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ABSTRACT

This document is a collection of 17 papers on theoretical issues in health education presented at the Dorothy Nyswander International Symposium. The introduction, entitled "Theory and Practice in Health Education: A Synthesis," attempts to highlight some of the features of these papers and their relevance for health education practice. The papers show a diversity in subject matter and scope and include such subjects as health education in the medical care setting, community organization, and educational diagnosis. Several papers examine various theoretical concepts and their applicability to health education practice. The papers emphasize people and the predominant position they play in decisions about their own health actions. Another common characteristic of the papers is the emphasis on precision in the delineation and analysis of whatever aspects of health education are under consideration (defining health education, causes affecting the individual or group behavior, analysis of data, program planning and methods, evaluation, training, and administrative framework). Yet another characteristic of the papers is the emphasis on theory or the ways to use theory in the practical implementation of programs. (BD)

PAPERS ON THEORETICAL ISSUES

IN

HEALTH EDUCATION

DOROTHY NYSWANDER INTERNATIONAL SYMPOSIUM

SEPTEMBER 27-28, 1974

School of Public Health
University of California, Berkeley

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THEORY AND PRACTICE

IN

HEALTH EDUCATION: A SYNTHESIS

by

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THEORY AND PRACTICE IN HEALTH EDUCATION: A SYNTHESIS

The reason for our meeting here for these two days is not only to pay tribute to Dorothy Nyswander and her contributions to health education. We are here also to give impetus to her long-time concern with the theoretical base of health education and its practice. Towards the realization of this latter goal, the Planning Committee invited a number of Dorothy's former students and health education leaders to submit papers on a theoretical issue of interest to them, or one on which they have been recently working. It was felt that through such papers the new problems and concepts with which colleagues are concerned could be shared with other symposium participants and would provide useful resource materials for our discussions following this session.

Seventeen papers were submitted. They have been reproduced in the symposium document which each of you has received. I believe all of you who have had a chance to read them will agree on their consistent high quality. That feature, in and of itself, is a tribute to Dorothy for we all know the high standards she sets for herself. Her concern for quality must be contagious, causing each of us to try to do our best. Furthermore, the papers are an outstanding achievement when one considers the short time allowed between the requests for them and the deadline for their submission. And, in passing, I want to express the sincere appreciation of the Committee to the voluntary contributors for making this aspect of the Symposium a highly professional one.

The task assigned to me for today is to highlight some of the features of these papers and their relevance for health education practice.

The first outstanding characteristic that occurred to me was their wide diversity, yet all within the legitimate area of health education. The variety applies not only to the range of subject matter but also to the scope of programs in which health education has made--and is making--a contribution. It also reflects a wide repertory of skills which our present-day practitioners have acquired and are using in their day-to-day operations. For example, the papers include such subjects as health education in the medical care setting, community organization, educational diagnosis and the elements that go into it: program planning, implementation and research methodology. Several papers examine various theoretical concepts and their applicability to health education practice. ..

The work situations of the contributors also cover a wide span. They include working in primitive cultures, training, family planning, medical care, research, and teaching in colleges and universities. Examples of the variety of skills are behavioral science analytical abilities, planning, interviewing, leadership, evaluation, administration and research, etc. How much simpler it was in the old days when Dorothy was just starting in the field! It makes me feel the need for some in-service education--how about you?

A second characteristic common to the papers was the emphasis on people and the predominant position they play in the decisions about their own health actions. This idea was expressed in many forms.

D'Onofrio mentions the need for "long range people-oriented" methods and emphasizes that involvement "of people in problem-solving to facilitate learning and change" has long been the technique of health educators. But this method is far from being accepted by many other professional workers who are fascinated by the media and committed to a systems approach with its alleged "organizational efficiency, effectiveness and accountability"--in short, "the input--output mentality."

Kawata and Miyasaka in their review of American literature on Community Organization for the past twenty-five years emphasize the important role of people participating in problem solving, community planning, self-help and cooperation among themselves.

Soong states that "by involving people in planning change, resistance to new ideas can be reduced;" so does Mathews when she writes, "Man appears reasonably skillful in resisting the efforts of others to change his behavior unless he understands, consents and participates in the endeavor." Keneally emphasizes the concept by asserting that he is "more concerned in developing participation of the Indian population in programs that affect their health and/or are health-related" than in improving Indian health behavior.

The importance of people is couched in this quotation from Reynolds, "Change agents must consciously accept the responsibility to undermine those elements of society which lead to oppression and the destruction of human dignity."

Although not explicitly stated, many other papers imply the importance of the people and their participation in problem identification and decision-making. Some of these implications are expressed

in criticism of authoritarian approaches or the use of any manipulation as a health goal or procedure by stating, "The individual must be able to manipulate the system and not be manipulated by it."

