

# DEMOGRAPHY, FEEDBACK, AND DECISION-MAKING FOR ECONOMIC AND SOCIAL DEVELOPMENT

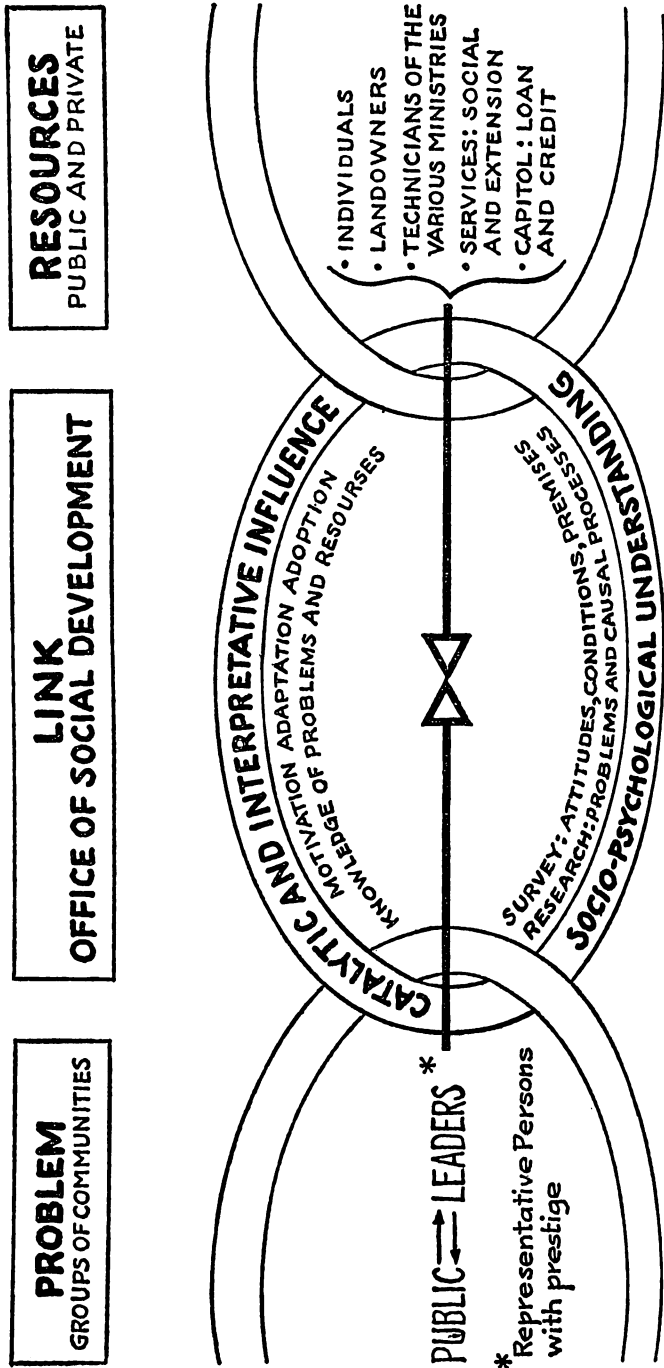
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## INTRODUCTION

Social scientists are, in general, agreed as to the need for a multidisciplinary approach to the problems of economic and social development. They recognize not only the importance of the sociopsychological factors but the crucial influence of them on almost all of the areas of development. Though these and other important elements are recognized, our failure to gain full acceptance of social science in development work is more one of strategy and tactics. It is a matter of finding new institutional arrangement and a rationale which tie the various social science disciplines, including survey research, into the practicalities of the programs of development. Now, no matter how convinced the social scientists may be of all this, we are not the ones who will decide on the creation and budgeting of such organized activity. For these reasons, this paper is not directed to the social scientists but indirectly through them to those with planning and administrative power. It is these operating people who require not only the underpinning arguments but also practical suggestions as to how the social sciences can best serve the interests of development.

There is a continuing dialogue between the social scientists and the action-oriented people, with many in the latter group persisting in the belief that theory and practice are antithetical. Actually, it is not simply a question of arguing the "good theory—good practice" combination

# DIAGRAM ILLUSTRATING RURAL DEVELOPMENT APPROACH



it more a matter of our developing a good theory-of-practice. This can come about by our reviewing past experiences in the applications of social science theory and by developing an over-all philosophy. The apparent dilemma of being at one time both analytical and practical is purely "psychological," and may be overcome here by giving advance notice of the double purpose of this paper. To repeat, our problem is that of finding a new institutional arrangement and a rationale which unite the various social science disciplines, including survey research, into the *practicalities* of the programs of development. In the case of demography, this means not simply a reviewing of the adequacy of data but questioning of their feedback through decision-making and action for purposes of development. The argument is that by making *development* the focal point of our attention, it becomes possible to recast roles, make new combinations and even to begin to think of a feedback—getting data on the *use* of data. After all, data are secured in order to do something about the conditions that gave rise to the data. At this stage, it may be much more a question of securing new types of information than of improving existing series.

In reading a detective story, the temptation is to skip to the end to find out "who done it." Now, before our general review, analysis, and development of a rationale, we might anticipate the paper's ending by seeing how the Peruvians "plan to do it." About one month prior to the writing of this paper, the National Fund for Health and Social Welfare of the Peruvian Ministry of Public Health and Social Assistance approved a new Office of Social Development. At the time of presenting the bylaws of this office for their approval by the Board, the then Director of the National Fund, Dr. Fernando Cabieses, described the office in a document less legal in form. A translation is included at the end of this paper. Curiosity now might lead us to skip to the diagram included in this material.

