginal man.' As opposed to the 'proletarian,' the 'stranger,' or the 'marginal man,' the established social structure of the particular society is in a position analogous to that of a ruling class. It is in this sense that Ralf Dahrendorf's concept of authority is valuable, for any time an individual confronts social organization, or — to phrase it in more empirical and operational terms — in any social relationship between two persons, one of whom acts as an agent of a social organization while the other acts as an unattached individual only, the actor acting on behalf of the collectivity is in the position of having authority over the other.

Marx proclaimed a collectivity, the class, the subject of social change. This has primarily been understood to mean that the class can act autonomously and as an entity. Such extreme social realism, however, does not yield itself to empirical verification, since a group or class, although it is real in many ways, can not act directly upon its environment. It can indeed cause individuals to act according to a coherent pattern of organized division of labor, but in empirical research we find individuals

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acting as a group rather than a group acting as such.

To show the relationship between knowledge and action, Hegel and Mead have used a model of interaction between two individuals. Marx worked with a model of two conflicting collectivities. Here the attempt will be made to link the relationship between knowledge and action to that between the collectivity and the individual.

III.
We have stated that the collectivity cannot act directly upon its physical environment. It depends upon the individual for action. But more than that, it depends upon the individual to perform the reconnaissance function of observing for, and communicating to, the collectivity the facts of empirical reality. The individual in turn will be unable to perform this task of communication, unless he has first been equipped by the collectivity with its social language, with the categories with which to capture reality. He may be seen as a mediator between the sensual reality and the collectivity, or between the material world and the social world. In dealing with things, sensation is the main source of the raw material which the mind works up into knowledge; in dealing with men, it serves chiefly as a means of communication, as an inlet for symbols which awaken a complex inner life not primarily sensuous at all.\(^{13}\) Thus the individual's senses link him to empirical reality as his mind links him to the group. It seems therefore that as the group depends upon the individual for the transformation of knowledge into action, so does the individual depend upon the group for the transformation of experience into knowledge.

In an unpublished paper on "Ideology and Sociology", Reinhard Bendix writes "The dictum of W. I. Thomas that situations which men define as real, are real in their consequences, applies with equal force to the realm of ideas. As long as men live by what they believe to be so, their beliefs are real in their consequences."\(^{14}\) The definition of a situation and the formulation of a belief are social processes that evolve in interaction. Tamotsu Shibutani's study of rumor shows "that a rumor is a collective transaction, involving a division of labor among participants, each of whom makes a different contribution."\(^{15}\) Shibutani's book is particularly important because it shows collective knowledge 'in statu nascendi.'

The sensual experience of the individual in confrontation with a certain facet of empirical reality must be translated into a social language in order to become of interpersonal relevance. The experienced reality changes its quality in this process of translation from an object of the individual's senses to an object of the group's thought.\(^{16}\) The various thought objects that are fed into the group by various individuals are then co-ordinated and integrated through 'collective transaction' into a collective image of reality. To contribute to and shape this image of reality is the task that, since Comte, has been assigned to the sciences, as producers of positive know-

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Knowledge of values too evolves in social interaction, but the sciences in general and sociology in particular have no legitimate contribution to make. If they do, they betray the principles of empirical research, which on a different level of analysis might be considered the value of the community of scientists. It can frequently be observed in modern society that a scientific value orientation spreads beyond the groups in which scientific role playing is organized. Where it has spread, and where the scientist is unable to distinguish between his role as a scientist and other social roles he is expected to play, the two forms of knowledge, referring to empirical facts and to values respectively, tend to merge into one. Morris Janowitz has pointed to this problem in connection with his criticism of "The Ideology of Professional Psychologists"; Janowitz writes "I feel that psychology assumes its pose of rampant positivism in part because it has not come to terms with the specific question of religious knowledge versus scientific knowledge..." The troubled emergence of psychological analysis from religious contexts and the large number of new psychologists still in active revolt against religion might well explain this orthodoxy toward science and the absence of concern with other dimensions of knowledge, except to deny their relevance for social action. As a result, psychology appears to be both a scientific discipline and a social gospel, and it is difficult to know where one stops and the other starts." 17) 

As 'reality knowledge' produces a shared image of the present state of affairs, in which the collectivity believes itself to exist, 'value knowledge' has the potential of producing a comparable image of a future state of affairs which appears sufficiently superior to the image of reality in order to make a development toward the future desirable. As examples for conceptual systems that may constitute the value knowledge of a group, one might think of classless society, one's own nation as ruler of the world, the kingdom of God, or the democratic perfection of human rights. Charles H. Cooley attributed the development of values or "social ideals" to the primary group. 18) 

Today the sectors of commerce, religion, and politics are probably making a significant contribution to the development of value knowledge.