A third common characteristic of the papers is the emphasis on precision in the delineation and analysis of whatever aspects of health education are under consideration. Let us look at some of these.

The way in which health education has been defined was examined explicitly by two of the papers. Klerman considers former definitions as too inadequate to include all the phenomena that have a bearing on people's health behavior. Mathews goes further and suggests that even health behavior is too limiting in its concepts and suggests the term "health-related behavior-change" as being the focus of health education. She further points out that "it is difficult, if not impossible, to identify any human behavior that is not potentially health related in one way or another." She distinguishes the health behavior that most of us have talked about in the past as being behavior motivated by a health goal and other health-related behavior as being motivated by factors other than a concern about health.

In the past we practitioners have not been too concerned with an exact definition of health education. But questioning the adequacy of such definitions as do exist and proposing more precise ones broadens one's view of the areas with which health educators should be concerned. This extension of the interests of health educators to other goals than the strictly health aspects of living reflects the philosophy espoused so eloquently by Dorothy in her paper, "The Open Society."

In our group discussions we may wish to examine these expansions of concerns and what they mean to the practice of health education. Will they make our efforts more useful to society or will our efforts become so diffuse they will have no impact?

Several of the papers point out the need to be more precise in defining the educational problem and in diagnosing the causes affecting the individual or group behavior. D'Onofrio states the importance of assisting health program "planners to define more precisely the specific responses needed from people in order to prevent, control or minimize the health problem under study."

Doak recounts the situation where the problem was seen by medical specialists as "the education of physicians and allied health personnel on the subject of hypertensive crises." When this one

problem was defined more precisely, four problems were delineated. They were "changing the physician's attitude toward delegating responsibility to allied health personnel, eliminating old and out-dated concepts about drug usage for hypertensive patients, introducing new knowledge about modern drug utilization, improving diagnostic skill in management of emergencies in hypertension." This analytical differentiation helped to improve the specificity of method used to solve the perceived simple problem.

The importance of precision in considering all the factors that enter into the diagnosis of people's present behavior was touched on by several of the papers. Kar proposes four categories of determinants of behavior, termed sub-systems, which should be considered in diagnosing the reasons for people's present behavior. These are: "1) cultural and political, 2) social-structural and economic, 3) social psychological and intra-personal and 4) environmental and situational." Mathews stresses (p.7) that not only are "perceptions, needs and actions of target individuals" necessary to the planning of change, but also "all the forces external to individuals that may facilitate or impede favorable changes in health-related behavior."

Doak, on updating a set of principles Nyswander put forth two decades ago, provides illustrations that "perceptions of the learner are essential data to be used in diagnosis and program planning." Her vignette of experiences in the medical care area indicated the universality of the need to take account of the perceptions of the learner in diagnosing causes of present behavior and planning for behavior change.

Reynolds points out that the ways each individual views himself and the world (from his own unique position) are essential data in planned change. Radelfinger uses a psychological cost-reward analysis framework to indicate the individual's perception of the comparative level of reward that would result from any specified health or other behavior. Both of these latter papers indicate the complexity of human behavior and give detailed insights into some of its determinants as delineated by Kar.

The need for precision in the kinds of data obtained through test instruments is pointed out by Krishnamurty, Fodor and Glass. They propose a practical method to determine what test items are needed and to demonstrate how the method applies in venereal disease education. Their emphasis on the decision that the young must make and the specific information and attitudes these youths need for each decision forcefully illustrate the importance of precision in health education diagnosis.

The papers also emphasized the need to be precise in the way the programs are planned and the methods that are used. All the papers state, or imply, that health education is a process in which the consumer plays a major role. Keneally, Soong, D'Onofrio and Doak specifically mention that the planning process is a potent educational method to facilitate learning and change. Doak elaborates on this process as it applies in medical care. She emphasizes a point made by Dorothy in an earlier paper--that the "personality needs, perceived threats and protective reactions" of the people involved is an essential element to be considered in program planning. Reynolds and Radelfinger go into considerable depth on the feeling tone of consumers in their interaction with health personnel, and how failure to take into account the perceptions of the client-consumer can easily thwart the results from physiological treatments.

Kar develops five models of intervention method and indicates the precise conditions under which each should be employed.

Many of us have thought of group dynamics as embracing procedures to improve the relations between people and facilitate change. But Ross and Mico point out that the technologies of group training need to be varied according to the goals of the training. They specify more precisely that individual change, or personal growth, organizational development, and board training are three distinctive training goals and require specific competences and skills for each situation.

