One of the advantages of remoteness from Ann Arbor is the freedom it gives one to do some thinking uninterrupted by countless daily demands. I have been using some of this time to think about our Organizational Diagnosis Reports. I have been prompted to do this because the organizational diagnosis reports are clearly of great value to the organizations with which we are working. They are a powerful and valuable instrument for several reasons:

1. The results are independent of the investigator since they are based on quantitative data which can be replicated by others providing they use equally rigorous methodology. The results, consequently, even though resisted and challenged cannot be disproved if we have done the measurements and analyses competently.

2. They provide the kind of objective, non-personal data which facilitate impersonal, constructive problem solving on the problems revealed by the quantitative measurements.

3. Some of the measurements objectively define situational requirements which facilitate productive problem solving.

4. The organizational theory and model used as well as the analyses of the data point to cause and effect relationships thereby indicating where to take hold and what to do in order to bring about desired improvement. The major causal variables are made clear and the direction and magnitude of the changes required in them to achieve present or potential objectives are indicated.

5. The data they contain enable goals for desired improvement to be stated in quantitative terms so that progress on each goal can
be measured and appraised objectively. This applies to all classes of variables: causal, intervening, and end-result.

6. When progress on stated objectives falls short of the goals set, causes can be detected promptly and new more effective action steps planned and initiated.

7. The measurements of causal and intervening variables which organizational diagnoses provide give management and all members of the organization substantial lead time concerning developments likely to occur in end-result variables unless the causal variables are altered. This lead time applies to financial variables and to labor relations, health, and satisfaction variables.

a. This lead time information can be used not only for remedial action as suggested previously, but to discover at an early stage new innovative developments yielding improved results. This will enable the more rapid detection and spread of these beneficial developments.

Organizational diagnoses are obviously of great value to any organization, but as I have looked at them and used them, I feel we can make them even more valuable. Here are some of my reactions which I hope will prove useful.

I. Readability

The Organizational Diagnoses are written for executives and middle and lower levels of management, all of whom feel very busy and under heavy time pressures. They know little, if anything, about our methods of measurement and analysis and are unfamiliar with our technical terms and concepts.
I suspect that virtually all of these managers find most of our Organizational Diagnoses highly complex, confusing, and extremely difficult to read, understand, and interpret. I have arrived at this conclusion in part because of my own experience. I find that I have to work hard, take much time, and read and reread the report before I fully grasp the contents and understand what it contains.

To my knowledge, we have little data from studies of change in companies to test whether top managers and other managers find the reports as hard to read and use as I fear. Mark and Pat's brief study of the change effort at Ansul reported that one of the three least helpful aspects was "too much data and hard to analyze for remedial action." This, perhaps, lends a little support to my apprehension concerning readability.

Since Organizational Diagnoses are of great value to the organization, I should like to suggest that we experiment with an approach such as the following:

1. Have the researcher write the Organizational Diagnoses in the usual manner.

2. Have a separate report written in non-technical language and with a style which is exciting and easily read. This writing should be done by a highly intelligent person who writes clearly with a succinct and readable style and who is reasonably knowledgeable concerning social science research methods and jargon.

The non-technical writer should sit in on the planning sessions for the research project and on the subsequent discussions as the research progresses. He should see copies of the data as fast as they become available and discuss with the researcher and the O.D. person on the project their interpretation of the findings. He should write the
report from scratch in an interesting, clear style which communicates the important points clearly and readily to the reader. So far as statistics are concerned, this report should contain only simple data and easily read and understood charts. It should be written with the orientation that the managers who read it recognize and accept our expertise as researchers and want us to tell them what we have found and what it means for them. The full, technical report, written by the researcher, could be available, or attached as an appendix, for any manager who wants, himself, to study the data in depth. The non-technical report should be written as soon as possible and completed usually before the technical report.

I recognize that we have already tried one attempt at a rewrite and that it did not turn out well. However, it was done under great time pressure and it was an attempt to rewrite the report paragraph by paragraph.

In the Division of Program Surveys, Sylvia Eberhart was highly successful in rewriting reports using the approach suggested above. We now have a CRUSK editor, Joyce Kornbluh. I suggest that we ask her if she would like to try this task. If not, I believe Van and Haney can suggest others, perhaps, Al Slote.

