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SOCIOLOGISTS AND THE PEACE*

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A MAJOR portion of this program is devoted to the expression of hopes and fears for the post-war era. We are wondering what are the prospects of realizing some small dividend in improved social relations in return for the investment of life, time, and resources. The degrees of hopefulness of such a dividend vary. I have heard no expectation of an early millennium. On the contrary, as the military situation and all the excitement and animal emotion accompanying the fight recede from the foreground, the problems which gave rise to the war emerge through the smoke and the wreckage in no way simplified by the Roman holiday in which we have indulged. There stand the problems like the bills with interest, which you could postpone paying while on vacation, but can no longer postpone. In short, we may now soon return to where we left off twenty-five years ago, except that the problems then facing us have been immensely aggravated.

Nor is there any ground for believing that the settlement this time can be very much more satisfactory than in 1919. There has not been in the meantime a sufficient change in the conditions that determine a peace settlement. These conditions are, broadly speaking, the following: First, the social sciences must have advanced to a point where they could reliably specify the re-

quirements of an enduring peace. Second, social scientists must have attained such public respect that their voices would be influential at the peace table. To what extent do these conditions exist?

Even if we contend that social scientists today know a great deal about the requirements for a durable peace, there is absolutely no reason to believe that their counsels will be heeded. It is not my purpose here to bewail that fact. I prefer rather to consider what we must do before the voice of social scientists can have an influence in social organization comparable to the influence of physical scientists in physical arrangements. I assume it is self-evident that a desirable peace settlement involves primarily a knowledge of sociological subject matter. All sociologists, at least, will presumably agree. We believe that knowledge of the type which sociologists possess, or aspire to, is an essential and a technical requirement for a satisfactory peace just as the knowledge that physical scientists possess is necessary for modern war. This fact is not yet generally recognized. The physical scientist was at a disadvantage for some centuries against the nostrums, short-cuts, and panaceas of the magician. So the social scientist is today at a disadvantage against those who, if you will only vote for them, propose to secure for all men everywhere in our time social conditions which every social scientist knows can be approached if at all only through centuries of development and application of their science. But on the

* Presidential Address before the Thirty-eighth Annual Meeting of the American Sociological Society, New York, December 4, 1943.

whole, there is no doubt that the faith in social as in physical magic is waning. As the pinch increases, the likelihood is that man will turn more and more in his social predicaments to that approach, namely science, which he has found effective in his other plights. Social scientists might better anticipate this eventuality so that they may have something substantial to offer when they are called upon.

This call does not come suddenly. We have already been called upon to some extent. Sociologists as well as other social scientists, however, are likely on occasions such as the present to feel that they and their advice are being largely ignored in public affairs. It is pointed out, and correctly, that if this and that advice of scholars had been followed, dire consequences of war and depression could have been avoided. If it happens that the course which was pursued was also dictated by one of our colleagues, we merely point out that bad judgment was exercised in the choice of a scientist.

This suggests our first problem, namely, how to trade-mark a true social scientist so that a public official can identify him on some other basis than the recommendation of politicians, the popularity of his writings, the accidents of personal friendship, or whatever the present basis is. The medical and the legal professions have established standards under the supervision of the state. The American Sociological Society has thus far been unable to define a professional sociologist. Supposedly he would be a person possessed of special skill and training, as contrasted with anyone else who also has six dollars and spends it for dues to the Society. If sociologists take this indifferent view of themselves, public officials can hardly be blamed if they do not regard sociologists as people of any special authority. The anthropologists are rated somewhat more highly at a time like this because of their familiarity with out-of-the-way places and queer people on which we are in process of imposing the four freedoms. The same is true of economists for somewhat different reasons. But it is perhaps fair to say that all social scientists are taken no more seriously than they

are today because they have not succeeded in developing among themselves adequate professional criteria, and in convincing the public that they possess the special qualifications they think they possess. It is futile to abuse the public for not being able to distinguish us from politicians, clergymen, journalists, novelists, poets, and wise men generally, as long as we ourselves are in doubt about the criteria which distinguish us from these dopesters.

The public will become interested in us when we identify ourselves by sufficiently evident and unique professional skills, and can point to a record of demonstrated superiority to the word mongers whose magic today formulates public policy and enchants the public. It is useless to bewail our handicaps. The unquestioned authority which physical scientists enjoy today in their respective fields had to be achieved by this same painful process of demonstrated superior performance as against the medicine men, the alchemists, and the astrologers. It took scientists generations to achieve their present status. We must expect to follow their rough road. When we develop and demonstrate the quality of our goods, a long-suffering public will be glad to lean more heavily on our advice, although we must expect some additional time to elapse before even a demonstrably superior article gains acceptance.

This conclusion, then, poses our principal problems, namely, (1) to develop demonstrably superior knowledge and techniques and (2) to gain public acceptance of them. Both require attention. In spite of what has been said about the inventors of mouse traps living in the deepest forest and the world making a beaten path to their door, it remains a fact that many excellent inventions get nowhere for the lack of sufficient advertising to change people's habits. It is true that we must develop a reliable science before we can expect people to become interested in it. But so far as the immediate situation is concerned, our problem is how to gain the public acceptance of what we already know. I shall consider first, therefore, the nature of the obstacles we have to overcome before even what social

scientists know today can be brought to bear on public affairs.