The precise analysis involved in program planning leads many of the contributors to emphasize the possible negative effects of the way in which health services are given. They, therefore, stress the need to educate the providers of health care as well as the recipients. Simonds writes, "Health education must be planned and carried out among the major providers who have responsibilities for the health of the population." Doak is more emphatic with "The public health educator who feels that continuing education is a separate field narrows the focus and interrupts the continuity of the educational cycle. The danger lies in that the health educator may stop short of where the action may need to occur, the health care provider." Klerman, writing about family planning says she wants no part of health education in that program "if the health educator's task is limited to individual counseling and group discussions and is not also responsible for determining that the clinics are run by sympathetic staff, are easily accessible and have adequate supplies." She also believes administrators and clinicians need "prodding" (education) from health educators to take care of these matters.

Reynolds, Radelfinger, D'Onofrio, Kar, Soong and Keneally all imply the need for education of the providers of health services by

describing some of their perceptions of the professionals which are at odds with those of the recipients of service.

Although many of us in the past have worked to make services more acceptable and satisfying to the public, we never explicitly talked about "educating the provider." We have come a long way. But acceptance of this responsibility implies some unique skills and methods which you may wish to discuss in some of your groups.

Evaluation is another area in which the papers provide more precise analysis. Health educators have long extolled the value of evaluation but, other than lip service and a few publications on its importance, as Klerman points out, the number of evaluative reports is quite small. Nevertheless, Figá-Talamanca, Doak and Klerman all state there is a high current interest in evaluation. In fact, Doak suggests that "the risks lie more in the concept (evaluation) being oversold than in stimulating interest in the subject." Among some administrators and workers the slogan is, "Let's evaluate everything." There is a great danger of unrealistic expectations among the medical group of what health educators can do in evaluation.

Klerman, Figá-Talamanca and Doak are in agreement on the principles enunciated by Nyswander in 1956 that "Evaluation of educational programs and methods by staff provides a supporting structure for introducing changes in content and methods"--in other words, a procedure which "permits mid-course corrections." But as Figá-Talamanca warns, others may think of evaluation as having quite a different purpose, particularly those who perceive it as concerned exclusively with the outcomes of an educational program, or the effectiveness of a single method. She writes, "Unless.....evaluative findings are stated with appropriate caution, there is potential danger for misinterpretation and abuse." "....Evaluative research findings can be a powerful instrument in the hands of the decision-makers and politicians"--particularly those who wish to reduce resources allocated to education. D'Onofrio implies the same precautions when she states "that increasing administrative reliance on computerized data processing, cost-accounting, and neatly Pert-ed program flow charts.....influence notions of how educational programs ought to be conducted" and "since administrators control the purse strings,.....health educators often find themselves.....defensive in (justifying process evaluative activities and) the need for multi-faceted, long-range, people-oriented educational approaches."

Klerman takes issue with the limited perspective that some evaluative efforts have used in which they consider only "the health education aspects of the program" and insists that health educators must be concerned with the planning of all aspects of the program and its administration from the point of view of the user and not just with the explicit educational efforts. In her words,

"Analyzing in terms of the client only, rather than also looking at the provider, has contributed to the negative results of a majority of evaluations of health education efforts."

In Figá-Talamanca's contribution on training, she acknowledges the usual dictum of the need for "explicit statement of goals in behavioral and measurable terms." But she points out that most training goals are vague just as are many of our other truly educational goals such as "helping others to help themselves and in achieving those objectives which they themselves have selected." (D'Onofrio)

Despite the vagueness of the goals of training, Figá-Talamanca specified six phases of a training program and drew up a detailed schema of what should be evaluated in each phase--the type of data that would be needed, the source of the data, how they would be collected, the use to be made of the information once it was gathered, and the skills needed to perform the necessary evaluation. This precise schema suggested to me that we need to do more of this kind of analysis in connection with all the various educational functions we undertake. Perhaps for each of the practical subjects you discuss, you may wish to analyze the dimensions of the program that could be subjected to various kinds of evaluation.

Only one paper--Mullen's and Reynolds'--was devoted exclusively to research. Others--Kar's and Mathews' to name two--discuss areas of investigation. But Mullen and Reynolds concentrate on a description of comparative analysis or "grounded theory" as a useful method of research for health education. It is essentially an inductive method concerned with "the integration and extension of theory"--avoiding a "preconceived theoretical framework" into which those who are being studied must fit and permitting relationships to emerge from the statements of the subjects. The elements involved in comparative analysis are described and its methods and outcomes contrasted with the usual behavioral science approaches to research as mentioned by Kar and implied in the areas of inquiry described by Mathews. Those of you who are intrigued by the techniques of comparative analysis may wish to delve further into this subject by reading some of the references given in the Mullen-Reynolds paper.