II. Inferences Concerning Causality As A Basis for Action*

One of the most complex, difficult problems with which social science research struggles, and often unsuccessfully, is that of causality.

*The other day I was told of a study of a flea's capacity to jump. The investigator, after removing one leg from the flea, said 'jump' and the flea did. The investigator removed a second leg and again the flea jumped in response to the command. This occurred when the third leg was removed, and again when the fourth leg was removed. Each time as the investigator noted in his report, the flea jumped in response to the verbal command. After the fifth leg was removed and the flea was told to jump, it did not do so. The investigator then noted in his report that "fleas with only one leg can't hear."
This appears to be an important factor which greatly complicates the task of making organizational diagnoses.

The complexity of the problems with which the social sciences deal and the large number of interrelated and interdependent variables contribute to making causal analyses difficult.

Another factor is that the assistance of social scientists so often is sought by persons or institutions only when they are experiencing difficulties and are seeking relief. In seeking help, they focus attention on the immediate relief from the pain instead of searching for its cause.

Examples are readily cited. School vandalism is substantial and increasing. Its cost to large school systems runs into hundreds of thousands of dollars each year. The remedies being used according to recent reports include such measures as tighter police control, continuous surveillance by closed circuit television, and high fences. Few school systems appear to be asking what is there about our school system, its administration, and methods of operating which create such animosity in youngsters that they engage in vandalism. Fewer school systems still are using the results of research focused on causes to reduce or eliminate the sources of hostile motivation which lead to vandalism.

Another broad class of examples concern buying behavior: why do consumers buy or not buy any of a variety of products? One very common approach is to ask them whether or not they buy a particular item and then ask them why they do or do not. The answers to these "why" questions when tabulated are often treated by the persons doing the study as the causal motivation for that particular behavior. There are several studies which reveal the error in this approach. One series of large scale studies
which provide relevant evidence were the war bond studies conducted by Cartwright.

In five different studies of war bond drives involving national probability samples, Cartwright found that where respondents were asked why they had increased their buying of war bonds during a drive, the answers given were largely patriotic. Only a very small proportion answered that they bought additional bonds because they were asked to buy. Yet when the data were analyzed, the variable of "being asked to buy" was found to be of greatest importance. Of all gainfully employed persons who were asked personally to buy additional bonds, approximately 55% on the average for the five studies, did so. Of all who were not asked to buy, less than 20% did so.

The importance as a causal variable of the motivational forces arising from group membership and the values and norms held by the group, i.e., from "being asked to buy" was tested by applying Cartwright's findings. In the study of the Second War Bond Drive he had found that among the 25% of all gainfully employed persons who were asked to buy more bonds, 47% actually increased their buying. Among the three-fourths of all potential buyers not asked to buy, only 12% had bought more than usual. Based on these data, T. W. Gamble, National Director of the War Finance Division of the U. S. Treasury, launched a vigorous effort to increase personal solicitation in the Third Bond Drive. He cited Cartwright's results as evidence for the need to do so. Gamble's efforts doubled the number of persons in the Third Bond Drive who had been asked personally to buy more bonds, i.e., the percentage of all gainfully employed persons who were asked to buy increased from 25% to 50%. Of those who were asked to buy more bonds in the third drive, 59% actually did so in comparison with only 18% among those who were not asked to buy. This doubling of the
number of persons asked to buy appeared to be a major factor in almost
doubling the amount of Series E bonds sold in the third drive compared
with the second. In the second drive, $1.5 billion of Series E bonds
were sold; $2.5 billion were sold in the third.

The results of this large scale field test demonstrated the importance
of asking people to buy as a causal variable and confirmed Cartwright's
analysis concerning causal variables. Cartwright had concluded this was a
major causal variable based on his correlational analysis of the data obtained
in the study of the Second War Bond Drive.

There appear to be many causes for an individual's failure when asked
"why" to give the correct reasons for his behavior. In the first place,
few persons understand their own behavior sufficiently well and objectively
to diagnose their own motivation correctly. Moreover, even though each
person were able to diagnose his own motivation correctly, there are
situations where his basic motivations are such that he would not wish to
report it candidly to others. These and related reasons underlie the in-
capacity of all, or most all, persons to report correctly the true causes
underlying their behavior, their reactions, and their response.