II

The story of the transition to a naturalistic, as contrasted with a supernaturalistic, view of man and his social relations is too familiar to require recapitulation. Unfortunately, the revolution of which Comte and Darwin became the publicly accredited agents is by no means yet completed. Let us consider some aspects of the transition to be achieved.

What is the principal survival of a pre-scientific orientation in contemporary society and even in the social sciences? Briefly, the principal surviving pre-scientific thought-way is a legalistic and moralistic viewpoint anchored in theology. The phenomenon as it operates in our international relations has been admirably summarized by Spykman as follows:

The heritage of seventeenth-century Puritanism is responsible for one of the characteristic features of our approach to international relations. Because of its concern with ethical values, it has conditioned the nation to a predominantly moral orientation. It makes our people feel called upon to express moral judgments about the foreign policy of others and demand that our president shall transform the White House into an international pulpit from which mankind can be scolded for the evil of its ways. The heritage of eighteenth century rationalism has contributed another characteristic feature, a legalistic approach, and a faith in the compelling power of the reason of the law. This almost instinctive preference for a moral and legal outlook on international affairs tends to obscure for the American people the underlying realities of power politics.¹

It would be easy to collect a volume of illustrations of how this viewpoint frustrates the social sciences at every turn. Now obviously everybody concedes the importance of both law and morals in all societies. I am talking about a superstitious and perverted notion regarding the source and nature of these rules. Considerable maladjustment often results. To begin with a minor illustra-

tion we find, for example, large numbers of organized and articulate Jews in their unhappy predicament devoting themselves to legalistic and moralistic conjurings so that their attention is entirely diverted from a realistic approach. They demand legislation prohibiting criticism and they demand international action outlawing anti-Semitism, instead of reckoning with the causes of the antagonism. They wallow in oratory about inalienable rights. One would think that if recent events had shown anything, they have shown that there are no such things as *inalienable* rights. The only rights we know about are those which a community from time to time chooses to grant and respect. The processes by which a community accords rights have long been well understood by anthropologists and sociologists, Jewish as well as Gentile. But their voices are never heard among the clamor of rabbis, showmen, and journalists who, if one may judge from the results, are much more interested in their own emotional displays than they are in the welfare of the Jewish people. That the above remarks will probably be decried as anti-Semitic by these same firebrands is perhaps the best evidence of how a primitive, moralistic, theological, legalistic attitude obstructs a scientific and effective approach.²

Another cultural minority invokes the same viewpoint in a recent statement declaring that "no nation has, under God, authority to invade family freedom, abrogate private ownership or impede, to the detriment of the common good, economic enterprise, cooperative undertaking for mutual welfare and organized works of charity sponsored by groups of citizens."³ Without

² This remark was immediately corroborated by an interruption from the audience by a gentleman who apparently was moved to call attention to certain provisions of the Constitution of the United States. Other manifestations of disapproval from three or four members further corroborated the prediction contained in my statement. This curious group seems to experience a thrill of achievement when they succeed in imputing anti-Semitism to the best friends of the Jews, and further spread the unfortunate impression that Jews, unlike other cultural groups, can not be criticized on any score without laying the critic open to the charge of being a sinister character.

³ "Catholic Statement on Peace Essentials" by

¹ N. J. Spykman, *America's Strategy in World Politics*, Harcourt, Brace & Co., New York, 1942, p. 216.

presuming to understand what may be meant by the phrase "under God" and without expressing an opinion on the qualifications and authority of the Catholic hierarchy to define the "common good," I merely call attention to the sociological fact that all nations throughout history *have* "invaded" and "impeded" human "freedom," "private ownership," and "economic enterprise" and they will in all probability continue to exercise these inevitable functions of social organization. We here sharply encounter the basic issue, namely, whether the authority and rights of sovereign nations shall be defined by various charismatic gentlemen purporting to speak for supernatural authority or by man's earthly experience as analyzed and interpreted by scientists.

Or consider the curious character of much sociological discussion about something which is called "Values." Some current discussions of "Values" imply that they are something beyond the reach of ordinary scientific methods. Why? Because values have for centuries been regarded as determined outside of the natural universe, or at least by mysterious mechanisms such as soul, mind, or conscience with which even sociologists until recently have been much preoccupied. There is in fact nothing unique about human values as a subject for scientific study. Data regarding man's values, i.e. his valuing behavior, are inextricably bound up in the data of all the social sciences. Science deals with them exactly as it deals with other behavioral data.⁴

As further illustrations of the survival in social science of the legalistic-moralistic orientation, consider the present discussions of justice, authority and freedom. The word justice today refers to a set of feelings about contemporary affairs projected on a framework of primitive theology. In fact, the

the Administrative Board of the National Catholic Welfare Conference at the direction of the Archbishops and Bishops who attended the annual meeting in New York Nov., 1943, as reported in the *New York Times*, Nov. 14, 1943, p. 44.

⁴I have elaborated this viewpoint in "What To Do With the Humanities," *Harper's Magazine*, June 1943 (especially pp. 70-71); and "The Future of the Social Sciences," *The Scientific Monthly*, 53: 346-359, Oct. 1941.

gratification of this feeling is more important to many people than is world peace and other ends with which we also profess to be concerned. Actually, "the only practical criterion of the justice of a treaty is the intensity of the desire to change it."⁵ Imagine introducing that notion of justice at the end of the war! Yet this is the only type of justice relevant to the ends in which we profess to be interested.