One aspect of health education to which many of us have not given the attention it deserves is the kind of administrative framework that should be developed to support and implement sound educational programs. Simonds has laid out a comprehensive administrative design for health education throughout the country. He outlines four settings from which health education leadership might flow. They are: 1) educational institutions, 2) health organizations, 3) health care facilities, and 4) media organizations. He indicates that health education in these settings should function on local, regional, state and national levels of government. I suggest you

consider how such an administrative framework would facilitate your own activities and what administrative changes might be required within your organization to fit into the scheme outlined. Also, what changes you would suggest in the design he has developed.

Up to now, I have discussed the increased emphasis on precision in analyzing each phase of educational intervention and concepts to be considered in the analysis of the education transaction. One which I have not mentioned is the factor of relative status between the educator and the individuals or groups he is trying to reach. This concept appears under various guises in several of the papers. Nyswander's statement of the principle as quoted by Doak is, "The social distance between the educator and the group taught is a significant factor in education." Keneally describes the status problem as it has operated, and continues to operate, in the American Indian culture. He, along with others, expresses the situation in terms of power. He points out that when "two or more societies confront each other through selected members," the intensity of the conflict will be increased as attention is paid to who possesses the power. He describes the "dependency syndrome" as an "outgrowth of the kind of paternalism" that has characterized "the long association of the Indian people with the dominant culture." This feeling of dependency brings with it a hopelessness and real reluctance to change.

The same phenomenon is described differently by Reynolds and D'Onofrio. The former states, "Too often health professional and other agents of social change have conveyed to the public, ... a clear statement of value which places the professional in a position of superior worth." This status differential is accentuated when social change agents are dealing with disadvantaged groups. Too often the latter are described as "apathetic, disorganized or stigmatized" in other ways as explanations or rationalizations for their inability to change the conditions of their daily lives or respond to health advice and education.

D'Onofrio states that technologically-oriented workers tend to label people as "hard-to-reach, apathetic or otherwise abnormal" when their responses to informational stimuli are not as anticipated.

Radelfinger describes this problem as it applies in the sickness-role and the doctor-patient relationship. He states, "Anyone who has been a patient in some hospitals should be familiar with the emotional deprivation involved in surrendering one's individuality and familiar possessions to the impersonality of the hospital gown and routine." This certainly reduces one's status and encourages dependency. Likewise in the doctor-patient relationship "the physician approaches the situation with power, confidence and a high CL_{alt} (comparative level of alternative behavior)": the patient comes

with little choice.

All of these discussions of relative status are primarily concerned with who possesses the control, the power, and the decision-making authority, the purposes for which such power is utilized, and how the balance of power may be shifted. This treatment of status raises the question--should the present vogue of consumer education be more concerned with the goal of reducing these perceptions of control and power than with the substantive material on the products and services people consume? If the former, then maybe the advice of Klerman is timely: she writes, "More can be accomplished by lobbying and through the ballot box than by small-scale health programs."

Doak considers the status of the health educator in the medical arena. She is quite optimistic when she says, "The social distance between the health educator and the physician may be less than it appears." She points out that credibility of the health educator derived from competent adaptation of health education principles and skills has reduced the status differential between physicians and health educators.

Another characteristic of the papers is the emphasis on theory or the ways to use theory in the practical implementation of programs. Some fifteen years ago Beryl Roberts, in her SOPHE presidential address, pointed out that we in health education had not been consistent in efforts to conceptualize the basis of our practice, to document our experience or to synthesize the research of our professional colleagues into some theoretical framework for practice and research. That situation has continued to exist, more or less, but in my opinion, the contributors to this Symposium have made giant strides toward its improvement. Mathews, Mullen and Reynolds in their own ways reiterate the diagnosis by Roberts but make different contributions towards overcoming the deficiency. Mathews deductively arrives at a theoretical "core of concerns in health education" which she proposes as a coherent and provocative framework to guide research and practice. She also describes the implications of her framework for curriculum design. Mullen and Reynolds use the lack of a consistent comprehensive and unique theory as a basis for describing the aforementioned research strategy which they claim has strong linkages to health education practice.

Reynolds, Radelfinger and Green examine some conceptualizations and research of other behavioral scientists and the application of their formulations in health education. I have already mentioned the insights provided by the analysis of Reynolds and Radelfinger.

Green examines the diffusion and adoption of innovations formulation as it applies in the field of smoking. His original paper,

prepared for the Conference on Applying Behavioral Science to Cardiovascular Risk, is much more comprehensive in scope than the segment included in this document, but because of space limitations, only part of it appears in the compendium. He compares the diffusion literature and general communication theories as they apply to change. His treatment of the adoption of smoking as an innovation that follows the diffusion S-shaped curve is a fascinating research finding. It reveals clearly the importance of social influence regardless of whether the innovation has positive or negative health implications.