The diagram and facing text illustrate one of the activities of the Office of Social Development. Attention is called to some of the key points in this rural development activity: a. A leverage principle is employed so that *groups* of communities are covered, each through *leaders* selected in an ingenious way. b. There is a paired use of understanding and interpretive influence: the understanding comes about by survey research into attitudes, living conditions (demographic, crops, income), premises, problems, and correlations. The interpretive, catalytic, and perhaps conciliating influence comes about through the application of this knowledge, enlightening not only the country people but the

landowners, public servants, and those influential in affecting full use of resources and technology. c. The appeal to a change in attitudes and the removal of blocks to adaptation and adoption of technology are those of enlightened self-interest. d. The basic objective is that of maximizing the effectiveness of the individual in meeting his own long-run objectives and linking him as a productive agent to local resources. e. The temptation is avoided to fill the unmet needs rather than to encourage and to help bring about social transformations and a strengthening of existing institutions—to get landowners to see their real opportunities, to encourage the extension workers to leave their town offices, to vouch for the creditability of communities for loans. In synthesis, this rural development activity and the other activities of the new office rely on the principle of permitting individuals (with emphasis on the leader class) to change freely those premises and attitudes which conflict with their manifest interests. The principle employed is a lubricating-catalytic effect based on understanding. As the title of this paper makes clear, our concern is not with demography per se, but with its integral use *for* development. So much for the skip-ahead to see one small part of what the Peruvians plan to do in a new organization, within their Ministry of Health.

#### ANATOMY OF DEVELOPMENT

That which immediately follows is an attempt of the writer, with many misgivings, to exhibit the anatomy of development. It is hoped that the various specialists interested in both man and progress will correct and add to the underpinning arguments and rationale. This will be necessary if applied social science is to gain acceptance as an essential part of operating programs of development.

Development goals are generally conceived of as improvements in: a. the ratio of the gross national product and the population, b. the distribution of this product in the population, c. the social conditions, and d. the political conditions of the people. Man is not only the framer of his goals but is also a component in each of them. Even in what might be thought of as the purely economic, man provides the hidden hand in the numerator and boldly crowds into the denominator of the fraction, gross national product per person.

The goals may change but the evolutionary *process* of development

remains. This process is the search of interdependent individuals and groups to evolve a “symbiosis,” an ethics of co-operation and behavior which results in exploitation of technology, knowledge, and resources for the greatest common good of present and future generations. This is an ideal, of course, and yet something on which survival depends. The problem is that of having this process work reasonably well in the face of short-term selfish behavior and other behavior resulting from incomplete understanding. What we are talking about is a principle of enlightened self-interest, which implies that individuals and groups, *when informed*, in the long run will make decisions and even modify their premises or attitudes when they can see outcomes that are in their immediate or future favor. It is not as simple as this, of course; but, except for force, what other choice is open?

Helpful to our analysis of this process are the steps: *fact-decision-action*. Man takes the available facts which, through a process of *planning* and balancing with values, he uses to make decisions. Then, through a process of *administration*, he acts on the basis of these decisions. The grist for all of this are three sets of factors. One set is what the economists call the “real” factors: resources, technology, specialization, and exchange, and a second set which they refer to as “money flow” factor having to do with the speed of transactions and the how, who, and why of spending or saving. The third set, the “sociopsychological” factors, is not always made explicit and yet it heavily influences the other two sets. This is made evident by the list below which spreads out for examination all of the many ingredients of development.

### Ingredients for Decision-Making, Action, and Development

Technology

Knowledge: principles and encyclopedic facts

Human resources: absolute number

(number and  
productivity)

age structure

urban-rural balance

net rate of increase

health, education, and training

cultural, e.g., premises, honesty,

achievement, aspiration

social: family, community, group

psychological: attitudes, motivation,

behavior

Natural resources and infrastructure  
 Institutions and organization (specialization and exchange)  
 Socio-political-economic environment  
 Capital: individual's propensity to save  
 (supply, individual's propensity to consume  
 formation, conspicuous consumption (nonsaving)  
 and use) businessman's investment spending  
 honesty, confidence  
 flow: flight and loan  
 credit  
 institutional mechanisms  
 efficiency of use of existent  
 resources  
 taxation and deficit spending

Quite clearly, development requires more than the introduction of technology and capital. The pervasive influence of the human equation in all subject sectors of development has been recognized. However, there remains the unfortunate fact that any concerted, systematic attack on the problems has been very slow in coming.

### PERSPECTIVE

In the United States there was a delay of some 14 years in the formation of a Division of Social Sciences within the National Science Foundation. And only about a year ago Kennedy's Science Advisory Committee reported on the importance of strengthening the behavioral sciences in the United States. The following quoted paragraphs are pertinent here:

"Both fundamental research in the behavioral sciences and the application of scientific knowledge to human problems could be substantially assisted by making available better and more illuminating basic data about the structure and functioning of North American society. We call attention to the great advance over the past generation in the quantity and quality of our information about the economy and to the effective use that is now made of such information in formulating and ad-

ministering national economic policy. Similar benefits would flow from a corresponding advance in the quantity and quality of information about noneconomic aspects of behavior.

“A significant start has been made on the borderlines of economics—the collection of data on family budgets, for example, and on businessmen’s expectations—and on the composition, characteristics, and movements of populations. A similar promising start has just been made with the establishment of a National Health Survey. A proposal has been made to establish a special National Family Welfare Survey in the Social Security Administration. But there are many significant aspects of behavior about which systematic data are almost completely lacking. We know something of how people spend their money, but almost nothing of how they spend their time. In addition to uses in basic research, behavioral data will become increasingly important in exploring the problems of the aged, in forecasting the effects of increased leisure on our society and in many other matters of public policy. There are other areas where good systematic data would be invaluable and where they are now almost wholly lacking: travel and commuting habits, occupational aspirations, the preferences and choices of youth, and the incidence of mental disturbance.