When strong biases and hostile attitudes exist virtually all perceptions
appear to be distorted (Blake, Shepard, Manton) (Sherif, Social Interaction,
1967). But even when there are few or no strongly held hostile attitudes,
some kinds of perceptions still appear subject to error. French, Meyer
and Ray (Foundation for Research on Human Behavior Seminar Report, 1900), found
for example, that three-fourths of the managers and professionals included
in their study perceived themselves as above average. Our perceptual
mechanisms apparently protect our self-esteem even when hostile attitudes
are not present.
Perceptions based on the outcome of complex intellectual processes are probably more subject to error than those which require only observation of a single phenomenon. Perceptions of a manager's behavior, for example, are likely to be more accurate than perceptions of what changes in the manager's behavior are required to bring about desired improvements in the operations under him. The latter requires arriving at a judgment which makes use of several different perceptions such as their perceptions of (a) their supervisor's abilities, (b) their supervisor's behavior, (c) the conditions which would be ideal from their stand point and (d) the shifts which would be most likely to bring about these ideal conditions. Since the errors present in each of these perceptions are much more likely to be cumulative than compensating, the total perceptual error or distortion is likely to be greater. For these reasons, perceptions of a diagnostic character such as reasons for one's behavior or the changes which one perceives his superior should make in his behavior to do a better job as a manager, are likely to be much more inaccurate than direct perceptions of behavior. Diagnostic perceptions appear to be particularly sensitive to distortion and error.

[Note: If anyone knows of research dealing with this question of cumulative errors I'd appreciate reprints or references. - RL]

Asking "why," or using other forms of a person's perceptions of causality yields data, as the war bond studies showed, which often do not reflect correctly the true motivations for behavior. Valid conclusions concerning causal motivation require sophisticated analyses such as the war bond studies of Cartwright, which relate quantitative measurements of possible causal variables to behavior or to changes in behavior.
Other Uses of "Why" Questions

Although "why" questions may not provide valid data concerning motivation, they do yield information useful for several purposes. "Why" questions, for example, reveal the life space of persons and frequently suggest the nature of key causal variables present in a particular situation. Although the "why" questions rarely provide the quantitative evidence to demonstrate the relative importance of the different causal variables, they do suggest variables which are likely to be important as major sources of motivation. "Why" questions skillfully used can be a rich source of insightful hypotheses to be tested by rigorous quantitative research.

"Why" questions provide information also concerning the way persons look at a particular situation and the vocabulary they use in discussing it. This information helps in any attempt to communicate with them as, for example, an organizational diagnosis prepared for their use.

Use Theoretical Models and Field Tests

One approach for obtaining valid evidence concerning causal motivation and other causal variables involves constructing a theoretical model which shows the hypothesized relationships among the independent and dependent variables. Quantitative measurements are then obtained for each variable and the relationships between the hypothesized, independent variables and the dependent variable or variables are computed. The magnitude of the relationships obtained reveal the relative importance of each of the independent variables.

If, as is often the case, time is likely to be a variable which affects the relationships among the independent and dependent variables, it is necessary to obtain measurements over an adequate span of time and to compute all of these relationships.
The use of these correlational analyses, however, is still not adequate for detecting correctly the independent variable(s) in every situation. For example, variables A and B may show a sizeable relationship with B lagging approximately six months after A. Such results would make it appear that A is the independent variable responsible for the observed fluctuations in B. It is possible, however, for both A and B to be dependent variables influenced by an independent variable C. This would be the case, for example, if C were the manager's leadership behavior, A were the peer leadership behavior and B an end-result variable. Dave Bowers' findings reveal that the actual situation appears to be even more complex than this since peer leadership variables are influenced by managerial leadership but in turn often exert more influence on end-result variables than they themselves are influenced by the managerial leadership variables.

The conclusions reached concerning causality from the correlational analyses should be tested, if it is at all possible to do so, by conducting field experiments. Successful altering of the causal variables would yield a test of the predicted relationships, i.e., successful changes in the causal variables should produce the expected variations in the intervening and end-result variables at the predicted time intervals.

To assess correctly, therefore, the nature of the independent variables in any complex situation the following steps are required:

1. Development of a relatively sophisticated model specifying the variables present and the pattern of their hypothesized interrelationships.

2. Measurements of the designated variables and, if necessary, at several periods over time.

3. Computations to test whether the model and the hypothesized relationships are confirmed by the quantitative analyses and to discover any discrepancies.
4. If possible, experimental field tests to confirm the pattern of causal relationships revealed by the correlational analysis.