Although Kar's contribution might not be labelled strictly theoretical, his model for examining the behavioral determinants of family planning behavior and his various innovation procedures constitute a synthesis of many theoretical concepts into an operating procedure. His emphasis on the multiple causation of behavior, also emphasized by Mathews, is a scientific fact too often overlooked in overall health program planning by administrators and others who influence decisions about health education.

D'Onofrio gives particular emphasis to this latter point and then recounts a most unique use of the simple S-R bond theory of learning in her education of program planners into the complexities of the health education process. Throughout her paper she demonstrates the educational dictum of "Begin where the people are." By starting with the more simple theoretical concept and letting others--administrators and students alike--discover for themselves the limitations of their own formulations, she affected changes that had not been possible with other methods. She summarizes this point by saying "theory provides more than a pattern for our own practice, ...it also can serve as a tool to question and evaluate the practice of others."

Only one paper dealt explicitly with the ethics of planned behavior change, though several papers dealt with the topic without naming it as such. Kar, after examining the position of several authors who have considered the subject, states his own belief that "consumer participation and informed consent of those whose behavior is to be changed through a planned intervention constitute the two key criteria" of ethical decision. D'Onofrio challenges our ethics when she questions whether "our approaches are primarily targeted to result in health action rather than health education" goals--this latter she defines as "helping others to help themselves in achieving those objectives which they themselves have selected." Maybe Reynolds didn't plan that his description of his job to his teenage daughter would be used as a statement of ethics, and if I misunderstood him, I apologize--but here is what he stated, perhaps all too briefly, in two sentences:

1. "Health education as community development is a subversive activity, and

2. Community development is trying to change the world without breaking it."

These different statements suggest that we should accept the challenge of Kar that the remaining years of this decade be the years of Ethical and Value Clarification of the Health Education Profession.

These seventeen papers offer a wealth of content. They might have been presented to you (by someone else) with different emphasis and the inclusion of many valuable ideas I have omitted. The concepts I have chosen derive from my own training and experience--my background has affected my synthesis. I recommend your own reading of the papers.

Before closing, let me depart briefly from my main task and make a few personal observations. Simonds wrote in his paper, "Health education is an idea whose time has come." To Dorothy and some of the others of us who have labored long in the profession, it seems a long time coming. With Dorothy's and my association for more than four decades, we enjoy remembering what it has been like. These sixteen papers have little in common with the health education literature of the day when we came into the field years ago. They included no "cookbook" recipes on how to do our jobs with titles such as "Stepping Stones to a Health Council," "Health Education of the Public--A Practical Manual of Technic," "Ten Ways to Better Booklets," and the like.

Doak reminds us that less than twenty years ago most health educators were in local health departments. Look where they are today! Indeed, we have come a long way, Baby!

I doubt that Dorothy, in her wildest dreams ever conjured up the favorable situation in which we find ourselves today. I know I didn't.

And this poses the question: Will health educators meet the challenge?

I believe Dorothy is betting that we will.

THE HEALTH EDUCATOR: BUILDING CREDIBILITY

AS A

CHANGE AGENT IN A MEDICAL PRACTICE SETTING

by

Cecilia Conrath Doak, M.P.H.

THE HEALTH EDUCATOR: BUILDING CREDIBILITY AS A CHANGE AGENT IN A MEDICAL PRACTICE SETTING

by

Cecilia Conrath Doak, M.P.H.

BACKGROUND

Studies of organizations and organizational change have been reported in the literature for many years, and the process of planning for change has been examined from a variety of viewpoints, particularly psychological and sociological. It is interesting to note, however, that the focus on the factors that may facilitate acceptance of the change agent, especially credibility, has not been reported to any extent in the literature. To illustrate, Rogers[1] devotes about two pages to change agent credibility in a several hundred page volume with most of the data limited to extension agents working with Columbian peasants.

It seems highly desirable, therefore, to explore the variety of ways in which the health educator as a change agent can build credibility in a setting less familiar than the traditional public health agency... the medical practice setting. The demand for health education expertise in the medical practice setting may increase at a greater rate than the health educators may be able to respond to the demand. Employment by Professional Standard Review Organizations, Health Maintenance Organizations, private health care review centers, as well as the more traditional institutions and professional societies reflects a growing realization of the impact possible through the application of sound educational principles.

The point of change agent intervention addressed in this paper is the medical practice setting, which is the continuing medical education phase of the lifelong process of learning. This is the phase now undergoing sweeping changes. The need for guidance in educational competency is obvious. Formerly, when the efforts in continuing medical education were directed toward the production of information, the educator's role was minimal. But now with the focus on the application and utilization of knowledge and skills, the educator's role is highly strategic. Of all the changes occurring, the most significant one for health educators is the recognition of education as a process.