This mystical attitude toward justice is mischievous. It is as if engineers became primarily interested in the justice of a landslide instead of in the angle of rest of the surrounding terrain. Of course, the sense of justice, however absurd and primitive in any community, has to be reckoned with as part of the situation with which we are confronted. The point is that while we must take into consideration even the most antiquated feelings of justice that may exist, scientists cannot accept these notions as a guide to policy when they contravene the very ends at which justice itself professes to aim.

Very similar is the preoccupation with a highly subjective and relative concept called freedom. The theological and metaphysical nonsense which currently characterizes discussions of this concept must delight whatever gods may be. Actually, the term is used to designate that feeling-tone which an individual experiences when his habits are relatively in accord with the restrictions of his environment. In short, men are free when they feel free. They feel free when they are thoroughly habituated to their way of life. It follows that within the limits of human conditioning, the feeling of freedom is compatible with an almost unlimited variety of social conditions. Now sociologists perhaps more than any other group, have been diligent in pointing out the wide limits of human conditioning and the doubtfulness of the doctrine that man is born with penchants for any particular kind of social order. Men apparently like the social order that ministers to the habits they have formed. Yet when social scientists in this country profess to render scientific counsel on practical ques-

⁵N. J. Spykman, *op. cit.*, p. 465.

tions of world organization, they forget this fact. As a result, their advice is grossly corrupted with their own cultural preferences for democracy. I have no objections to these preferences, and usually share them myself. What I object to is pretending that these preferences are scientific conclusions.

The logical inference from some of the current discussion about democracy seems to be that every man should be a social scientist. No such assumption is made with respect to the physical world. The authority of physical scientists is blindly accepted. A similar attitude toward the conclusions of social scientists is suspected of being authoritarian, as indeed it probably is. We need to recognize that it is not authority as such that we need fear but incompetent and unwisely constituted authority. When we undertake to insist on the same criteria of authority in the social as in the physical sciences, no one will worry about the delegation of that authority, any more than he worries about the physician's authority. All persons who presume to speak with authority will be expected to submit credentials of training and character of the type that physicians and other professionals now submit, and *to the state*, at that.^{5a} This will hold for all would-be authorities whatsoever, whether they purport to speak for God or for nature. Those who are more interested in labelling an idea with an epithet than in examining its validity or in refuting it, will doubtless find this idea authoritarian, Fascist, and what not. Let them reflect that namecalling has a way of becoming tiresome in the long run and frequently operates as a boomerang. Namecalling is soon recognized for what it is, namely, an attempt to distract attention from something one is afraid to examine.

The various "grass roots" movements suffer from this unwarranted fear of authority. It is proposed to take people from the football game, the movie and the shooting gallery to attend neighborhood meetings

in order to be "guided" and instructed by some usually self-appointed "leader" on the intricacies of the international situation, monetary policy, or corporation finance. I think it was the late Heywood Broun who said that one of the greatest weaknesses of socialism was the number of evenings per week it required for meetings. This is supposed to be the eternal vigilance which is the price of liberty. When it can be shown to have some observable relation to liberty instead of being a curtailment thereof, people will probably put up with it and find it no burden. They will not put up with it under present conditions because it is clearly not related to any desired result at all.

Under these conditions the common man will correctly look for other means of guarding his interests. He assures himself today as far as possible against malpractice on the part of engineers, electricians, doctors, lawyers, and teachers by requiring them to qualify according to state regulated criteria. He thereupon gives his authorities and technicians a free hand and holds them responsible for results. Most of the multifarious duties of the private citizen today will, I predict, go this way in the not too distant future. For some time past, the "ward healer" has functioned as a sort of informal, unofficial social worker to relieve the citizen of some of his obligations as a citizen. More recently, the laboring man has decided or has had it decided for him, that his interests are better represented even by thugs who often function without authority or license from the larger community. This can happen anywhere on a national scale when the pressure becomes sufficient. If scientists do not take over, charlatans will.

The trend mentioned above is, of course, merely a transition toward the responsible performance by scientists under the auspices and authority of the state of certain functions hitherto imposed upon each citizen. Of course, there is much worry about the state these days. People talk as if the state were a big animal of some sort which, if we don't watch out, may suddenly swallow us. In the meantime, I notice that those who are yelling most loudly about the form of the state in other countries, are

^{5a} The state may in turn *delegate* the function of formulating and administering these requirements back into the hands of members of the profession concerned. This does not alter the importance of retaining the ultimate authority in the hands of the community's accredited governmental agency.

themselves busily engaged in extending the functions of their own state. Now, I have an open mind as to the proper or desirable function of the state, because these questions depend upon how the state is constituted and upon the level of scientific development.⁶ But I have no doubt at all that I prefer the authority of a properly constituted state to what seems to be the alternative, namely, private and self-constituted legislatures, police, and courts as they occur among employers, labor unions, and churches. Even learned societies occasionally get the notion that they are proper courts and that the plaintiff is sufficient witness to decide whether he as a member has been unjustly discharged from his job.

This state of affairs is quite natural and perhaps fortunate in the sense that some leadership or some solution is better than none. When people are in trouble, they will look for a savior. Now there are certain temperaments in all countries which enjoy action on the basis of guess, magic, astrology or their own intuition. These are likely to come into power especially in periods of crises. They are likely to surround themselves with seers, poets, playwrights, and others alleged to possess these powers of "seeing." The idea is a sound one. The only reform needed is a substitution of scientists for these soothsayers and soothseers.

