

THE NEED FOR CORPORATE RESEARCH IN THE SOCIAL SCIENCES

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Since the term *corporate research* is not one in general use, I shall define it at the outset. Corporate research is research carried on by a number of individuals representing different fields of specialization (or different disciplines), whose activities are integrated in terms of a general plan, are guided by a recognized leader or director, and are focused upon a single problem or complex of related problems. Although the term *corporate research* may be unfamiliar, the principle is not new. A striking example of the effectiveness of corporate research in the physical sciences is afforded by the work of the Manhattan Project in developing the atomic bomb. One reason the Manhattan Project could be set up quickly and could function smoothly was that the pattern for this type of research organization had already been worked out in the research laboratories maintained by corporations such as General Electric and A. T. & T., and many top-ranking scientists had already had experience with such organizations. Examples of the beginnings of corporate research in the social sciences are found in the work of certain foundations, notably the Russell Sage Foundation, the Scripps Foundation, and the Twentieth Century Fund, and in some of the work carried on by the Bureau of Agricultural Economics of the U. S. Department of Agriculture, also the Food and Agriculture Organization of United Nations.

Corporate research is differentiated sharply from *individual research*—the prevailing form of social research today—in which the individual selects his problem, formulates his hypothesis, determines methods of investigation, gathers his data, and writes up his findings, hoping of course for publication and perhaps professional advancement. Indeed, there are grounds for suspecting that a large part of the individual research now being done in the social sciences is motivated by this hope rather than by an insatiable thirst for knowledge. Consider, for example, how many academic persons find that their thirst has been permanently slaked after their Ph.D. dissertation has been accepted! The shortcomings of individual research were indicated recently by Professor Harold W. Saunders, in reporting on a census of sociological research in Midwestern colleges and universities, when he declared that “most of the research is still highly *individualized endeavor*, carried on as subsidiary to the function of teaching, is short run and piecemeal in organization, and is poorly financed, if financed at all, by funds specifically allocated for that purpose.”¹

Professor Philip M. Hauser, writing at a time when it seemed likely that basic social science research would be provided for by Congress under a National Science Founda-

¹ “The Status of Research in the Midwest Sociological Society.” *The Mid-West Sociologist*, v. 12, No. 2, pp. 15-16 (Spring, 1950).

tion, asks the question, "Are the Social Sciences Ready?" and gives a qualified negative answer when he declares that "new research perspectives are badly needed—perspectives not restricted to projects forced into the molds of the spotty and limited financial support of the past." He goes on to express the hope that "adequate financial resources will increase the necessity for, and should increase greatly the number of studies made by competent groups rather than by individual investigators."²

Corporate research should not be confused with *joint research*, nor even with *cooperative research* in the usual sense of the latter term. Joint research in science is the equivalent of the *partnership* in business. It is the situation where two or more individual workers, usually representing the same discipline and often the same field of specialization, pool their efforts and results. The type of project undertaken by joint researchers is generally little different from the individual research project, and while the scope of investigation may be broadened considerably and the amount of data amassed may be more imposing, joint research nevertheless has most of the characteristics, and limitations, of individual research.

All scientific research is cooperative in the sense that every investigator makes use of and builds upon the work of others. In the narrower sense in which the term is ordinarily used, however, cooperative research denotes a certain loose cooperation between individuals or institutions (especially the latter) involving, among other things, exchange of in-

formation about projects being worked on, conferences on methodology, mutual exchanges of personnel, and in some cases a pooling of data. An example of cooperative research in which data are pooled would be a series of parallel surveys undertaken in different communities by different investigators, but employing a common schedule so that data collected will be more or less comparable. If joint research is comparable to the business partnership, cooperative research may be compared to the trade association in its looser forms. This is not to disparage cooperative research, or cooperation in research. There is need for much more cooperation than now exists in the social sciences and it is not contended that the development of corporate research would reduce the need for cooperation in research. *Social Science Abstracts*, which perished during the depression and which certainly should be revived, was a cooperative enterprise involving interdisciplinary and inter-institutional cooperation in reporting research.