The process consists of identification of the problem, analysis of what is needed to correct the problem, design of an educational strategy to solve the problem, implementation of the program, and the evaluation of results. The process, indeed, is identical to the planning and development of educational programs carried out by health educators for many years. Only the setting of medical practice is different. The basic premise is that education can improve performance, and through better performance, health care improves.

The recent World Health Organization Report emphasizes the problem orientation to continuing education for physicians, and stresses its importance for "maintaining and improving competence, not merely to impart knowledge and to spread information".[2]

PURPOSE OF THIS PAPER

The purpose of this paper is to update the application of the educational principles cited by Dorothy Nyswander eighteen years ago, to illustrate how the technical competency of the health educator can build credibility in the medical practice setting. Credibility is a product of personal qualities, knowledge, skills, and abilities in a chosen field, and acceptance by co-workers.[3] The change agent is, necessarily, a marginal person with one foot in each of two worlds. This paper is written with the conviction that better understanding of the ways of applying educational principles in the medical practice setting will build the confidence of the health educators to place "one foot in a new world". It is the technical competency aspect of credibility that is described in this paper.

This paper cites each of the six principles described by Dr. Nyswander, and then offers illustrations of how these principles have been applied by health educators in the medical practice setting. The functions performed by the health educators have varied from consultation to professional societies to direct program operation in the manner most familiar to health educators. Of all the functions performed, the interpretation of the educational process is probably the one function most predominant in the illustrations presented. At the supervisory or administrative level, this is probably the most critical function, since it is through understanding of the process that administrative sanction makes it possible for other staff to carry out the educational program and, in turn, build and strengthen credibility.

A PERSPECTIVE

Many changes have occurred in the field of health care delivery since Dr. Nyswander gave her address on EDUCATION FOR HEALTH--SOME PRINCIPLES AND THEIR APPLICATION[4] at the Health Education Conference at the School of Public Health, Chapel Hill, North Carolina, on March 21, 1956. Her illustrations were relevant and valid to that period in history. Let's look for a moment at that time: the health department was considered the key public health agency, oftentimes the only public health agency; the health educator was concerned about helping board members and staff of voluntary health agencies see their goals through the same eyes; the health educator was diligently working on more effective ways of increasing participation in case-finding efforts for communicable diseases, organizing health councils, committees, etc. Remember those days?

The legislation for Comprehensive Health Planning and Regional Medical Programs was still nine years away. B.F. Skinner made headlines with his programmed learning and teaching machines. Language laboratories were just coming into existence. Kellogg reported on a re-survey of eighteen medical schools which showed increased use of participative teaching methods, a dearth of teachers who were practice-oriented, relationships frequently strained between "town and gown", and postgraduate education was perceived as an irritant. Russell Sage Foundation had published the Lyle Sauders' study on Cultural Difference and Medical Care on Spanish-speaking people in the southwest. Health educators were talking about Health, Culture, and the Community, Ben Paul's classic case studies of public reactions to health programs.

Terms such as peer review, standard-setting, criteria development, utilization review, problem-oriented medical records were only words, a glimmer in the eye of a few forward-looking people. They were concepts, awaiting development.

And what does the world look like today? Quality assurance of medical care is on the agenda of most professional meetings, either formally or informally. Social controls such as relicensure and continued membership in professional societies are being studied and debated in almost all professional circles. Accreditation of continuing medical education is a reality. The public is back in the picture in a somewhat different role; now the quality of medical care is a mutual responsibility of consumers and providers. Patient education is soon to become a reimbursable item in hospital care. Twenty-one different guidelines for setting standards of practice have been published by the Inter-Society Commission for Heart Disease Resources.

Consortia are big news, with the health services/education activities linking health care delivery and the educational institutions into a viable means of preparing and maintaining health professional competency. Sharing of resources is going on in most forward-looking communities. The sacrosanct of clinical tools, the medical record system, is undergoing rapid change with positive results, purported from sharing it with patients as an educational tool.

Not all the change is fait accompli; resistance and negative reactions are common, but the climate of society seems to support now the participative methods and the process emphasis, which have long been part of the health educator's orientation.

The exciting areas for health educators are the planning on a long-term continuing basis for behavior change, rather than limiting efforts to episodic educational experiences; the design of learning experiences based upon the kind of change desired, and identification of levels within practice settings where change is needed; the development of educational objectives derived from the data base of performance and practice needs; the application of participative methods in group problem-solving to develop standards and criteria; the development of evaluation strategies which measure physician learning; the design of reinforcement and renewal experiences when need indicates. These are only some of the exciting areas; the horizons are endless when the partnership role of the patient in the medical transaction is fully spelled out.

