

An economist or engineer who is engaged in academic work can rarely get leave of absence for more than a year. Part time service is often the best that is obtainable. Even in small undertakings only a few first-rate persons can be had, while for large undertakings the personnel problem is critical. Demand is greater than supply.

An organized and well trained group is best as a nucleus at least. Such a group possesses *esprit de corps*, the habit of team work and channels for communications among its members. The members recognize the capacities and limitations of each other. An attack on a new problem can in consequence be made more quickly and with greater unanimity. On large investigations a nucleus or nuclei of organized groups is practically a necessity.

In the case of the United States Coal Commission the experience of which has been previously cited, a number of investigators of labor questions was secured from the Wharton School of Finance of the University of Pennsylvania, under the direction of the Professor of Geography and Industry. Other groups of investigators were drawn from the Federal Trade Commission, others still from the Institute of Economics of Washington, D. C., and a firm of investigators trained in governmental studies, who engage in private practice in Washington, was drawn on for students of living conditions in the mining towns. The Business Cycle personnel was grouped about the National Bureau of Economic Research; that of the Seasonal Operation study about the Division of Building and Housing of the Department of Commerce, the Coal Storage and Safety and Production studies about the permanent organization of the American Engineering Council.

Regarding the relative desirability of a large staff working at top speed or a small staff working more slowly, the character of the problem, of course, will determine. On a reconnaissance where the collection of a large amount of raw material is vital to the investigation a large staff working rapidly has many advantages. Of course it is impossible for such a staff to go back and retrace its steps, so that the questionnaires or the staff instructions must be quickly standardized and must be such that the directors and the sponsoring committee are willing to abide by the results. With a small staff shifting methods may not be serious.

Questionnaires

The dependence upon questionnaires is striking in these surveys. The Waste reports were filled out by field investigators; the Coal Storage and Safety and Production reports were filled out by plant executives; an important part of the Business Cycle study was developed by means of questionnaires filled out by correspondents and a similar method was followed in the case of the Seasonal Construction study. The United States Coal Commission used questionnaires filled out by field agents as well as those filled out and sworn to by coal operators.

Experience plainly shows that wherever a questionnaire is used a preliminary test should be given it. The sampling method almost always results in improvement in the text of the questionnaire and in the method to be followed in using it. If a small group cannot answer the questionnaires, a large one cannot. Questionnaires returned to headquarters by field agents or correspondents should be tabulated immediately in order to develop the weaknesses and errors in the method. To hold them for future tabulation may mean that agents will have to go over the entire field again or that a single agent who has misunderstood instructions will have to return to the field.

Costs

The pie chart of costs on page 27 tells its own story. In the Waste report sixty-four cents of the dollar went to field work, both salaries and expenses. In the Business Cycle study fifty cents went to these items. In the work of the United States Coal Commission fifty cents went to salaries of investigators, railroad fare and living expenses in the field. In the study of Safety and Production fifty-one cents went to these items. Apparently about one-half of the expenses of such reconnaissance as these will go to the accumulation of data in the field; the balance will go to administrative expenses, equipment, statistical compilations and analysis of results, printing expenses and similar items.

Conclusion

In order to keep this paper within bounds, I shall omit consideration of a number of fascinating problems such as the organization and direction of advisory committees, the relation of such committees to the staff of investigators, the role of

experts, the relation of fact finding to policy-making, the dissemination of the facts found and the policy proposed, checking up on the results of surveys and reconnaissances and evaluating them.

One problem I should like to suggest. Is it not probable that an analysis of other types of economic and social surveys, similar to this analysis of seven reconnaissances, will reveal comparable factors and various ways by which methods can be improved? Is it not probable that research is also susceptible to such analysis?

Fact finding is the fashion. Since the World War there has been a marked increase in the public appetite for scientific information and in the sums available for research and surveys. Our public policy-making is frequently preceded by some type of investigation conducted under public or private auspices; commercial and business policy-making, too, is largely conditioned by the results of preliminary surveys of the facts. It has been estimated that in this country more than \$200,000,000 is now being spent yearly on research and economic and social investigations.

There is nothing particularly new in the method employed. What is new is the growth of these activities and the faith in them displayed by the public.

Some part—perhaps a large part—of the sums now being spent on investigation is wasted. Sooner or later public confidence both in the method and in its results will be weakened if standards are not set up. I suggest that it is our duty to appraise these methods, to standardize their factors, and to develop a science in the conduct of social and economic studies.

Discussion

Thomas Adams.² First I want to congratulate Mr. Hunt on his excellent paper and to express agreement with his general propositions in relation to surveys of the character used in his illustrations. Mr. Hunt has rendered a great service in analyzing the methods and distribution of time and cost of these surveys. Such post-reviews of reconnaissance surveys or research operations are excellent as guides to those undertaking any kind of survey.

²General Director Plans and Surveys, Regional Plan of New York and Its Environs.

I am a bit doubtful, however, as to the extent to which the guidance obtained from these practical experiences could be used as a means of laying down definite rules and programs of time and cost prior to making some kind of preliminary investigation. I am referring in particular to civic surveys, with which I happen to be most familiar. Every city differs from every other city and no stereotyped method or rules can be adopted for making a civic survey until after preliminary inspection and diagnosis have been made of a particular area. This means that a preliminary reconnaissance survey has to be made, for the purpose of developing a program for a more extended reconnaissance survey. The first is a path-finding operation and the lines of the paths, the time and cost of "blazing" them, can hardly be the subject of precise estimate. This preliminary work has to be done to ascertain the conditions, as well as the methods, to be adopted and the time and cost involved in making a more extended reconnaissance survey corresponding to those that have been described in the paper under discussion. In city planning we advocate that cities call in a consultant to make a preliminary diagnosis of the character of the survey that should be made, the kind of plan needed, and on what parts of the survey and plan the chief emphasis should be placed. These preliminary studies offer a real field for sociologists, I believe, as they are more impartial in their recommendations than city planners.

My point is that, while a definite program and budget should be made as the basis for a general survey of civic conditions, the actual preparation of that program cannot be undertaken without first making a preliminary reconnaissance survey of the area and conditions. In other words, there are really two surveys to be made—neither of which can be regarded as having the scope of research—and it is after the first has been made that a definite program and budget should be drawn up for a more extended investigation.

Trevor Bowen.¹ We are probably all agreed that the amount of money now being spent on various forms of social research reaches an impressive total. I have no knowledge of what the total sum actually amounts to but certainly it is large enough to convince me that one of the necessary condi-

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