Carrying to its logical conclusion the scheme of analogy we have used in comparing joint research to the business partnership, and cooperative research to the trade association, we may say that corporate research is just what its name implies—the application of the principles of corporate organization to scientific research. As implied in the definition at the beginning of this paper, it involves (1) division of labor, as distinguished from parallel effort, (2) maximum utilization of specialized training and talent, (3) interdisciplinary team work, (4) integration of effort under leadership, and (5) a research plan providing for continuity of effort and the focusing

²"Are the Social Sciences Ready?" *American Sociological Review*, V. 11, pp. 381, 382 (Aug. 1946).

of diverse viewpoints upon a single problem or problem complex. Though not implied in our original definition, and not essential to the basic concept, it is important to note also that corporate research, like the business corporation, may make possible a better utilization of available economic resources and also bring to the support of scientific research larger aggregates of capital than are likely to be made available to the less organized forms of research.

1. *Division of labor.* — Adam Smith, in *Wealth of Nations*, pointed out that in his time (c. 1776) it was not uncommon for an English "factory" to consist simply of a warehouse in which a number of skilled workers pursued parallel enterprises, each one performing all the successive operations involved in converting raw material to finished products, and that the output of such a factory was simply the sum of the individual outputs. But he went on to show that a transition was in progress, and that in one industry, the manufacture of the common pin, the manufacturing process had been broken down into separate and successive operations, with the use of teams of workmen in which each worker performed only a single operation; and he pointed out that, as a result of this division of labor, a team of workers was able to produce several times as much as the sum of the outputs of a similar number of workers working as individuals. In the twentieth century, the advantages of division of labor in industry are universally accepted, but scientific research with few exceptions has not yet reached even the stage of the warehouse "factory." It reposes in a still earlier stage—that of cottage industry and the individual craftsman!

In defense of this analogy, it is asserted that industry and scientific research have many essential things in common. Each calls for the exercise of a variety of highly developed skills, each involves well defined processes which can be broken down into concurrent and successive operations in which specialization leads to greater skill and efficiency, and each makes use of tools (or instruments) and stands to gain from that sort of organization in which the worker does not waste time in putting down one tool and groping for another. The universe of scientific knowledge, like that of technical skills, has expanded to the point where no one person can hope to master more than a small segment yet nations and individuals are daily confronted with problems which call for the concerted, and integrated application of many fields of scientific knowledge.

Imagine, if you can, the plight of a person desiring a modern automobile who is obliged to procure all the necessary raw materials, then seek out workmen with all the necessary skills, then transport his material from shop to shop until all the parts are finished, and finally assemble the parts himself. Yet such, precisely, is the plight of the man, or the nation, which seeks scientific guidance in the solution of any of the complex problems which we designate by the term "social."

2. *Maximum utilization of specialized training and talent*, as indicated above, is attained only in a situation where tasks are allotted according to special skill and ability and the whole process is so organized as to avoid duplication of effort, but at the same time insure that all needed operations are performed in proper sequence. Anyone who has

and even superficial contact with research in the social sciences must be aware of enormous duplication of effort. If not, a perusal of some of the annual lists of doctoral dissertations in the social sciences is recommended. Even at the level of advanced research, universities and individual scientists compete openly with each other in the exploration of certain favored fields, and turn a deaf ear to proposals for division of the field and the sharing of results, doubtless for the unspoken reason that to do so would involve sacrifice of institutional or individual credit and prestige, though the shibboleth of freedom of scientific investigation is likely to be advanced as public justification of their disinterest, if justification is demanded.

But duplication of effort is not the only loss we sustain because of our highly atomized and individualized research. Because choice of research problem is largely a matter of personal bent (or institutional bias), research tends to be spotty and discontinuous, so that when one surveys the field of social phenomena as a whole, he finds certain areas mapped and plotted in great detail—even trivial or useless detail. These are the popular areas, the areas of research toward which attention runs.