IV.

Values as defined by H. Fallding are of the highest possible level of abstraction. 19) This makes it difficult or impossible to falsify them, makes them applicable to an extremely wide range of individual life situations, and makes it necessary to translate values down toward lower levels of abstraction before they can become applicable in action. They thus fade into norms that prescribe more concrete forms of action in given situations. When new situations arise, the individual must cope with those, not as a group agent (since no norms, i.e., no commission by the group was given him), but as an autonomous representative for the group as defined by values shared. Thus

he by himself must tentatively bridge the gap between 'value knowledge' and action in the absence of a norm. In any event he creates empirical reality by acting he produces a\textit{manifestation} of the values recognized and the procedure followed, thereby suggesting new norms.

When this type of pioneer action becomes the object of the knowledge of that collectivity, on behalf of whose values the individual had acted, collective judgment will evolve on whether or not the individual's action is to be recognized as a legitimate application of the values referred to. If the group accepts the manifestation, it elevates the course of action taken by the pioneering individual to a social norm or a set of norms. In this example communication between group members on the action performed by the individuals starts out on the level of 'reality knowledge'. It is then evaluated or judged by relating it to shared 'value knowledge'. Finally, if the group approves of it, new 'norm knowledge' is derived from this action.

Renate Mayntz has written that a functioning organization is the translation of a goal into structure and process.\textsuperscript{20) In our terminology here both values and norms are goals, distinguished by the level of abstraction, with values viewed as more abstract and general, and norms as more concrete. As knowledge and action influence each other in the way which we have attempted to outline, they also cause the organizational structure to change. With the evolution of new knowledge new roles evolve. New roles may integrate into new groups, and old groups may disintegrate out of old social systems. Norms of an encompassing group that have been known as instrumentally related to that group's values may become the values of an emancipating subgroup, if concepts which formerly appeared as means to an end are raised to the significance of an end in itself.

Let us assume that a subgroup starts out as hierarchically subordinated to an encompassing group. The subgroup may then start recruiting members who identify with the subgroup's values without recognizing those values as having the quality of norms in relation to the encompassing group. Clearly as this happens, the subgroup ceases to be a subgroup. It becomes autonomous and can continue to recruit members who do not recognize the formerly superimposed values. New members then may either not recognize the instrumentality of the former subgroup's values in relation to any hierarchically superior group, thereby giving it the dignity of their all encompassing group, or they may relate the new group's values as instrumental and thereby as norms to a variety of different values, as happens, for instance, when protestants, catholics, jews, and humanists unite in a civil rights' organization.

If a structured collectivity grows in membership, it will sooner or later have to organize itself hierarchically. The more general the ultimate value known in this collectivity and the farther therefore theory and practice are removed from each other, the larger the number of hierarchical levels that can be built into the structure of the collectivity. It is also true, on the other hand, that the possibility of a rupture between 'value knowledge' and 'reality knowledge' increases with the conceptual distance between the two. The larger the collectivity's size as measured in this distance and also in the number of members, the greater the change for the forma-

tion of parallel subgroups, which have no functional distinction, but which each have its particular membership and are usually separated in geographical location (as local chapters of a secret organization). As similar or identical organizational patterns develop in each of these subgroups, identical social roles will be assigned to different members in different groups. These identical roles may then furnish the basis for horizontal contacts of communication.

Contacts of this kind frequently develop into a more formal association of individuals who have identical roles in a large organization but who do not ordinarily interact with each other. The set of norms constituting the role which they all have in common furnishes the basis for the value of this newly developing group. How norms can become values by being raised from the level of instrumental means to that of an end, and how subgroups can disintegrate out of a larger organizational framework, has been shown. Whether or not this occurs depends on the degree to which the actors acting within a prescribed role have an opportunity to contribute to organizational change by taking initiative as individuals in bridging the gap between knowledge and action in unprecedented situations.

If their assigned roles limit them to routine and circular activity with no change for spontaneous value manifestation, these individuals will be well versed in enacting 'norm knowledge', but the enactment of the 'value knowledge', which they are supposed to have, will be quite unfamiliar to them. In the new social environment in which the bearers of identical roles interact, they will readily define as a group value that knowledge which they are used to applying in their acting. At the same time, their association will take the step from aggregate to system by differentiating social roles. Also the group can define new conceptual systems as desirable goals and thus change its value knowledge as it develops new norm knowledge.