5. Continuous examination of all of the relationships and findings and of all developments and occurrences (a) to detect any evidence of inadequacies in the model including the presence of any as yet unrecognized major, independent (or intervening) variable; and (b) to gain new insights which will facilitate the creation of an even more sophisticated and powerful model.

This general plan has been used by ISR's BIG and has yielded many valuable insights. A recent example is provided by the findings from a study of a moderate-sized plant* which showed that variables hypothesized to be intervening, and hence should lag in time behind changes in such causal variables as managerial behavior, were actually leading these causal variables in time sequence for managers at middle and lower levels of management. This deviation from predicted relationships yielded important insights and new dimensions to the model, namely, the organizational climate concept and variables.

Organizational Diagnoses Require Causal Variables

From the standpoint of basic scientific research every independent variable which shows a significant relationship of a given magnitude to the dependent variables is as important as every other independent variable which displays a relationship of comparable magnitude. In situations where there is interest in applying the knowledge derived from the research, all independent variables are not of equal interest or importance. Some independent variables can be manipulated easily. Others can be altered only with great difficulty and still others cannot be altered at all. In research where there is any interest in applying the results it is important, consequently, to give particular attention to

*See D. Bowers Research Bulletin #
those independent variables which are readily modified.

To discover from research, for example, that the rate of technological and economic change in a developing country is related to the tensions and stresses experienced by the citizens of the country and especially by its leadership is an important contribution to general knowledge and theory. It does not, however, give government officials any clues as to how best to cope with these tensions, except to decelerate the rate of change and keep it at a relatively slow level. This deceleration step is likely to be impossible for a government to take in the face of the expectations and desires of its citizens who, generally, want faster, not slower movement toward a fully developed nation. Government officials who face this problem need the results of research which tell them what steps they can take to keep tensions low and manageable during periods of rapid technological, social, and economic change. They need knowledge, consequently, about those independent variables which influence the levels of felt tension and which are subject to alteration or manipulation by these government officials.

The concept of causal variables can be used by the members of a research staff to assist them in keeping their attention focused on those independent variables which can be altered readily:

Causal variables are independent variables which determine the course of developments within an organization and the results achieved by the organization. These causal variables include only those independent variables which can be altered or changed by the organization and its management. General business conditions, for example, although an independent variable, are not included among the causal list. Causal variables include the structure of the organization and management's policies, decisions, business and leadership strategies, skills, and behavior.
The deliberate use by a research staff of the concept of causal variables, rather than independent variables only, helps them keep their attention focused during the design of research upon variables which are important both for theory and application. This focus carries over from the design phase of the research to its execution and the analysis and interpretation of the findings.

A simple test which can be used to help keep the attention of a research staff focused on the dynamics of application is to have them keep asking, "So what?" Each hypothesis, each independent variable, each aspect of the research model can be tested by asking, "Suppose the research does yield that finding or conclusion, so what? What use can be made of that knowledge? What difference will that new knowledge make?" The practical value of any research will be enhanced considerably by using this test as work is done on the design and execution of the research. Even the scientific significance of the research is likely to be increased from using this test since knowledge of causality is often an important aspect of the findings from basic research.

Some of the Errors Present in Questionnaire Items and Indexes

The implication of these comments concerning causality and causal inferences for organizational diagnoses will be discussed after two additional points which are related to the interpretation of findings, have been examined briefly:

1. If fixed questions with fixed alternatives are used, test the meaning which each question and each alternative has for the kinds of respondents involved in the study prior to interpreting the results obtained from using these questions.
2. If indexes are used, test periodically the intercorrelations among the items on relevant populations to be sure that the intercorrelations are, and continue to be, large enough to warrant treating each of the indexes as an index.

Concerning the first point, when an investigator writes a multiple choice question along with the stated alternatives, he is clear in his own mind as to what the question and the choices mean. Moreover, in interpreting the results, he usually takes for granted that in answering the question respondents read into the choices the meaning he had in his mind when he drafted the question. Methodological research (Likert, Scientific American, December, 1948) (Current Trends in Psychology?) (Kahn and Cannell?) has revealed that while the investigator's assumption concerning the meaning of a question is often correct, in many instances it is not (See Appendix I).