APPLICATION OF EDUCATIONAL PRINCIPLES

Learning the culture of medical practice is not unlike the health educator's approach to learning the culture of other groups: i.e., the belief that values, attitudes, and feelings are inherent among medical practitioners just as they are among other groups of people. No assumptions are valid until tested, and the cues for acceptance and/or rejection operate as they do in other groups, sometimes visible, sometimes invisible. The margin for error is equally narrow as it is with other groups of people.

TWO PROCESSES IN PROBLEM-SOLVING

The first principle Dr. Nyswander stated is: IN EVERY PROBLEM-SOLVING SITUATION THERE ARE TWO MAJOR PROCESSES AT WORK: ONE, A PROCESS WHICH IS DEPENDENT ON THE DYNAMIC IMPACTS OF PERSONALITY NEEDS, PERCEIVED THREATS AND PROTECTIVE REACTIONS OF THE MEMBERS PRESENT.

The first dimension of the problem-solving situation is readily recognized by physicians. Task-orientation in patient care is very familiar. The clustering of several aspects of a problem or a task may be an important point of difference, however, between the orientation of the health educator to a "problem" and that of the physician. What the physician may see as one problem, the health educator may identify as several quite different problems or tasks.

An illustration may clarify this point. The Professional Education Committee of the National Task Force for High Blood Pressure Education Program saw as one problem or task: the education of physicians and allied health personnel on the subject of hypertensive crises. As the health educators raised questions for specific illustrations of this "problem", it became clear that the point the Committee intended to make was that many patients with hypertensive crises can be treated successfully without special facilities. The provisions are: the physician is trained to recognize the emergency, understands the pharmacology of anti-hypertensive drugs, and is supported by nurses and/or allied health personnel skilled in moment to moment monitoring of the patient's status.

In this illustration there are four educational objectives which can be derived from this educational "problem": changing the physician's attitude toward delegating responsibility to allied health personnel; eliminating old and outdated concepts about drug usage for hypertensive patients; introducing new knowledge about modern drug utilization; improving diagnostic skill in management of emergencies in hypertension. The implications of these objectives for the design of quite different teaching methods becomes obvious.

The second dimension of the problem-solving situation is understood more often in retrospect than it is viewed prospectively. The health educator brings an understanding of the dynamics of the group process and, thereby, helps physicians begin to cope with, and plan for, the feeling level and tone for problem-solving conferences. The emotional component of performance review and criteria setting give ample evidence of the physicians' sensitivity to the perceived threats and protective reactions of the group members. The success of the health educators in California in the conduct of medical audit workshops exemplified the credibility established by the health educators in a collaborative relationship with physicians in private practice. The neutrality of the role of the health educator, and the recognition of expertise in the field of health education are two attributes now contributing to the trust and confidence felt by both the physicians and the health educators. The integrity of the health educators' performance in the medical audit workshop program continues to open new areas for collaboration in the future.

USE OF PERCEPTIONS IN PLANNING

The second principle is: THE PERCEPTIONS OF THOSE WHO ARE TO BE TAUGHT FURNISH IMPORTANT DATA TO BE USED IN PROGRAM PLANNING. There is a tendency to view medical practitioners as though they were a homogenous community, with similar experiences and values. This is a high risk position to assume, and is likely to create vulnerability, rather than building confidence and credibility. In the early days of the Cancer Control Program in the Public Health Service, the Chief of the Program, Dr. Lewis Robbins, conducted regional meetings of general practitioners and specialists to learn their perception of the twenty-year outlook on cancer control. Taking five major sites of cancer, he asked general practitioners, internists, surgeons, pathologists, gynecologists, and radiologists, to give a numerical prediction on the probability of bringing cancer of each particular site under control in the next twenty years.

The results over the country were consistent, with the optimists being the general practitioners, and the pessimists the radiologists, each reacting from the nature of his clinical experience. The general practitioners have the key position in usually being the first physician the patient sees, and perceiving himself with responsibility for total care. On the other hand, the radiologists are usually the final physicians called to treat cancer patients, and their perception of what can be done is limited to their bleak experience with terminal illness.

For identifying problems of motivation, interest in cancer, as well as conviction in preventive measures, such an exercise was invaluable to differentiate the approaches and strategies necessary to plan an educational program. Interest and motivation may be at quite different ends of the spectrum within the practitioner community. Expectations of what can be accomplished influence the quality of and extent of participation in continuing education experiences. When the perceptions of end results, which the physician is likely to have with his clinical cases, is brought into the planning process, then the physician's relationship to the problem in which the health educator would like to interest him may become more accessible.

Because of the importance of this principle, one additional illustration is offered. The process of solving problems in practice is not often viewed as an educational experience. Usually the term, "continuing medical education" has been associated with acquisition of new information. As one practitioner remarked during a continuing

education planning meeting, "are we here to solve problems or to learn something?"