Fortunately, distinguished physical scientists are also beginning to take that view of the matter. This is the more important in view of the fact that the primitive sociological views of some of the leaders in

physical science have hitherto been an obstacle to the development of social science in the very places where the most influential and valuable technical support should be forthcoming. We welcome, therefore, the following recent statement from Dr. Frank B. Jewett, President of the National Academy of Sciences in collaboration with Dr. Robert W. King. After reviewing the need in statecraft of something corresponding to the research laboratory in industry, these scientists conclude:

It seems likely that we are well launched upon an era during which all the existing advisory aids to the government, as well as others still to be created, will have to function with increasing vigor. Such an arrangement will not savor of bureaucracy. The sovereign people will still remain sovereign. But belated and constructive recognition will have been given to the fact, now abundantly clear, that they day is gone, and probably forever, when a successful state can base its policies upon clamor of pressure groups or upon the uninformed beliefs of the majority, even though measured numerically by tens of millions.⁷

When this realization becomes more general, Massachusetts and California Institutes of Technology, to mention only two, may give as much attention to social as to physical science. What is more, such institutions devoted primarily or entirely to social science will begin to appear. A single such institution devoting itself seriously to the social sciences could transform them into reliable and respected guides of social action in a single generation.

III

So far I have dealt chiefly with the negative side of the picture, namely, what social scientists must desist from doing if they are to rise to the occasion to which the course of events has called them. What must we do on the positive side?

Before answering this question, let us review briefly some of the conspicuous achievements of the past ten or fifteen years.

⁷F. B. Jewett and R. W. King, "Engineering Progress and the Social Order." An address delivered before the Section on Natural Sciences of the University of Pennsylvania Bicentennial Conference, Philadelphia, September 19, 1940.

⁶In fact, current discussions of the state are of significance perhaps chiefly as an indication of the inability or disinclination of the discussors to think except in terms of rather primitive stereotypes. Witness the preoccupation of even would-be social scientists with the various "isms" that are always current. There is from a practical or a scientific viewpoint no necessity of making any blanket commitments as to the proper functions of the state. Nations have always adjusted these functions to suit changing situations and they will doubtless continue to do so. As a red herring to distract attention from more serious issues, current emotional discussions of the state are, of course, very helpful. In the meantime we may note the fine tolerance with which we regard a number of totalitarian states as long as they are on our side.

In the first place, it should be recognized that the chaos of unrelated projects, large and small, from doctors' theses to the gaudier studies supported by the foundations, constitute a not inconsiderable contribution. It is true that most of them have no avowed relation whatever to scientific theory. This could hardly be otherwise at this stage of our scientific development. Nevertheless, these unrelated projects, these little bits of partial knowledge about small segments of particular situations, constitute raw material which may some day suggest to us the larger theory that encompasses them. It is true that endless surveys of the negro, of delinquency, of particular communities and current problems will not of themselves ever produce a science of sociology. Such projects must be carried on in the future with reference to more clearly stated hypotheses so that the results will bear not only on the immediate problem which gave rise to the study, but will also contribute to general knowledge of principles. But taken altogether, these projects represent material of considerable value both in practical adjustments and as sources of scientific hypotheses.

Most important and systematic of the research of this general type is that in the field of population and demography. Since some aspects of population study have been organized on a large scale for some time, we tend to take them for granted. Any survey of the present status of sociological research must recognize, however, the leading importance of this field. The ordinary census material and vital statistics are indispensable in all kinds of practical daily affairs. The expansion of the work of the Census Bureau, the establishment of census tracts in cities, and a multitude of other developments in this field are of inestimable importance to scientific sociological research in a variety of other fields. Finally, demographic research has provided the model and the methods for much research in other fields. The notion of reliable prediction of social phenomena which has progressed so notably in the past ten years, was first developed in demography. The whole trend toward quantification of social data and the adoption in sociology of the general approach of the

other sciences undoubtedly derived more impetus from developments in demography than from any other source. Since a rapid swing in this direction is by far the most important development of the past decade, some of the implications and ramifications of that development should be briefly reviewed.

Population statistics provide today the only existing record of millions of systematic observations of human behavior. As a result, we have had for some decades in the field of demography broad generalizations that measure up comparatively well to the standard of scientific principles. Theories and conclusions regarding the conditions determining the characteristics and behavior of human populations were the first to achieve a scientific level, and we shall do well to consider the reasons for the relatively advanced state of sociological knowledge in this field.