For an important proportion of respondents, a particular question, or one or more of the fixed answer alternatives, may have a sufficiently different meaning from those held by the investigator that he misinterprets the respondents' answers. This is most likely to occur if either the issue or the wording of the question is complex. It is important, consequently, to test periodically the meaning to respondents of complex, multiple-choice questions. The need to do the testing periodically arises from the fact that changed circumstances can change the meaning which respondents read into a question and into one or more of the alternative answers.

With regard to the second point, indexes, or attitude scales, consisting of a few or more items, offer many advantages over measurements of variables by means of single items. Errors of measurement are reduced, the reliability
of the measurement is higher, and alternate forms or wordings can be used when desired. It is essential, however, that the items combined into the index show, for the populations measured, a sufficiently high intercorrelation to warrant treating the items as a single index. If several indexes are used, the items in each index should display relatively high intercorrelations and there should be no item in one index which shows a consistently higher correlation to items in other indexes than to the items in the index of which it is a part. This is especially important if the interrelationships among such indexes are to be examined.

It is necessary to test the intercorrelations among the items of an index from time to time and separately for each of the different populations who are measured by the index. Since populations differ in their cognitive, attitudinal, and behavioral dimensions, items which form an excellent index for one population may not do so for another population. Similarly, the items which make a satisfactory index at one point in time may, or may not, display the same pattern of high intercorrelations at a later time.

Data Available for Organizational Diagnoses

What are the implications of these comments on methods of measurement on causal inferences for organizational diagnoses? The information available for use in organizational diagnoses at present include such categories of data as the following:

1. The indexes from the Core Questionnaire, which appear in the "composite organizational profile," e.g., the four measures of managerial and peer behavior, and the organizational climate dimensions.

2. Other items from the Core Questionnaire including measures of the characteristics and functioning of the respondents own work group.
3. Supervisory needs as judged by subordinates.

"Supervisory Needs" are measured by the following:

SUPERVISORY NEEDS

How much does your immediate supervisor need each of the following to be a better manager?

a. More information about how his people see and feel about things
b. More information about principles of good management
c. A change in the kinds of things he personally feels are important
d. Greater ability in handling the technical side or the administrative side of his job
e. Practices in making use of information he already has about how his people feel, how to be a good manager, etc.
f. A situation that lets him do what he already knows how to do and wants to do
g. More interest in and concern for the people who work for him

The responses to each item are:

1. To a very little extent*
2. To a little extent
3. To some extent
4. To a great extent
5. To a very great extent

* These response items are reversed in the scoring process so that a high score signifies a low need.

The Core Questionnaire As A Source of Data for Organizational Diagnoses

The usefulness for organizational diagnoses of each of the above categories of data can be evaluated on the basis of the previous discussion of causal inferences, item meaning, and internal consistency. Let's start by examining measurements derived from the core questionnaire.
The core questionnaire indexes have been classified on the basis of a conceptual model into causal and intervening categories. This classification has been tested several times by computing relationships over time. The managerial behavior indexes are proving to be causal in character. The organizational climate indexes rather than always being intervening in character have been found to be intervening for the very top levels of management and to be increasingly more important as causal variables at successively lower hierarchical levels.* Peer leadership behavior variables appear to be influenced by both the managerial behavior and the organizational climate variables.**

The internal consistency of each of the different indexes used to measure managerial leadership behavior, peer leadership, and organizational climate has been computed several times and for several different populations. The intercorrelations among the items included in each variable have been found consistently to be sufficiently high to warrant using the summated item scores as an index.

Data derived from the core questionnaire, when evaluated on the basis of the requirements stated above, appear in general to meet them reasonably well. The one possible exception is that tests of the meaning of individual questions are not made or made as often as might be desired. In general, however, the data from the core questionnaire appears to be excellent material upon which to base an organizational diagnosis.

"Supervisory Needs" As A Source of Data for Organizational Diagnoses

Measurements derived from the "Supervisory Needs" questions seem to be less adequate as the bases for an organizational diagnosis. Subordinate

*D. G. Bowers, Research Bulletin #
**D. G. Bowers and S. Seashore, "Four Factor Theory of Leadership"
responses to such supervisory needs and items as those listed above are not likely to reflect a correct diagnosis of what changes in their supervisor's skills or behavior would enable him to be a better manager. This is the case since the subordinate's responses involve several complex processes. Their responses reflect (1) the subordinate's perception of their supervisor's abilities and behavior, (2) their knowledge of what the ideal state ought to be to obtain the best results, and (3) their judgment of the changes required to shift from the present to an improved state. Errors are likely to occur in each of these sets of conditions which influence their response and these errors are likely to be cumulative not compensatory. These errors usually will be so large as to make the subordinate's estimates of their superior's "supervisory needs" an unsatisfactory body of data upon which to base an organizational diagnosis. In contrast, a subordinate's perception of his manager's behavior as used in the core questionnaire is likely to contain errors of much smaller magnitudes.