For example, in sociology, family relations, juvenile delinquency, social disorganization (a rather vague and formless concept), and recently, race or minority group relations have been strong favorites. But at the same time there are vast areas of *terra incognita*. Some of these areas, such as religious behavior and sex behavior, are fenced off by institutional bars. A certain amount of peripheral exploration is permitted, provided it is done delicately and

reverently, but one must not go into the dark woods, and one must be careful not to step on the flowers or frighten the little rabbits.

On the other hand, there are large and important areas which are neglected for no discernable reason save that nobody seems to be interested in them. For example, sociology has largely neglected the study of popular music and other forms of popular art; and while sociologists have studied intensively certain aspects of criminology, the study of law-making, law-observance, and law-enforcement as social processes has been neglected. Social workers and sociologists have long been concerned with the effects of poorly balanced diets, but sociological literature contains only a few small and scattered studies dealing with the relationship of food habits to other aspects of culture such as intergroup prejudice and social status. Here is certainly a problem for interdisciplinary teamwork with dietitians, physiologists, psychologists, and sociologists all playing on the team.

It is not contended that corporate research will solve all problems of mal-distribution of research effort, but like the Scandinavian gentleman's daily ration of sixty-four cups of coffee, "it will help." It will help in four ways: (1) Corporate organization of research will certainly reduce the amount of needless duplication of research. This point seems so obvious that space will not be taken to argue it. (2) Confronting barriers of prejudice or tabu, an organized group with respected institutional backing can make a stronger attack, with less individual risk than can the lone researcher. (3) With respect to the neglected areas in the research map, it may reasonably be assumed that interdisciplinary team-

work will help. Bringing together investigators trained in different fields means that more questions will be asked and the searchlight of science will be played over a larger area. (4) A research team on which different but mutually supporting fields of specialization are represented will be able, not only to see more aspects of a central problem, but to pursue more related lines of inquiry and hence avoid the errors of particularism which have appeared so often in the social sciences.

3. *Interdisciplinary teamwork.*—In the preceding section we have already pointed out how interdisciplinary teamwork can contribute to the more effective utilization of specialized training and talent and lead to a broader concept of problems and more comprehensive investigations. Interdisciplinary teamwork appears to offer one answer to the dilemma of *specialization versus understanding*, i.e. a means whereby the social sciences can supply, not only the minutely detailed knowledge of the specialist, but also broad understandings which can come only from knowledge which is both intensive and extensive, and which are so necessary in the processes of prediction and planning.

For example, to understand and deal effectively with intergroup relations—racial, ethnic, religious, or economic—calls for a team in which anthropology, economics, psychology, and sociology are represented, because that complex social phenomenon which we call *prejudice* is far more than a pre-judgment or fallacious belief which can be speedily vanquished by giving people the facts. It is a witches' brew, compounded of folk myths and superstition, religious convictions, eco-

nomic interests, sentiments of group loyalty, vague fears and anxieties, displaced hostilities, and frustrations, with added special ingredients according to the particular brand of prejudice. Nothing could be more futile and absurd than trying to deal with so complex a phenomenon as if it were a simple matter of interpersonal understanding which can be cleared up by getting the facts in the open and bringing the parties together so that they can shake hands.

4. *Integration of effort under leadership.*—Anyone who has ever had the experience of working on, or with, a faculty committee knows that even scientifically trained minds, without leadership, have a disconcerting tendency to "ride off furiously in all directions" and spend a precious afternoon in getting nowhere at all. Corporate research involves, as an essential element, the existence of acknowledged leadership and the willingness of all persons engaged in such research to respond to leadership. This does not mean mechanical control nor the sacrifice of what we ordinarily understand as intellectual freedom and integrity. In the staff conference ideas and proposals may be batted around the circle without regard to the rank or seniority of their authors, but in the end, if there is to be an end, someone must be able to fuse divergent proposals together into a plan acceptable to all. And when divergence becomes so sharp that this is not possible, there must be someone, commanding the respect of all, to make a decision. Admittedly this involves risk, and some compromising of freedom, but so does marriage, or signing a contract, or entering into any significant social relationship.