“Fortunately, progress has been made in recent years in developing methods for collecting and processing data of these kinds. Available skills in sample design, in survey technique, in construction of interview schedules, and in electronic data-processing make such data collection feasible and meaningful. The family budget studies already mentioned, and recent surveys of scientific manpower, are examples of what can now be done, and of what needs to be done, more often, more systematically, and over a wide range of phenomena.”

At the 1960 UNESCO regional meeting in Caracas, it was recommended that governments should accept as targets the allocation of 2 per cent of the national budget to scientific research. Whereas no division was made of this amount according to scientific field, it would not be unreasonable in the developing countries to see this directed toward research into failures to adapt and adopt that which is *already known*.

## ANALYSIS OF DELAY

What is needed in developing countries is an organized systematic means for helping interdependent individuals and groups to evolve a "symbiosis" which permits exploitation of technology, knowledge, and resources for the greatest common good. This idea is not new. There have been groups working on these problems, but there has been no large undertaking tied to action programs. Possibly the main reason the social science approach has not been fully utilized is that the few professionals who were available were parcelled out to the various programs. The institutional-organization structures were such that the social scientists had no home and no spokesman. Their allies, who had the techniques of sampling and processing of data, were made incommunicative and denied multisubject approaches because of the divisions imposed on them by departmental and administrative organization. The demographers and statisticians themselves, it must be admitted, also fell in love with the all-absorbing aspects of method, and made refinements going beyond all practical necessities. Sample survey methods, suitably tied to action programs, somehow never had a chance. Emphasis was placed on the improvement, by subject, of the never-complete, routinely reported data. Assuming that registration of vital events can be improved: How long will it take before the data are really useful in action programs? And, more seriously, is there the time to do this? The interdisciplinary nature of the problems, the scarcity of professional manpower, especially in the newly developing countries, and the very mechanical demands for processing information, are all factors which should bring these people together.

Progress is not simply a matter of obtaining a multidisciplinary approach. A forced common focus on development also has the effect of changing the points of view of specialists. The demographers, for example, must view their work in relation to the whole spectrum of decision-making and action. As stated, economic and social development is the goal; it is achieved by *actions* resulting from *decisions* based on many *facts* balanced with values. Among the data are the demographic: encyclopedic basic "facts" and special descriptions involving relationships and trends. Viewed within this framework, it might be argued, for example, that for all practical purposes, the basic demographic data related to population increase are well enough known, the hand-



writing is on the wall. Now the demographers should explore the feedback cycle of their data through the stages of decision-making and action. Isn't it a question of balancing the need to perfect the measures of population increase against the need to investigate the sociopsychological forces behind this increase? To what extent are the available facts known? Why are they not used if known? Are some data unavailable to, or unused by, decision-makers simply because we don't know their problems or because the stimulus for securing the knowledge is not action-oriented? Now these may not be the best questions but at least they and many others become important and even crucial to explore once we have assumed full responsibility for feedback. Our society perhaps has rewarded us too well for concentrated, dedicated specialization. Thus, just as in the old story, it is the rare mason who sees himself as a builder of a cathedral rather than one simply exercising his craftsmanship to applauded perfection, one arch after another.

Social change means different things to different people, possibly because of the failure to distinguish between its quantitative and qualitative aspects. In relation to development, the quantitative has to do with *more* people who read and are free of disease; the qualitative involves basic *transformations* of: attitudes, premises, institutions, and rules. Because the quantitative social changes were more easily visualized and dealt with (education, immunization) these have gained in precedence and attention. It is of no little importance that policies and budgets are swayed by the persuasion of the visible: the number of schools built, the number of immunizations given, the number of wells dug. As a consequence, mechanistic approaches have tended to evolve. Public health people defend their role in development: "Better health means better production," and "The degree of health of the mind and body determines in the last analysis the rate and extent of progress in all fields." Unfortunately the qualitative transformations are less immediately visible. Out of necessity we must find supporters with both wisdom and foresight.

Is it possible that the qualitative social changes have received less attention because there has been no theory-tied-to-practice for effecting them? Sociopsychological factors (attitudes) may be established as a consequence of the "tradition of experience," the passing down over the years. But they may also be formed through another more direct learning process involving life situations—a conditioning by man's status: his health, economic situation, mobility, housing environment, plus his

family and social organization. These will be referred to as "conditioning factors." Individuals, executives, decision-makers of the leader class and other special groups form, but also *change*, their attitudes when they see or are influenced by the relationship between the bases for their action and their potential economic or other conditions. This is *enlightened self-interest*. Certain attitudes can be discovered to be expensive luxuries or even dangerous! But what is the nature of these socio-psychological factors and what is their relation to man's status? How and by whom are these factors and correlations to be studied?

Science provides the method: a. to speed up experience, b. to synthesize relationships, and c. to contribute to the learning process. Applied survey research techniques are particularly appropriate in dealing with the kinds of problems discussed, especially when employed in programs of action. Obviously, the question is not whether these methods should be employed, but by whom. Our review of the past indicated the need to find a home quickly for this work. Lazarsfeld, in his "Observations on the Organization of Empirical Social Research in the United States," says that ". . . the rapid expansion of empirical work in the social sciences and the *institutional form* this takes will remain one of the outstanding features of the 20th century." (The italics are mine.) In the United States the institutional form is as yet unclarified, there being an unplanned mixture involving the government, universities, centers, institutes, and bureaus. The developing countries can take advantage of this experience. Since the common denominator of problems of development is *man*, it is suggested here that his study is a "natural" for public health.