Scientists since Galileo and industrial workers since Marx have experienced that their manifestations of value knowledge in action were discarded rather than interpreted in terms of the central value system of society. The commission of cardinals which forbade Galileo to teach and condemned his heliocentric cosmology was unable to see that theological 'value knowledge' and scientific 'reality knowledge' are separate but complementary forms of knowledge. Consequently they were incapable of seeing a fruitful relationship between the two but could only regard them as a correct and a false aspect of an undivided total realm of knowledge. This very inability of the commission or cardinals is shared by Auguste Comte. In his view also there is no chance for a fruitful relationship because just as for the cardinals in Galileo's days, there is no knowledge outside theology, for Comte there is no knowledge outside the empirical sciences. Comte and Galileo's cardinals both play the same old game of trying to arrest social change: one party by claiming that everything is exactly the way it ought to be; the other by claiming that everything ought to be exactly the way it is.

By defining scientific 'reality knowledge' as a value, Comte has successfully completed the emancipation of scientists from theologians. By defining physical work as a value, Marx has initiated the emancipation of action from knowledge. Both goals

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could only be arrived at via the structural effect that we see as the 'emigration' of scientists and laborers out of the established social structure or as disintegration by aggregation.

V.
It seems that every organizational structure depends on that 'norm knowledge', which contains the definition of a social role for each member. The definition can be seen as composed of a set of norms, which are essentially solutions to anticipated problem situations. Unless the collectivity conceives of itself as omniscient, however, there will also be built into the structure an anticipation that certain unforeseen situations will occur, in which the social personality of the individual will enlarge or complement (add to) his role, thus contributing to the social structure by acting as an additional segment into it, or by no longer enacting a certain segment of his role, thus letting it drop out of the structure.

The foregoing example explains how individual freedom arises from incongruities among the various forms of knowledge. It is characteristic for a dynamic social existence that 'reality knowledge' poses problems, which have not been solved on the level of 'norm knowledge'. At the same time, 'value knowledge' may support demands that have not been fulfilled according to reality knowledge. In this case the individual is free to act out for the group a suggested course of action, in which he tries to relate reality to values.

If the incongruities between forms of knowledge are too large, leaving to the individual's initiative too much room for improvisation, we approach the state of anomie (Durkheim). If, on the other hand, the collectivity claims to have all the solutions programmed into the group brain as into a computer, it faces a tendency toward overorganization. Strange as it may seem, both states of affairs, anomie and overorganization, have this effect in common: they both deprive the individual of the opportunity to act out values spontaneously on behalf of the collectivity and to them have the manifestation of his act interpreted and appraised. In the case of anomie this may happen because of a lack of 'value knowledge'. The individual may not know where to look for a reference group or may otherwise be unable to find a collectivity willing to accept or even reject his actions. In the case of overorganization, 'value knowledge' has the quality of pure speculative theory with little or no significance in concrete action.

In complex organizations the functions of value formulation and norm definition may be institutionalized. If this is so, the structure does not grow by tradition and precedence, as the British social and political system has largely done, but rather by central codification as in the continental European tradition of Roman Law and also in the Roman Catholic Church. Regardless of whether the legislative or norm defining function and the function of value formulation are institutionalized or not, every proclamation of new knowledge is but a suggestion that has the quality of a hypothesis. Its verification in practical application may be achieved in a free society when individuals decide to accept this new knowledge by enacting it, or in a totalitarian social system when action is forcefully produced out of knowledge by violence, fear, or threat.
But when new knowledge is accepted and translated into action, the author of this knowledge is then recognized as having produced it on behalf of the group and is insofar institutionalized and raised in his social status. George C. Homans' group theory and Orrin E. Klapp's study on "Symbolic Leaders" have dealt with this phenomenon. The higher a person's status in an organization, the further remote from acting in confrontation with physical reality he will be. The group knows; the individual acts; therefore, he who represents the group in the most perfect way will have to give theory priority over practice, or, in other words, his attitude will tend to be contemplative rather than manipulative. Plato's philosopher king and Comte's high priest of positivism may serve as examples for this observation.

But as the institutionalized keepers of knowledge lose contact with physical reality by not acting, the knowledge they keep becomes false. And as the active individual isolates himself or is isolated from institutionalized knowledge, the actions he performs become meaningless. Thus in the dialectical relationships between knowledge and action, and between the individual and the collectivity, social reality has the seeds of social change built into its very structure.

In summary, we started out with the distinction between three forms of knowledge, referring to values, norms, and empirical reality. We proceeded to look into the relationships between knowledge and action and found that thought becomes real in its practical application. Within the realm of social action we then dealt with the interplay between individual and collectivity and identified the individual with action and the group with knowledge. As various forms of new knowledge evolve, the social structure change. The origin of moving forces effecting change may be seen:

a) In the incongruities among various forms of knowledge,
b) In the antagonistic co-operation between individual and collectivity, and
c) In the dialectical relationship between knowledge and action.

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