It is generally agreed that demography has prospered by virtue of the fact that it early arrived at sharp definitions of units, engaged in large scale observation and recording of these units, and has handled these data according to the accepted quantitative methods employed by all the sciences. Curiously enough, these facts are taken in some quarters to indicate the irrelevance rather than the relevance of demographic methods for other sociological problems. After all, it is pointed out, demographic data *are* quantitative. Here crops up the old assumption that some data are by nature quantitative, others not. The assumption is so thoroughly untenable in the light of the history of quantification that we shall perhaps hear of it no more in serious discussion. In this connection we must record as a most conspicuous and important achievement of the last decade the passing of the argument about statistics and quantitative methods. The rising generation simply will not argue about it. The only reason that scientists in any field have become interested in mathematics is that they have found it useful and necessary in stating intricate relationships and in handling large numbers of observations. That is also the only reason sociologists have turned to mathematics. Yet some critics

still regard this interest as "esoteric" and imply that sociologists who explore the possible contributions of mathematics to sociology do so from motives of malice, superstition, or sport. The rising generation will regard training in statistical methods somewhat as they regard reading today. They will be interested, as statisticians always have been, in the techniques of quantification, especially in new fields, and in the rules of legitimate inference from data. But they will no longer argue whether it is possible to generalize or predict from a single case, or about such misconceptions as is implied in the phrase "case study *versus* the statistical method."⁸ They will devote themselves instead to the methods which have been so productive in the fields of our highest achievement, not only in sociology but also in the other sciences.

With the disappearance of the notion that social phenomena were divided by God into two categories, those that can be quantified and those which cannot, a vigorous experimental movement in the construction of scales, tests, indices and other measuring instruments has appeared in sociology and in psychology.⁹ Indeed, the advance here in the last ten years probably far surpasses the

⁸ See the symposium on his subject by E. W. Burgess, S. A. Stouffer, L. S. Cottrell, Jr., S. A. Queen, G. B. Vold, and G. A. Lundberg in *Sociometry*, 4: 329-383, November 1941.

The epitaph on the controversy has been written recently by T. Sarbin in his paper "A Contribution to the Study of Actuarial and Individual Methods of Prediction," *American Journal of Sociology*, 48: 593-602, 1943.

⁹ For a summary of the recent developments in this field, including 200 references, concerning only the period 1937-39, see Daniel Day, "Methods in Attitude Research," *American Sociological Review*, 5: 395-410, 1940. See also F. S. Chapin, "Trends in Sociometrics and Critique," *Sociometry*, 3: 245-262, July 1940. For detailed treatments of scale construction, see W. H. Sewell, *The Construction and Standardization of a Scale for the Measurement of Socio-Economic Status of Oklahoma Farm Families*. Oklahoma A & M College, Technical Bulletin No. 9, Stillwater, Okla., 1940. Also, by the same author, "The Development of a Sociometric Scale," *Sociometry*, 5: 279-297, 1942. Also, F. S. Chapin, *The Measurement of Social Status*, University of Minnesota Press, 1933. Reprinted with revisions 1936.

achievements of all previous history in this type of measurement of social phenomena. It was inevitable that many of these instruments should be defective and that principles governing their validation should be inadequately understood at first. It was also to be expected that as a result of the great interest in this direction, these principles would themselves be more adequately formulated. Such has in fact been the case. Guttman's¹⁰ recent work in the field will, I predict, render obsolete a great deal of recent argument about scales and the measurement of hitherto untouchable phenomena.

Since I have indicated that these developments were largely suggested by previous developments in the field of demography, the effect of these developments on demography itself should be noted. The boundaries of that field have hitherto been defined in terms not so much of subject matter as in terms of whether the data were quantified or not.¹¹ At first demography consisted chiefly of statistics of population size, density, age, sex, and vital rates. More recently conspicuous demographic studies have dealt with social characteristics of populations, such as the distribution of wealth, occupations, mobility, illiteracy and intelligence. With the new instruments for measuring opinion, attitude, status, social participation, social expansiveness, and the whole field of communication and interpersonal relations, these fields become eligible for inclusion in demography as types of study on a scientific level comparable to the better studies of population characteristics and movements.

The effect of all these developments has been to make possible in sociology understanding and prediction in fields hitherto regarded as chaotic, inscrutable, or at best determinable only by mysterious powers of

¹⁰ L. Guttman, "A Basis for Scaling Quantitative Data," to be published shortly in the April *American Sociological Review*.

¹¹ Cf. *Encyclopedia of the Social Sciences*, V, pp. 85-86, which defines demography as "the numerical analysis of the state and movement of human population inclusive of census enumeration and registration of vital processes and of whatever quantitative statistical analysis can be made of the state and movement of population on the basis of fundamental census and registration data."

insight, empathy or clairvoyance. Indeed, the progress in the technique of prediction and measurement in a number of new fields involving interpersonal relations, must be regarded as among the most notable achievements of the past decade.¹²

The tremendous development of scales, tests, and other measuring instruments in the last decade has conspicuously advanced research and predictive power in the fields of social status, communication, and interpersonal relations. In short, our advance in sociological knowledge, as in other departments of an evolving culture, has depended largely on the invention of instruments and tools. As in the other sciences these tools have been largely of a statistical and mathematical character. As in the other sciences, also, these developments have forced us to consider the nature and limitations of our most ancient and traditional tools, namely, the words of the language that have come down to us from pre-scientific times. Outstanding in importance among the developments of the last decade, therefore, has been the awakening of widespread interest in semantics. Dealing as it does with the sociologically fundamental phenomenon of communication, the interest in semantics will greatly facilitate the emancipation of sociological theory from the metaphysical and mentalistic toils in which it has suffered down to the present time.