This seems particularly applicable to research carried on by graduate students in our universities. Working individually and guided only by occasional conferences with busy professors, they turn out each year scores of theses and dissertations containing vast accumulations of painfully collected data which the student has analyzed mechanically, by methods learned the previous semester. Problems selected are often inconsequential, or so narrowly defined as to be of little significance unless supported by related studies; and the interpretation of findings is halting, confused, and lacking of insight. Surely the minds and energies of these young people could be utilized better if they were assigned to work for a semester, or a year, with an organized group under skilled leadership, instead of being forced to strike out on their own.

5. *A research plan.*—Stressing the need for more and better planning in social science research, Professor Hauser insists that

we must regard it as a basic obligation, to plan social science research projects that meet the requirements of good design of experiment. This does not mean that all research projects must be put into a test tube or brought into a laboratory, or that all research projects must be quantified. It does mean, however, that all important variables involved in a given problem should be brought under "control". It does mean that steps should be taken to assure that the population studied is a representative population—representative of the entire universe from which it is drawn or a selected segment of that universe which can be rigorously described. It does mean that the study should be set up in a manner to permit generalizations and conclusions whether they be of a positive or negative nature. Too many researchers in the past have, largely because of limited resources, stopped where they really should have begun—at the point where qualitative or quantitative studies have provided initial insights into the problem under exploration. Exploratory case studies or statistical studies will, of course, still be

necessary, but adequate resources should result in projects which follow through—in carefully designed studies in which the variables are known and controlled and which result in statements of social laws and probabilities.³

The essence of a research plan is to be found in the concept of continuity—logical continuity and temporal continuity. Research should have logical continuity in the sense that it covers completely a defined area of investigation and maintains scientific liaison with related areas; it should have temporal continuity in the sense that it builds upon the validated results of earlier research and at the same time provides leads for future investigation and further validation. There are at least five requirements for a sound research plan.

To begin with, a research plan must be built around a defined problem, or problem complex. A problem may be defined in terms of a specified category of social phenomena, for example, competition or assimilation, in which case it is usually designated as a *theoretical* problem; or it may be defined in terms of a specified institution or institutional pattern, for example, marriage, education, or a specified group or population, in which case we designate it as a *practical* problem. As the social sciences have operated until now, the emphasis upon the practical type of problem has been much stronger than in the case of the theoretical, and there is probably little reason to suppose that this situation will change, nor to wish that it should change, for the soundest structure of theory is often that which is built up in the process of finding solutions to practical problems. The important thing is that the problem, whether "practical" or

³ *Ibid.*, p. 382.

"theoretical," shall be so defined as to include all ramifications and permutations. In other words, the great sin of research planning is oversimplification of the problem.

A second requirement of good research planning is the collation of all existing research data which have a bearing on the problem, in order that unnecessary repetition may be avoided, and the investigation may be so ordered that it will add to present knowledge. The importance of this is obvious, but the means of doing it, so far as the social sciences are concerned, are not obvious. Because of the individualistic and unorganized character of social science research in the past, and in the absence of classified lists and cross-indexes of published research data, it is virtually impossible for a social scientist today to know what has been done, or even what currently is being done with respect to a certain problem.

Having defined the problem and taken account of all existing knowledge which bears upon it, the third step in research planning is to formulate a series of hypotheses which shall, as far as possible, cover all solutions to the problem which are logically conceivable in the light of existing knowledge, and this leads directly to the fourth step, which is the designing of an experiment (using that term in its broadest sense), or a related series of experiments, which shall test, not one, but all of the hypotheses. Good experimental design, as Hauser has indicated, means setting up a plan of inquiry in such a way that when the inquiry is completed, the various hypotheses will either be "proved" or "disproved." A conclusion which falls short of this is really no conclusion at all.

Finally, in the sound plan of research, there must be an analysis of the task and a determination of the personnel needs. What disciplines and what fields of specialization within disciplines need to be represented in this study? When this has been done, the plan may be said to be complete; there remains only the administrative (and perhaps financial) problem of finding suitable staff and organizing them into a research team.