There are other inadequacies in subordinate's estimates of their superior's "supervisory needs" which indicate that these estimates should not be used as the primary data for organizational diagnosis. These estimates by subordinates are often more likely to reflect symptoms than underlying causes. Subordinates often do not know or recognize either the kinds of qualifications which their superior should have or the kinds of behavior he should engage in to achieve the best performance and the highest levels of employee satisfaction. Since, for these reasons, subordinates are likely to be unable to give valid responses to questions concerning the "supervisory needs," what are their responses likely to reflect? Since subordinates are keenly aware of their pains and their various kinds of unhappiness, their responses are likely to reflect them. Responses which reflect pains and unhappiness are much more likely to be
expressions of symptoms than valid statements of causes.

Although subordinates' estimates of their superior's "supervisory needs" may be unsatisfactory as the primary source of information upon which to base organizational diagnosis, they are valuable, as are other symptoms, in providing information to help confirm an organizational diagnosis based on other data. These estimates are of use also in providing insights into the outlook of subordinates at various levels in an organization. These insights also can facilitate effective communication and interaction between the members of the organization and those persons engaged in organization development since the O.D. person(s) is aware of their strongly felt pains and concerns.

Organizational Diagnoses Should Involve, Not Tell

If we seek to use a Sy 4 approach in working with an organization, the members of that organization at every hierarchical level should be involved in the problem solving and decisions concerning the organizational diagnoses and the action steps to be taken. The time devoted to the problem solving and the amount of effort involved usually will be greater at higher than lower levels, but all levels should be involved.

The written organizational diagnosis prepared by the ISR staff for the organization, consequently, should report the research findings, our interpretation of the data, and the problems revealed. We should stop short, however, in the written report to the firm of recommending action steps or an action program.

The organization development staff members from ISR, or the internal organization development personnel from the firm, or both, should engage in joint problem solving with appropriate work groups. This problem solving should reveal what action steps should be taken, by whom, how, and whether
training or other specific assistance should be provided. The organization development staff members, both internal and from ISR, should see that in the problem-solving process the best interpretation is made of the data in the organizational diagnosis and of all the other available information and that the most promising alternate courses of action are fully examined before the final decisions are reached on the courses of action to be pursued.

This does not mean that the ISR research and O.D. staff should not develop carefully thought through action steps and action programs. They should do so and in written form. But this thinking should not be communicated in writing to the organization as part of the organizational diagnosis. This material and thinking should be used by the ISR organization development members to help guide their thinking and to assist them to do the best possible job in working with the organization involved.

Probably the only time when the organizational diagnosis should contain explicit recommendations concerning action steps or an action program is when we wish to use a System 2 approach with specific directions as part of a field experiment to test the relative effectiveness of alternate O.D. designs.

**Organizational Diagnosis Should Avoid Time Commitments**

In all O.D. work with companies, our experience seems to indicate that it is highly desirable to keep expectations low concerning the rate and magnitude of improvement in organizational effectiveness and performance. It is far better to have firms, departments, and units highly pleased because their progress and achievements have substantially exceeded their goals and expectations than seriously disappointed because they fell short. It often may be desirable to maintain some flexibility
in the goals and expectations so that if it becomes necessary to scale them down somewhat this can be done since they are not anchored in concrete.

For these reasons the written, organizational diagnosis given to a firm or department should not state or suggest specific time expectations. This is in keeping also with not stating in the organizational diagnosis any action steps or recommendations. It may be desirable in the organizational diagnosis to mention that creating improvement in the solution of the problems pointed to is difficult and will require appreciable time. That is, statements can appropriately be made which will encourage the establishment of low, conservative time expectations when the action steps and goals are being decided upon.