The abandonment of the arguments about quantification noted above is, of course, itself an example of the discovery that the categories in a language do not represent inherent divisions in nature. Special cases, however, are frequently the clue to the discovery of a more general principle. Thus it happens that the work on scales and indices of particular social phenomena, which has made such outstanding progress in the last decade,

¹² See, for example, E. W. Burgess and Leonard S. Cottrell, Jr., *Predicting Success or Failure in Marriage*, Prentice-Hall, 1939. Paul Horst, Editor, *The Prediction of Personal Adjustment*, Social Science Research Council Bulletin, 48, 1941, Part II. J. L. Moreno and H. H. Jennings, "Statistics of Social Configurations," *Sociometry*, 1: 342-374. See also *Bibliography of Sociometric Literature* (Bulletin of the Sociometric Institute, 101 Park Ave., N.Y., 1942).

coincides with and reinforces a considerable interest in general semantics on the part of philosophy, literature, and science. The development is easily the most important in recent times. There is not a major controversy in sociology which cannot be shown to be largely based upon the semantic immaturity of one or more of the participants. The overt evidence of the awakening of this fact in sociology is found in a more general self-consciousness about the sociological vocabulary and a desire to define its words more rigorously. As a rudimentary beginning, a Dictionary of Sociology has appeared this year. A Committee on Conceptual Integration was established some years ago in the American Sociological Society to consider more rigorous and detailed work. While floundering badly at first on account of its own semantic handicaps, the Committee has at least called attention to the crucial nature of the problem with which it wrestles.¹³ The need for semantic ministrations to sociologists is apparent on practically every page of their theoretical writings.

The type of research I have reviewed is not generally regarded as chiefly a contribution to sociological theory. Yet its principal significance is precisely that it has revealed to sociologists the true nature of scientific theory and has exposed the type of verbalization that has hitherto passed for sociological theory. The notion has been current among us that sociological theory consists of the history of social thought or a kind of social philosophy which frequently is not even sound philosophy. It has been quite generally and erroneously assumed that sociological theory must consist of the discovery and re-discovery, the translation and retranslation of sacred texts, and that unless theory relates itself somehow to Marx, Weber, Durkheim or Pareto, it is *ipso facto* not sociological theory, or at least not good theory. This notion is so deep-seated that it probably will

¹³ See G. A. Lundberg, "Operational Definitions in the Social Sciences," *American Journal of Sociology*, 47: 727-743, 1942. Also, S. C. Dodd, "Operational Definitions Operationally Defined," *American Journal of Sociology*, 48: 482-489, 1943. Also, H. Hart, "Some Methods for Improving Sociological Definitions," *American Sociological Review*, 8: 333-342, 1943.

be with us for some time yet. People still review books on the basis of whether the sacred names are mentioned, and note as a reproach the fact that a book devoted chiefly to the logic and methods of science contains only two references to Durkheim while it mentions Einstein thirteen times.¹⁴ But this practice is on the wane. Students will increasingly recognize that mere verbalization about social phenomena in the abstract is not necessarily sociological theory. Neither will they mistake mere obscurity for profundity nor measure the comprehensiveness of a theory by the number of pages required to state it. Furthermore, it will be recognized that any theory which involves for its testing conditions which are impossible is not a scientific but a metaphysical theory.

Instead, we shall see more work of the

¹⁴ Examples of this and other misapprehensions of what is relevant to the discussion in question will be found in L. White, "Sociology, Physics, and Mathematics," *American Sociological Review*, 8: 373-379. In addition to the detail mentioned in the text, this author is also concerned about the old fear that if social scientists draw upon the logic and symbolism of the other sciences, there is danger that the framework of physics may be imposed upon the social sciences. I have elsewhere tried to dispel this curious idea. (See "Regionalism, Science and the Peace Settlement," *Social Forces*, 21: 133). Nor is he entirely reassured by the fact that writers who think we have much to learn from the other sciences nevertheless finally come around to such familiar concepts as mores, conflict, and socialization. He rather suspects that this was an unintentional slip and an inconsistency. Chemists and biologists will be interested to hear that their sciences are "essentially non-mathematical," whatever that means. Sociologists as well as other scientists have become interested in mathematics only in so far as they find it useful in describing relationships and in orderly generalizations from numbers of observations, and in the latter respect, at least, all sciences are "essentially" mathematical. The old worry about mathematics appears to have been aggravated by the appearance of S. C. Dodd's *Dimensions of Society* (Macmillan 1942). Several reviewers who mistook the nature of Dodd's undertaking although it was clearly announced in his book, will be relieved to find that he was engaged in quite a different project than they imagined. (See, S. C. Dodd, "Of What Use is Dimensional Sociology?," *Social Forces*, December, 1943.) In the meantime, another social scientist, considering Dodd's book for what it is, namely a system of hypotheses for improved definition of concepts and methodology, finds it with-

type represented, for example, by Stouffer's theory relating mobility and distance. Stouffer proposed the hypothesis that "*the number of persons going a given distance is directly proportional to the number of opportunities at that distance and inversely proportional to the number of intervening opportunities.*"¹⁵ After rigorously defining all the terms and stating the theory as a mathematical equation, it is painstakingly tested by actual data.

Now I know that some will be surprised that I cite Stouffer's work as example of sociological theory. For there are many who apparently distinguish theory only by whether or not there are mathematical expressions in it. Nevertheless, I regard Stouffer's monograph as perhaps the past decade's finest example of how to build sociological theory. He starts with observable human behavior and considers various hypotheses as to how it could be explained and generalized. He final-

out reservation "an exceptionally good book." (See, J. G. Smith (Princeton), in *American Economic Review*, December, 1942.) See also W. S. Robinson (Columbia) in *Pol. Sci. Quarterly*, 57: 453-455, Sept. 1942.