## THE ADDED ROLE FOR PUBLIC HEALTH

Public health involves two types of action: Action *on or for* the mass of people (DDT, water) and action *with or by* the people (safety, nutrition, health education). The proportion of these two types is, of course, dependent on the stage of development but both require socio-psychological insights about man, family, and community. These insights become an increasingly more important part of health work as programs move away from the simple overt actions on or for the people. Attitudes affecting health can be changed by providing enlightenment as to this relationship. In addition, because many health problems can-

not be solved by health measures alone, it is essential to know the relationships between health and income, education, and housing. This means that public health, particularly in underdeveloped areas, must be concerned with:

1. The nature of the sociopsychological factors
  2. The relationship between the sociopsychological and conditioning factors
  3. The relationship among the conditioning factors themselves
- It is precisely these same aspects which are essential to all development, not simply health! An examination of each of these will clarify their importance not only to health but to the other programs.

### *The Sociopsychological Factors*

The understanding of the social and human equation factors has long been recognized by public health people as basic to case finding, patient management, case holding, health education, and community campaigns. The very techniques of survey-research arose relatively recently, indirectly out of biometrics. Those entering the public health field have usually done so because of interest in human problems. Mother-and-child programs, juvenile delinquency, mental health, accident prevention, and nutrition are all part of public health and each demands sociopsychological insights. Many very effective studies have been conducted which are extremely useful to these programs. However, criticism might be made that they have not gone far enough, that the approaches have been too narrow, and that we have not considered the matter of leverage. For example, studies have been made to learn why the Indians don't boil their drinking water, but few or no studies have been made to learn why the larger community and its leaders have not promoted a co-operative project of running a pipe to a mountain stream. The leverage of the leader class is important and is something which will be dealt with increasingly as a consequence of placing more emphasis on the single objective of development and the feedback of our data for this purpose.

It is not simply a matter of considering the public "they" but, perhaps more important, the administrators of programs, to learn how to better utilize employee efforts which are being directed toward the public's health. It takes little imagination to see a new hospital about half-built, on "greatly needed" borrowed capital, next to an older hospital only half-occupied because of the resistance and inability of the rural folk

to go to *any* hospital; the old hospital run by a doctor, trained through technical assistance, who still allows the practice of washing dishes under cold running water, without soap! Just what are the basic issues in this example: Technical assistance? Grants? Capital loans? Improvement in morbidity reporting? Or are the basic issues those made implicit by the following types of questions:

What are the factors that motivate health department employees and what are those that cause inaction?

What are the important public dislikes in the handling of hospital patients that may discourage facility use?

What are the incentives and motivations for regulating family size?

What percentage of those in slums would recommend that others back home do not migrate?

One of the surest understatements is that there are many problems, some controversial, all made complex by the multiplicity of factors. Surely our plate is full! But priority assignment coupled with a *gradual* widening of interests will permit the public health people to add increasingly to their role the understanding of the sociopsychological factors related to man's development. Now this does not mean a radical, wholesale reorganization which might well be opposed. In a modest way, it is possible to start with a small institute or adapt existing *servicios* to assume this new function gradually.

### *Relationship between Sociopsychological and Conditioning Factors.*

It will be recalled that the conditioning factors refer to man's status: health, income, housing. These have been so labeled because of their profound influence on the formation of premises, attitudes, and individual and group behavior. It has been our thesis that once the sociopsychological factors are studied concomitantly with the conditioning factors, relationships will be found which can effect changes in attitudes and premises. It is a matter of bringing out into the open the conflicts between goals and behavior. The principle employed is that of enlightened self-interest. A plantation owner in Chile might say, as the result of enlightenment: "Yes, I see that I have been denying myself the pleasure of having my children at home; we have been sending them away to Santiago because of the poor local schools and the dangers of

contagion. Education of the peon's children does affect the whole community."

This whole matter is not simple. New practical ways will have to be found to "enlighten," recognizing that the principle is applicable not only to single groups but also for simultaneous use with several. The insights gained in the study of groups can very well provide the arbitrate lubricant for their co-operative endeavors. In action programs involving community development, it can be the catalytic link between the community's problems and the resources of extension services, and supervised credit.

### *Interrelation of Conditioning Factors*

Quite clearly a collection of univariate distributions cannot give rise to a multivariate distribution. Health cannot always be improved by health measures alone. Housing is related to health, both of which are, in turn, interwound with education, crop yield, fertility, and mobility. It is not simply that the data are fragmented, thus preventing correlations, but that they are secured by slow, *routine* reporting procedures which, for all practical purposes, permit, not precision, but only the honesty of the classic phrase, "According to *reported* data . . ." But how do we get out of this organization-produced dilemma without each administrative group resenting the seeming invasion of their problem area, i.e., education, labor, agriculture? There are several vitiating arguments. Apart from cost, the existence of several competing survey groups is not possible owing to the severe limitation of professional resources. We are considering not the routinely reported data of departments but the type of data that can be obtained in sample surveys which are conducted to meet specific planning or action program needs.

### PROBLEMS OF EXECUTION

The philosophy and rationale of a new approach is one thing—execution is another. It might be wise to note two real difficulties. One of the most basic problems in gaining acceptance of the use of empirical methods in Latin America is that the popular Spanish meaning of the word "empiricism" is trial-and-error, rule-of-thumb, with overtones of quackery: An empiricist is a charlatan. Therefore, associated with this limitation, there is the tendency for studies to be historical, institutional, or romantic.

The following, which is really in the nature of a footnote, is not an essential argument to the main thesis but is so important to development that it must be considered. It is suggested that acceptance of the empirical approach might be possible if the studies are referred to as *estudios evidenciales*. Now, quite clearly, the changing of a word from "empirical" to "evidential" will not change cultural behavior. However, if the changed word results in the introduction of not only new findings but a new way of pragmatically and operationally viewing the world, it may have very far-reaching effects. Consider the following set of questions:

Does the absence of an empirical approach to science lead naturally to a nonpragmatic philosophy and a lack of appreciation of operationalism? Does this tend to encourage a doctrinal, ideological approach and a search for solutions to problems solely within a broad historical and "philosophical" framework?