This has been an attempt to put in writing many considerations related to preparing an organizational diagnosis. I hope that this draft will provide a useful chopping block as we examine our experience in the preparation and use of organizational diagnoses as valuable tools in organization development.
APPENDIX I

From a methodological research study done by the Division of Program Surveys, U.S. Department of Agriculture, published in Scientific American, December, 1948, No. 6.

Perhaps the greatest of these problems is that of meaning. Most of the issues of the day involve words and concepts that have different meanings for different people. On some issues large sections of the population may have no understanding of the major dimensions of the issue or the terms used. To understand the meaning of the percentages obtained in a poll, it is essential to know what respondents meant when they answered each question. Unfortunately, such data are not available. Yet polling results are often presented and discussed with the implicit assumption that each respondent understood the question and answered it from precisely the same point of view as that of the person conducting the poll.

An indication of the inadequacy of the usual polling questions can be obtained by asking a very small sample of respondents a question taken from any poll on a complex current problem and permitting these respondents to answer in their own words and to elaborate their answers. Several tests of polling questions have been made in this fashion. Quite consistently evidence has been obtained that questions on complex issues have different meanings for different people who are called upon to answer them.

Richard L. Crutchfield and Donald A. Gordon of Swarthmore College ran a test on the following Gallup Poll question which appeared in news releases of August 22, 1943:

"After the war, would you like to see many changes or reforms made in the United States, or would you rather have the country remain pretty much the way it was before the war?"
To test interpretations of this question, the investigators interviewed a cross-section sample of 114 New York City residents. After recording the respondent's initial reaction to the question, "the interviewer then encouraged the respondent to enlarge upon his answer in an informal conversational manner." The interviewers found that the initial response of their New York respondents gave substantially the same results as those obtained by Gallup for the country as a whole. But they also found that their respondents had seven different frames of reference in mind when answering the question. Some persons thought the question referred to "domestic changes or reforms"; others "technological changes"; others changes in the "basic political-economic structure of the U.S."; and still others thought it referred to changes in "foreign affairs of the U.S."

Respondents also had quite different meanings in mind when they answered "change" or "remain the same." For example, among those who answered in terms of "domestic changes and reforms" the word "change" for some persons meant shifts in a more liberal direction, such as "increases in social security," "higher pay levels," and "greater social equality for members of minority groups." Other persons meant a shift in the conservative direction, such as "change to a Republican administration," "less government control of business," and "more control of labor unions." Similarly, some of those who answered "remain the same" had in mind conservative aspects of our economy; others giving the same answer referred to liberal aspects, such as "maintaining high wages." It is obviously impossible to interpret percentages which combine into single totals answers which have such widely different meanings.

This study of what the respondents really meant by their answers substantially altered the interpretation of the poll. Thus in their first answers, 49 per cent of the New York City respondents said they wanted
the country to "remain the same," and 46 per cent voted for "changes or reforms." But further questioning of those who were thinking in terms of domestic changes showed that 60 per cent wanted "changes or reforms," and 40 per cent favored "remain the same"--a direct reversal of the results with respect to this phase of the question. Most of those who thought the question meant technological change favored such change, while those who thought it referred to the basic political-economic structure of the U.S. did not want change.

Many of the polls dealing with complex current issues use questions which are very likely to be as misunderstood as was the question tested by Crutchfield and Gordon. The importance of knowing what questions mean to respondents and what the latter mean by their answers is illustrated by the following two questions, which seemed similar in wording but produced substantially different results. The Gallup Poll asked: "Do you think the U.S. and all the Western European countries participating in the Marshall Plan should join together in a permanent alliance—that is, agree to come to each other's defense immediately if any one of them is attacked?"
The answers: Yes, 65 per cent; No, 21 per cent; No Opinion, 14 per cent.

At about the same time (the results of both polls were published in the same week--May 31 and June 2, 1948), the National Opinion Research Center asked: "As you may know, England, France and other countries of Western Europe recently signed an agreement to defend each other against attack. Do you think the U.S. should promise to back up these countries with our armed forces if they are attacked by some other country?" The answers: Yes, 51 per cent; No, 39 per cent; No Opinion, 10 per cent. Thus on what was essentially the same question--the formation of a military alliance--there was a difference of 14 percentage points in the Yes answers and 18 points in the No answers. Unless data are obtained showing what respondents
in a poll actually mean by their replies, the percentages obtained are of
limited significance and sometimes may be seriously misleading.