¹⁵ S. A. Stouffer, "Intervening Opportunities: A Theory Relating Mobility and Distance," *American Sociological Review*, 5: 845-867, 1940. See also a corroboration of the theory by D. S. Thomas, "Interstate Migration and Intervening Opportunities," *American Sociological Review*, 6: 773-783, 1941. See also, J. Q. Stewart, "The Influence of a Population at a Distance," *Sociometry*, 5: 63-71, 1942.

Stouffer's modest statement regarding his theory should be considered by all social scientists: "This paper seeks to make an addition to sociological theory by proposing a conceptual framework for attacking the problem of distance. The theory is offered as a key which may open at least an outer door, although like any simple abstract theory it may require considerable elaboration and modification if it is to explain a wide variety of actual events. The writer believes that what sociology most needs is basic theories which can be so stated that verification in particular cases is possible. Therefore, painstaking effort has been made to test the theory in a particular case. If other studies confirm the success of this initial effort at verification, we have here a modest formulation of a new sociological law. The ultimate utility of the abstract theory will be determined by the variety and abundance of concrete situations in which it proves helpful in providing at least an initial ordering of thinking and of data."

ly arrives at one hypothesis stated in rigorous mathematical terms, and shows that it conforms remarkably well to the data against which it has been checked to date. Others have tested and are testing the theory in other places and settings. It is from numerous particular and detailed studies of this kind that increasingly comprehensive theories become possible.

I refer to the above study not because it is the only one. It represents, however, the most clear-cut example of a type of procedure which is destined both to produce and to test the sociological theories of the future. We have been working in this direction for some time.

With this transition in sociological theory will come a more realistic appreciation of the proper role of insight, understanding and empathy in sociology. In the past and down to the present there has been much mysterious conjuring with these terms, trying to make out that they are a unique and peculiar consideration in sociology as compared with the other sciences. There is still some sentiment in sociology to the effect that just as long as the sociologist himself "understands," he needs give no account of how he comes to his conclusions nor how his understanding can be checked against the different understandings of others. The fact seems to be that some sociologists have mistaken for scientific procedure the vague processes by which they arrive at hypotheses. Insight, empathy, and understanding are indeed proper and most desirable sources for hypotheses. But to mistake these insights either for the full scientific procedure or for scientific conclusions, is to neglect the task which most needs doing. An unbelievable amount of nonsense has been written to the effect that to "understand" a social act one must "experience" it, as nearly as may be, as the actors in it do. Literature probably aims to communicate this type of empathy or understanding. This is not the criterion at all for scientific understanding. The best *scientific* understanding of delirium tremens, murder, and prostitution, for example, is probably in the possession of people who have themselves never "experienced" (in the empathic sense) these forms of behavior.

The temptation to be overconcerned with the unique particular in the social sciences is very great. We need to remind ourselves, therefore, that *scientific* understanding of the unique particular is always in the light of the abstract general, not in mere personal understanding, identification, sharing, or empathy. Indeed, the latter may even corrupt that impersonal and rigorous manipulation of data which is absolutely required in science.¹⁶ Whatever might have been the original source of Stouffer's hypothesis, his theory certainly did not emerge from empathy or participation in apartment hunting in Cleveland. In fact, he operated upon data already collected by other people for other purposes, and quite without the life histories of the people concerned. No one has questioned the value of such experience for *other purposes* and in the formulation of hypotheses. But we must not let this fact obscure the full procedure by which sociological theory in the future will be evolved.

IV

If I am right in the above appraisal of the solid achievements of the last ten years in sociology, then our program for the future hardly needs to be pointed out.

First, we must continue to emancipate ourselves from thoughtways which are not only alien but even contradictory to the scientific approach, and which frustrate the ends everyone seeks. Chief among these thoughtways is the legalistic-moralistic orientation which continues to look for sanctions outside of man's experience and outside of nature.

Second, if I have noted correctly the kind of research which has produced results of the type for which the social sciences strive, then university administrations, departments of sociology, and the foundations supporting research should adapt their programs accordingly. I have indicated three general areas of progress during the past decade:

(1) We have continued sociological research with special success in the field of

¹⁶ The preceding sentences on this subject are a paraphrase of Read Bain's excellent treatment of this subject in *American Sociological Review*, 7: 387, 1942.

demography, regionalism, communications, and interpersonal relations.

(2) The invention of new methods and new tools, indices, scales, and other sociometric devices has resulted in conspicuous advance in our power of analysis and prediction in many fields.

(3) These same technical developments have suggested the re-examination of the whole sociological vocabulary and have resulted in an awakening to the nature of units, language, and semantics. These developments promise our liberation from the whole mysterious mentalistic terminology which for generations has obstructed the development of scientific sociological theory.

These types of research, because they would be cumulative, would not only result in the gradual emergence of principles of sociology which would be applicable to a vast variety of situations that exist and that may arise. Such research would also contribute most to the immediate situation. Research of the type I have advocated would provide means and instruments for the determination of local and regional equilibria in different parts of the world, after which we might discuss with some semblance of intelligence subjects like world organization.¹⁷

Present discussion of that subject, far from being an attempt to face crucial problems, is rather of an escapist character. We turn to the golden opportunity for romantic ver-

¹⁷ The Office of Population Research shows a commendable appreciation of the problem involved, as do the various organizations engaged in regional research. Among the universities, the work under Professor Odum's direction at the University of North Carolina deserves special mention. See "Regionalism in Transition" (reprinted from *Social Forces*, 1942-1943), University of North Carolina, Chapel Hill.