Do students who are naturally aroused to the economic and social problems, but without alternative choices or techniques of analysis, tend to seek solutions in the metaphysical and *ideological*?

Does a lack of empiricism lead to a teaching approach, in any of the various disciplines, which tends to be historical, institutional, nonlaboratory, with emphasis on *orientación meditada*, encyclopedic memorization, and little motivation for application?

Does emphasis on the nonutilitarian value of education, on learning as a value in itself and as a symbol of elite status rather than of service, reflect a truly responsible position of the leader class at this dangerous juncture in history?

Another difficulty in promoting evidential studies is the extreme shortage of personnel. Although applied survey research can be learned by doing, the laboratory should be the country of the student. Because of the limited professional resources, we must harness well what we have. One way is to take advantage of both the research output and the example that can be set by graduate students working on their Ph.D. theses. One such student, who worked on a special case-finding problem for the United States Public Health Service and is now a sociologist in a large company in the United States, recently wrote: "I am convinced that much is gained from having graduate students work on specific problems when they undertake to write a Ph.D. dissertation. A specific

problem has two merits: It prevents the student from floundering in trying to define his problem, and it provides him with a continuing panel of critics who can assess his hypotheses and his mode of analysis of a problem. Quite apart from these two advantages is the substantive fact that such studies are worth while in terms of a world where too little informed manpower is brought to bear on the everyday problems of living a more meaningful and productive life." (The Peace Corps of the United States will be co-operating with Peru by sending Ph.D. candidates to work with the Office of Social Development, described below.)

Foreign professionals on sabbatical leave can be brought into harness without cost to the host country, except for office space and tabulation facilities. These persons, plus others provided through foundations and other international groups, can conduct evidential studies and, in the process, teach their method. Finally, contacts can be made within the country, so as to take advantage of the universities' professional manpower and to provide their students with realistic studies. The side-effects of this last are not to be undervalued.

## PERU'S PLAN

The Peruvians have recognized their expanded opportunities in public health work and have created an Office of Social Development within the Fondo Nacional de Salud y Bienestar Social. They are to be congratulated on finding a home for the concerted attempt of social science specialists to work realistically on the problems of economic and social development. There follows a translation of a general description of this new office, as promised at the outset of the paper.

### OFFICE OF SOCIAL DEVELOPMENT

#### MINISTRY OF PUBLIC HEALTH AND SOCIAL ASSISTANCE

##### A. THE HUMAN FACTOR IN SOCIAL DEVELOPMENT

The Office of Social Development assumes responsibility for the study, application, and dissemination of information related to that class of problems in which man is the common denominator, whose sociopsychological understanding is the prerequisite to change. It will realistically and effectively combine social science with modern applied survey research methods in order to permit the clarification and resolution of sociopsychological problems related to economic and social development.

## **B. FUNCTIONS**

1. Surveys and research will be carried out through projects with universities, by national and foreign scholars, by United States Peace Corps Ph.D. candidates, other interested institutions, and the Office itself.

2. The results of applications, experiments, and studies will be disseminated by the Office itself, through theses, and through reports submitted by the universities and institutes.

3. The knowledge gained will be used in the collaborative programs involving Peruvian and United States Peace Corps volunteers, and by its Field Work Units. Use can be made by others, public and private, who have been informed and stimulated by these studies.

## **C. OFFICE ORGANIZATION AND PERSONNEL**

In general, the principle of decentralization will be employed to eliminate bureaucracy. To assure continuity of the field work, maximum stimulation will be given to employees working outside the capital. "Work Descriptions" will be prepared and modern methods of supervision employed. Other employees, students in many cases, will be given contracts and trained locally under agreements with universities and others.

1. Lima Office: A combination of professionals in sociology, social anthropology, social psychology, social service, and survey research. Statistics functions (sampling plans, tabulation, etc.) will be performed by collaborating units of the Ministry.

2. Field Work Units: Each unit will be composed of a team of semiprofessionals (anthropology or sociology) and persons with training in social service plus experience in community development and fundamental education. These teams will include employees of the Fondo Nacional and volunteers of the Peace Corps of Peru and the United States.

3. Agreements with Peruvian universities and other institutions with the object of: training field personnel through special intensive programs and conducting applied research which meet the objectives of the Office of Social Development.

4. Agreements, not involving funds, with: national and foreign scholars, members of the United States Peace Corps who are doctoral candidates in the social sciences, and others who have objectives co-ordinated with the Office of Social Development.

## **D. TYPES OF ACTIVITIES**

Priorities will be given to the various types of social problems according to seriousness and urgency. The method of operation will vary according to problem, the general development of the country, improvements in techniques of study, and the availability of trained personnel. Survey research methods



will be employed in each of the three types of programs with formal or informal publications resulting. In the case of III, Rural Development work, the results will be used immediately, as is indicated in the outline and sketch describing this activity.

I. *Studies of special groups*, such as workers, employees, administrators, leader class, students.

II. *Urban Development*: special problems, squatters, slums, community organization, etc.

III. *Rural Development*: confined zones, easily accessible, where the communities are much alike with respect to language, economy, social values, etc. (*see below*).

### *Steps in Rural Development Programs (III)*

1. Preparatory conferences and talks will be given in the communities to indicate the possible results of the field work about to be undertaken.

2. Each of the communities included in the program will be surveyed, one at a time, employing systematic procedures so that a sample will relatively quickly indicate the problems of health, economic conditions, mobility, housing, attitudes, premises, objectives, and problems. This information also will be employed to make an immediate selection of the community leaders within the various social groups.

3. The information obtained above will be studied in the Lima Office. In the case of a university contract, the study will be carried out within the framework and policies established by the Lima Office. The purpose of these studies is to find the correlation between health conditions, economic, housing, and other factors; to determine the magnitude of these problems, the group attitudes, etc. This information will be employed in the campaigns of social change described below and will be made available to planners and local workers.