For most institutions now engaged in social science research, corporate research must be regarded as a goal to be approached gradually rather than as a procedure to be adopted immediately. One obvious reason for this is the problem of financial support. Large-scale, comprehensive research projects of the sort described here call for research budgets seldom dreamed of in the social sciences. Moreover, they call for an entirely different sort of grant from that which foundations and research councils are accustomed to make. The practice which has developed and become strongly entrenched in the social sciences is for available research funds to be parcelled out in small grants (\$500 to \$3,000) to individuals on the basis of competitive "bids." If progress is to be made in the development of corporate research, institutions and foundations must be educated to the point where they recognize that the structure of knowledge cannot be economically built by the same principles which govern the erection of a new wing on the gymnasium.

Yet one of the reasons for the nigardly support now given to research in the social sciences undoubtedly is to be found in the present shortcomings of social science research. In other words, *if the social*

scientists could do better research, they could get more money, and if they had more money, they could do better research. How is this circle to be broken? As indicated above, it cannot be done all at once, but I think it can be done. The first steps must, obviously, be taken by the social sciences themselves. Specifically, the following measures are suggested:

1. Organization of interdepartmental discussion groups or faculty seminars to promote a broader approach to social problems and lay the foundations for interdisciplinary teamwork.
2. Establishment of social science research committees or councils charged with the function of developing broad, coordinated research programs. Such groups already exist in many universities, but their usual function is administration rather than planning—they consider the “bids” of individual researchers and parcel out research funds or research time on an individual basis, making sure that no department gets more than its share.
3. Progressive integration of individual research efforts, including the “forced” research of graduate students, into a broad plan that is focused upon a locally or nationally significant problem complex.

The possibilities of action along these lines can be illustrated by an account of what we are doing at Southern Illinois University. For a long time, southern Illinois has been regarded as a problem area, but we at the University have come to regard it as an area of unrealized opportunity. From the standpoint of

research, it is a veritable sociological laboratory, since it is culturally an interstitial area where the distinctive culture traits of northern and southern regions meet, intermingle, and not infrequently “slug it out.” We have not yet been able to accomplish the first two steps outlined above, but within the Department of Sociology we have developed a long-range research plan which is based upon the corporate concept of research, have secured limited financial support from the University for this plan, and have hopes of getting foundation support. With a small budget provided by the University, we are collecting and collating presently available information about the area. We have been reasonably successful in persuading graduate students to work on research problems which fit into our plan, and in building up the staff of the department we constantly keep in mind the requirements of a well-balanced research team, which we find is not necessarily incompatible with the equally important objective of developing an effective *teaching* team.

In conclusion, I turn to a problem which I am sure has been troubling many during this discussion—the problem of possible dangers in corporate research. Will it destroy intellectual freedom and lead to regimentation of investigation, followed by regimentation of thinking? In answer to this question, I wish to assert, first of all, that there are vital differences between *integration* and *regimentation*. Indeed, it may well be argued that the survival of free society depends upon our discovering practical means of achieving integration of effort without regimentation.

In the second place, it is far from my intent to advocate corporate re-

search to the exclusion of individual research. There should always be a place for the investigator of rare talents who can perform a brilliant piece of research by himself, as well as for the unorthodox theorist whose hypotheses may seem insane to organized research agencies.

In the third place, while I have emphasized the adaptability of corporate research to large-scale projects, I am not blind to the dangers of cartelized research. I can, for example, foresee the possibility that a National Research Foundation, financed by Federal appropriation,

might lead to a dangerous degree of cartelization, and I think the exclusion of social sciences from the benefits of the pending legislation may some day be viewed as a fortunate thing. The social sciences need scores of well-organized research teams, based on the campuses of our leading colleges and universities, and financed from many sources—local contributions, state or municipal appropriations, foundation grants, and even Federal grants where they can be obtained without sacrifice of local control or self-sufficiency. And all this, I must insist, is compatible with the concept of corporate research.