See also the following penetrating papers in *Proceedings of the American Academy of Arts and Sciences*, Vol. 75, pp. 23-37, October 1942 (28 Newbury St., Boston): C. S. Coon, "Technology and Human Relations"; C. M. Arnsberg, "The Nature of World Equilibrium"; and E. D. Chapple, "How a World Equilibrium can be Organized and Administered."

The Cross-Cultural Survey at Yale is notable not only for its collection of materials useful in any regional study that may be undertaken, but also for its use of this material in the construction of sociological theory.

balization that the subject of world organization provides because we cannot face the fact that we do not yet know how to solve similar problems on a local, national, or regional basis. Sixty sovereign states will never directly form a workable world federation. Five or six (or even Culbertson's eleven) regions, each with coherent structure of its own, might conceivably effect such an organization. Today we seem to be committed to prevent regional integration at all costs. At the same time we profess to be interested in world organization and peace. It would be difficult to find a more perfect or a more tragic illustration of the current bankruptcy of sociological theory. The whole subject of regionalism and ecology¹⁸ should increasingly become the framework for a great deal of social science research.

Peace foundations and peace organizations flourish and agitate both between and during wars. It is time that they examine realistically what they are doing and ask themselves whether their activities are calculated to achieve results or merely to provide idealistic employment for the participants. One of the first questions these groups should ask themselves is this: Do we seriously believe that we can achieve by a world organization results which no large nation has yet achieved for itself? A second question should be: Why is the technique of adjusting human relations so inadequate that even the most favored nation cannot escape widespread maladjustment and occasionally civil war? If the answer to this question is that some people are wicked and that when they have been removed and punished all will be well, then sociologists have nothing today to offer toward world peace. But if the answer is that human relations are what they are because they have never been systematically, extensively and scientifically studied

¹⁸ See J. A. Quinn, "Topical Summary of Current Literature on Human Ecology," *American Journal of Sociology*, 46: 191-226, 1940 (347 references). A conspicuous exception to my criticism of schemes for world organization should be made in the case of the Culbertson plan, which, in addition to other excellent features, recognizes at least the principle of regionalism.

so that better techniques of adjustment could be invented, then sociologists may point the way.

Finally it should be pointed out that not only must we push forward in the directions I have indicated, but the amount of activity must be greatly increased. Huxley has estimated that "before humanity can obtain on the collective level that degree of foresight, control and flexibility which on the biological level is at the disposal of human individuals, it must multiply at least ten-fold, perhaps fifty-fold, the proportion of individuals and organizations devoted to obtaining information, to planning, to correlation and the flexible control of execution." That the resources for such expansion a hundred times over are readily available is clear from our ability to indulge in such activities as the war.

It comes down, then, to this: Shall we put our faith in science or in something else? We have already answered that question as regards our physical problems. Once we make up our minds to do likewise regarding our social predicaments, the path before us is clear. This is the question which ultimately must be answered by everyone, but first by scientists themselves, by the Foundations, and by individuals who endow and finance research and education. If it is answered in the affirmative, then social research institutions will make their appearance, which will rank with Massachusetts and California Institutes of Technology, Mellon Institute, the research laboratories of Bell Telephone, General Electric and General Motors, not to mention some two thousand others. For some time the sponsors of these enterprises devoted to physical research have been wondering if the solution of social problems does not lie in the same direction. They are entitled to a more emphatic answer and more positive examples of what can be done by social scientists. I believe that we now can begin to exhibit some achievements which justify public faith.

The two principal problems which I mentioned at the outset thus turn out to be correlative. I pointed out that social scientists today do not enjoy a prestige or a public

confidence which will enable them seriously to influence the peace or other public policy. I also said that the only way to win public confidence is through superior performance. It may be contended that without public confidence we shall have no opportunity to show our skill. It is also true that as we are afforded opportunities in public affairs, our skill will increase and public confidence will afford us further opportunities. Skill and public confidence are correlative, but the initial effort must be ours. The development of sociology comes first. There is still a good deal of confidence in leaders whose only training and experience has been in getting other people to vote for them. But that faith will wane. It will some day be recognized that real social scientists are as necessary in making an effective peace as physical scientists are in the making of modern war.

Finally, there are those who find the methods of science too slow. They want to know what we shall do while we wait for the social sciences to develop. Well, we shall doubtless continue to suffer. Executives will continue to decide on the basis of guess and intuition and to mistake their own voices for the voice of the people or of God. The nations will doubtless continue to rage and the people to imagine vain things. Life went on also in the days before anesthetics, vaccines, and sulphur drugs. These days also had their immediate and pressing problems. A few people, however, devoted themselves to research which could not possibly solve the current difficulties, but which have transformed our world. We do not abandon cancer research because the patients of today may not be saved by it.

Many of the fruits of science, however, can be used to advantage while in the process of development. Science is at best a growth, not a sudden revelation. When we once put our undivided faith in science, we shall enjoy not only the support of a faith more demonstrably deserving our allegiance than many that we have followed in the past, but we shall also vastly accentuate the transition to the realization of that faith.