4. The selected leaders from each of these communities will be invited to attend a "conference" in some central place in the zone. During a reasonable period, according to circumstances, they will be given intensive training directed primarily: a. to establish lines of permanent contact and mutual understanding with persons at the local level; b. to receive from these people elementary education in health, home improvement, agriculture, etc.; c. to teach them to recognize those things which members of the communities themselves might undertake co-operatively; d. to distinguish what are the realistic limits of help which the country can give them; e. to demonstrate how their assumptions and attitudes can be factors which impede their own progress and produce misunderstanding between groups, etc.

5. The results of the investigations and research will be made available to the area functionaries in both public and private sectors.

6. The Field Work Unit personnel will help the leaders when they return to their communities to pass on to others that which they have learned. From one to two years will be necessary to complete this whole process in each zone. The unique objective of the field work is to stimulate the community to use its own knowledge and resources to the maximum, to obtain the greatest advantage possible from those local resources (public and private) which have been available, and to stimulate those individuals providing these resources so that they might do so in a more effective way. Once it is realized that the community is at the point of take-off, from the sociological point of view, it will become an attractive place for the extension of supervised credit or the granting of loans.

7. At the conclusion of these activities by the Field Work Unit the project will be turned over to the most appropriate local group for vigilance.

## SUMMARY

Of primary concern is the search for a new institutional arrangement and a rationale that will tie the various social science disciplines, including survey research, into the practicalities of the programs of development. By making *development* a focal point of attention, it becomes possible to recast roles and, as in the case of the demographers, to question the feedback of data through the processes of *decision-making* and *action* for development.

Enlightened self-interest implies that individuals and groups, when informed, in the long run will make decisions and even modify their premises or attitudes when they can see outcomes that are in their immediate or future favor. Helpful to our analysis of this process are the steps: fact-decision-action. Three sets of factors go into the process: real, money flow, and the sociopsychological. The rationale being developed amounts to purposive cultural change effected by the introduction of a studied enlightenment, not initiated by reformism or force, nor attempted simply through supplementation of technology and capital.

A perspective is briefly given.

Present institutional-organizational structures, excessive specialization, the reward systems, failures to distinguish between quantitative and qualitative social changes and an incomplete rationale have produced delays.

The Added Role for Public Health (possibly the *servicios* in Latin America) is that of obtaining and stimulating the use of understanding: sociopsychological factors, the relationship between these factors and

conditioning factors, and the relationship among the conditioning factors. The conditioning factors are first discussed on page 309.

There is a need to introduce empirical concepts and harness well the limited number of professional personnel.

The Peru Plan indicates how this work is to be undertaken in a new Office of Social Development within their Ministry of Public Health. Their rural development plan is highlighted on page 302.

*The ideas expressed in this paper are those of the writer and should not be interpreted as United States policy. Except for the translated description of the Peruvian Office of Social Development, the writer's amplifications and interpretations of the work of this Office may not necessarily reflect Peruvian policy.*

## DISCUSSION

*Dr. Linder:* With reference to Dr. Morse's paper, I can sincerely endorse the proposition that was put forward yesterday by Kingsley Davis, namely, that discussions would be much better if there could be more sociology and less statistics involved. I think the essential elements of this paper do deal with sociological concepts, which I will leave to the sociologists here to comment on, more than with statistical problems and concepts on which I perhaps can make some observations.

As I understand Dr. Morse, the essence of his paper is really the argument that economic development depends largely on sociopsychological factors rather than on just know-how and capital investment factors; that these sociopsychological factors which stand as a barrier to development can be modified by what he refers to as "enlightened self-interest"; that this enlightened self-interest can be developed by a technique which he refers to as interdisciplinary multivariate studies of one kind or another at a local community level; and that such studies will identify factors and elements of leadership which, when fed back to the community leaders, create the enlightened self-interest which can modify the sociopsychological barriers to development.

He takes the position that in this whole procedure public health should have a special role and a special responsibility.

Now let me comment a little bit on each of these elements that he has expounded as the "anatomy of development."

I think a major contribution of his paper is this point—that development is not solely a question of know-how and capital, but is equally a question of what he calls “no-do.” I think those with experience in technical assistance and developmental work can recognize that this factor of “no-do” is of equal or greater consequence than the factor of know-how.

I remember reading some time ago a book by an Indian author, Kusum Nair, entitled “Blossoms in the Dust”; in discussing agricultural development in India, she gave examples time and time again of where the know-how was available, the water was available, the fertilizer was available, the tools were available, but nothing happened because what was required to happen was contrary to the traditions, the thinking, and the behavior pattern of the people who were involved.

To dramatize this point, in a lecture she gave some time ago, the author pointed out again that the problem of agricultural development in India was the people; the attitudes of the people. She referred to the scarcity of food in India. Then she referred to the surplus of food in the United States. She proposed a way to solve both problems, which was to trade farmers. If we traded farmers, she said, she would guarantee that in five years both problems would be solved—our surplus and the Indian scarcity.

I think Dr. Morse has made a real contribution in emphasizing that the sociopsychological factors are very crucial in developing areas.

He says that these sociopsychological attitudes can be modified or changed by the development of enlightened self-interest. Here I guess I will leave the whole question to the sociologists, to advise us whether and how enlightened self-interest can be created and, if created, whether it will change the basic psychological attitudes which are so important.

Dr. Morse proposes a method or a technique for creating this enlightened self-interest. He states that it is his thesis that once the sociopsychological factors are studied concomitantly with the conditioning factors—which are health, income, and so on—that once these two groups of factors are studied together, relationships will be found which will effect changes in attitudes and premises. This is the fundamental argument of his whole paper.

In proposing these studies which will interrelate the sociopsychological factors and the conditioning factors, he encounters, of course, some problems.

The first problem that bothers him to a very great extent is the

bureaucratic subdivision of the governmental organizations in the various countries. He is proposing in his paper that we find some new institutional arrangement for going at these multivariate types of studies. He actually spells out one such new institutional arrangement which is being developed in Peru.

I can fully sympathize with his frustration at these institutional arrangements, because I was expressing a little of my own frustration at the institutionalization and stratification of our international agencies when I said yesterday that nobody was really doing very much about the basic data in vital statistics, which is the same kind of problem.

So Dr. Morse is seeking a new institutional organization of some kind that can proceed with these multivariate studies of one kind or another.

However, the core of his proposition is that certain types of multivariate studies can be done which, when fed back, will create an enlightened self-interest.

I should like to comment a little on multivariate studies, which he suggests as the key to the problem. I have had some experience with multivariate studies in our own office. We collect a great number of variables relating to health and I must say that multivariate analyses are extremely difficult. It is very nice to talk about them, but they are extremely difficult to do. We collect information on a lot of variables, such as health related to income, to education, and so on. Pretty soon, from an analytical standpoint, you find yourself going around in a circle because you have no idea which is the dependent and which is the independent variable. Furthermore, if you tabulate your material by too many variables, then the sample evaporates and you are really analyzing frequencies which are negligible in size.

In addition to this, I have found in consultation with our mathematical experts that the statistical theory of multivariate analysis is itself a very underdeveloped subject. That is, the whole question of, let us say, merely tests of significance in multivariate situations is statistical theory yet to be developed.

So this is a very difficult field. Multivariate analysis is something very easy to say but pretty hard to bring down to earth and really to get anything out of.

In addition, Dr. Morse says these studies are going to be done by surveys. I would like to make it clear that my organization does lots of survey work. I suppose we carry on more surveys in more variables than any other agency in the world. We have all sorts of surveys in all sorts of

areas doing all sorts of things. I firmly believe that surveys are the hope of the world. Making that testimony of faith, I would like to attack them as a feasible method of getting much done.

The more I look at our own survey techniques and the more I examine them critically and without pity, the more I am convinced that survey methods as used by sociologists and others are not in their infancy; they are in their embryonic stage. We have so much to learn about surveys. So much is done with them. It is so crucial that I think we might say there is a coming crisis in social science, once the problems of survey work are really appreciated. Let me give you one simple example to pin this down:

In one of our surveys we go out and ask people, "Have you seen a doctor in the last two weeks?" This is a very simple item. Seeing a doctor is a concrete thing. There is no question really of definition. It is something they did. They know they did it. Furthermore, because of the memory factor, we asked about only the last two weeks. You ought to be able to remember if you saw a doctor in the last two weeks, yet some experimental work we are doing on checking this shows we missed 20-30 per cent of the physician visits.

If we missed a large per cent of the physician visits on a simple, concrete, overt act of this kind, you can guess how much might be missed and what the survey problems are in situations where the item you are talking about is subjective, where it is not an overt act, where the definitions are a little vague, where the time reference period might be a little longer than two weeks.

Survey work is essential to all of us, but I think we have to spend an endless amount of energy trying to calibrate and perfect the methods.

I think Dr. Morse is too optimistic in stating that surveys are going to produce the feedback that is necessary to produce the enlightened self-interest necessary for development.

He wants to use surveys for employing systematic procedures so a sample will relatively quickly indicate the problems of health, economic conditions, mobility, housing, attitudes, premises, objectives, and problems in community situations. I think this is too much to ask of survey techniques in their present stage of development.

In all of this, Professor Morse points out that he thinks there is a special role for public health. In this I certainly agree with him. He differentiates in public health between two kinds of things: One, the

kinds of things that are done for people—spraying them with DDT, giving them a water supply, or providing sewer systems for them—and other things which people have to do themselves in the public health situation. Up to now, I suppose international public health has been primarily concerned with the things that it does for people, such as the malaria eradication program. But more and more, as public health gets into the areas of chronic disease, more and more, as it gets into questions of family planning, where the people have to do things for themselves within a certain framework, these whole questions of the socio-economic factors will become much more important, and then, I think, the public health agencies will begin to understand what Dr. Morse has been trying to say in his paper.

*Dr. Silver:* In a paper so packed with stimulating concepts, it is difficult to restrict comment to a reasonable time limit, but I will try. I do not like to write footnotes longer than the chapter.

I cannot help but agree with Mr. Morse's contention that what is needed is a good theory of practice and an end to the interminable debate of theory versus practice.

The description of the newly organized Office of Social Development within the Ministry of Public Health in Peru is very hopeful. Here the opportunity seems to have been created to collect and utilize demographic information that will help establish sound bases for public health and medical care development in that country.

In this particular area of my own special interest, I am concerned that integration of medical and other social needs has not always been achieved. With the best will in the world, outstanding public health problems in many instances have been dealt with as if they existed in a vacuum; and powerful tools of modern research, including the sociological ones, have been applied to particular medical problems without regard to their interrelations with social problems. Poverty, illiteracy, and pre-industrialized economic circumstances are potent public health events and need to be treated as such.

This is obviously part of Mr. Morse's thesis, but additional emphasis will not be amiss.

There is the example of priorities. The need for more doctors and more health workers is clear and unarguable, but how should they be trained? If the model for medical education is to be 19th century Europe, as in large parts of South America it is, what will these doctors

conceive to be their roles? How will they practice? What attitudes will they bring to bear on the social decisions to be made about the distribution of medical care and its financing?

On the other hand, if we succeed in modifying that 19th century medical educational system by the introduction of the newer concepts of laboratory research and orientation, how applicable will the training be to current Latin American needs?

Surely, thoughtful study of Latin American problems of medical education must lead to specific Latin American solutions in the form of unique and individual curricula, practice design, and selection of students. This is not the time to discuss these matters in detail, but, hopefully, study of the situation based on such viewpoints will stimulate future educational developments in the Latin American countries.

Another important contribution that demography can make is in the area of evaluation. I have not heard too much about this vital subject in the past two days, but I would like to know what we are going to do about the things we have planned to do after we have done them. We may decide in advance what is necessary or desirable. How do we determine that we have succeeded either in the sense that the original decision was a correct one or in the sense that the program which we have instituted has been accomplished? Secondly, are we able to apply the lessons that we learned from some of these surveys and research methods? We collect information. What do we do with it?

If I were to quarrel with Mr. Morse's thesis at all, it is because, as Dr. Linder pointed out, he is a little too sanguine. I think he is too sanguine about the triumph of right, for example. I admire this, but I am afraid that changing a word like "empirical" to "evidential" will not change one's view of the world, nor will a group or society always make decisions based solely on facts even when they are available. I mean the sociopsychological facts as well as the economic facts.

But this in no way invalidates the thesis that behavioral sciences must be involved more fully to seek out the obstacles to rational decision-making. To present the political and social interrelations of public health and medical care needs more forcefully is a hard job, but I think we can do it if we try.

*Dr. Bogue:* This is a subject that is very big, as you say, and involves quite a bit of sociology research topics that we do not know too much about now.



I think another view might be put forward and considered in connection with this paper. The research that we need is not necessarily survey research of the cross-sectional kind, where you are observing over an instant of time, but research of the longitudinal nature. Quite often in these economic development programs, experts have a fine idea and approach a village or a community with this idea which is very new to these people. The first reaction is one of rejection, or to go along with it, but, as soon as the initiators' backs are turned, they drop it, and the people become very discouraged.

Wherever the social scientists have studied this process of social change or social adoption of a new idea and have really followed it through time, not just looking at the cross-sectional thing, one of the things that has always impressed them is how long it takes.

These Iowa farmers, for example, who are producing the huge surplus of foods that they might export to India. The time between the introduction of hybrid seed corn by the Iowa State University and its use by 50 per cent of the farmers was seven years, and this in a society which is highly rational, highly sensitive to self-interest, and highly accustomed to computing profits and losses.

So when we try to get the poor people of India to use privies instead of going into the fields, or to adopt any similar practice, and they do not do it immediately, we immediately yell "cultural barrier," or something like that. However, if you go back six or seven or eight years later, you find maybe that they have not behaved much differently from the Iowa farmers. While we are making a plea for survey research, I would like to make a plea for longitudinal studies as well.

*Mr. Stavenhagen:* I was very much impressed by the internal logic of Dr. Morse's paper, and I can only hope that if this theory is put into practice, it will really turn out as well as it should. However, I am a bit more pessimistic about the possibilities in Latin America, and I think the keys to the matter are the terms "no-do" and "enlightened self-interest." I personally would like to know more particularly what is meant by "enlightened," because very often I find that in Latin America "no-do" is self-interest, whether enlightened or not—usually "not enlightened," I suppose, by modern standards, but probably "enlightened" by the standards of the people who have their self-interest in "no-do."

The fact is, with institutional development, as we know, there are

usually groups of people who are very much interested in "no-do," in the status quo, in keeping things as they are, or in building institutions on paper and then not carrying out the plans, programs, and projects. We have plenty of cases of the wrong people in the wrong places, whose great self-interest is precisely *not* to carry out the reforms and *not* to build the institutions which might serve the people, *not* to replace institutions that once served but which in the present situation do not.

I agree, of course, that we should carry out our surveys over a long period of time, and I agree, also, that we should establish evaluational research at the same time that we establish our surveys and our programs and projects for institution-building, to find out as soon as possible just why things go wrong, if they do go wrong, and just how successful they are when, in some cases, they go right. I hope they will continue going right.

*Dr. William C. Paddock:* I should like to make one comment relative to this know-how versus "no-do" by saying I do not believe we have the "know-how." There is the implication in the comments today that we do know how.

Requesting, for instance, that the Indian farmer change place with the Iowa farmer implies that the Iowa farmer has the same piece of land today, more or less, or did 100 years ago, that the Indian farmer has. This simply is not the case.

For instance, in Latin America, there is slightly more than 6 per cent of the world's arable land. In the United States there is over 26 per cent. There is, in addition, a great difference in the quality of that land.

You can take almost any production problem in Latin America, and I question whether we have the know-how to solve that problem.

Most of Latin America lies in the tropics. There has been practically no work done in tropical agriculture. I question whether today anyone could tell you how to double corn production there. In 1930 we could tell one how to double the corn production in Iowa, and today yields of 160 bushels to the acre are not unheard of in Iowa. In Honduras (where previous discussion lamented there is no demographic teaching going on) the average corn yield is 11 bushels per acre. I question whether there is anyone in the United States today or in Central America who could show you how to get average yields of 24 bushels per acre.

The applied research just has not been done. We do not have the know-how. The basic work has not been performed, and I think it

unjust to imply that there is a preponderance of "no-do" on the part of native populations. I think first there is a lack of know-how.

*Mr. Morse:* I know time is short. I should like to return to the theme, namely, the argument of recognizing that there needs to be a redress in the use of science to help solve the problems of man. In my travels, not referring particularly to Peru, I get the picture of one lone individual with social science training working off in one corner of a building, and another individual two or three miles away, each independently trying to solve some of the social and psychological problems related to development. In tackling these questions many mistakes will be made. We do not know the answers as to how best to organize this work. The argument is simply that one of the first things we need to do is build the institutions in which these people can work. Public health, because of its interests and competence, is the suggested location of this institution.