It may be useful to offer a distinction between those continuing education efforts which advance the individual to a higher level of knowledge and expertise in his specialized field of interest, and those educational efforts which direct his attention toward a given deviation or problem. Society has need for both kinds of efforts. The former efforts are usually self-accomplished, and move the individual toward a richer sense of life fulfillment. The latter efforts are problem-oriented and are the ones which receive attention from external groups. The two efforts are not mutually exclusive, and indeed, the closer the congruence, the less of the problem of protecting the public interest. At this time, however, there are two important differences: components for solving problems in practice are often related to institutional and referral system procedures, and are not usually self-motivated.

There are notable examples of when the educational process has been considered as solving problems in practice, but they do not tend to be reported as educational experiences. One of the earliest widely applied efforts was the use of expert and peer judgment procedures to investigate causes of, and bring about a reduction in, the maternal mortality rate in this country. From the early 1930 publication of standards for maternity care, the following twenty years saw publications in national and state medical journals devoted to "maternal mortality studies". Yet, if one asks MEDLARS, National Library of Medicine, for a computer print-out on continuing medical education, not one of these reports will appear.

Another effective approach used in Philadelphia was the combined patient and physician interview system to obtain an "honest evaluation of the delay period in pelvic malignancy and to properly assess the responsible factors".[5] Both the maternal mortality study approach and the later model of the Philadelphia pelvic malignancy study approach were successful in reducing the mortality picture. But perhaps the only problem-solving approach generally accepted as "educational" up until a few years ago, was the consecutive case conference as developed in the field of tuberculosis and later applied in cardiovascular disease. In all of these examples, patient care data examination, or the search for validation of the data, was the basis for the educational experience.

Broadening the perception of education to include the problem-solving process is of strategic importance in selecting medical practitioners to serve on national review committees and Program

Advisory groups. Many a forward-looking proposal has received a negative decision because it was presented in problem terms, which makes sense to educators but which did not reflect the committee's view of "good education". Having a session on educational philosophy included in the orientation of new committee members has helped maintain congruence between Program goals and peer group advice.

PLANNING PROCESS HAS CHANGE POTENTIAL

The third principle is: THE PLANNING PROCESS ITSELF IS AN EDUCATIONAL METHOD WHICH HAS THE POTENTIALITIES FOR STRESSING THE MAJOR PSYCHOLOGICAL FACTORS WHICH BRING ABOUT CHANGE. It is in the application of this principle that the factors of motivation, ego, and group-goal involvement can be understood most clearly.

In medicine a real strength lies in the high value placed upon peer group judgment of performance. Attitudes of professionals toward each other plus the preference for the professional groups to discipline their members, exercising both actual and potential control, are assets which the health educator can build upon in the planning process.

One of the early examples of applying this principle was the Louisiana Academy of General Practice study of physician interests, which later evolved into program. Local physician groups became the nucleus for planning continuing education programs, with the focus entirely on local physicians deciding on the subject areas, the details of the scheduling, and the selection of the faculty members to conduct the sessions. The last session became the planning session for future courses. This was one of the first experiences of a health educator working simultaneously with both a professional society and a medical school to link together the "change agency with the client system".

Another example of using peer group judgment in the planning process is the Bi-Cycle concept developed by Dr. Clement Brown.[6] The term, "bi-cycle", describes the linkage of the cycle of patient care with the cycle of educational experience, hence the term. First instituted in late 1966 at Chestnut Hill Hospital, Philadelphia, the process consists of involving the physicians on a hospital staff with each of the steps of problem-solving, from survey of opinion of diseases causing maximum disability in the hospital to a re-audit of records following an educational program. The major strengths of this approach lie in the physicians themselves at the department level establishing criteria for minimal and optimal care levels, reviewing performance to determine how well the departments are

meeting criteria, and then instituting the kinds of changes indicated.

The step which is so critical in this process; i.e., the distinction between deficits in performance requiring isntitutional change vis a vis individual behavior change, sets the direction for whatever additional learning experiences are needed to improve the situation. Some changes are procedural, policy, or administrative in nature, requiring different kinds of involvement in planning for change with different people. The first, and to the author's knowledge, the only paper in the literature devoted to this distinction written from an educator's viewpoint was presented last year at the Regional Medical Programs Conference on Quality Assurance of Medical Care.[7] What an opportunity for the health educators who have already established credibility in the medical audit program to amplify and clarify the educational process in the medical audit!

Maintaining interest in the design of the learning experiences following the problem identification is another function health educators have performed. There is a hazard in the "bi-cycle" approach when the energies and interests are so consumed in the problem-analysis stage and the review of the data that the next stages in the learning process are treated more casually than they deserve. The credibility of the health educator is enhanced by the perseverance shown in seeing the program through to fruition.

COMMUNITY ORGANIZATION IS A COMPLEX PROCESS

The fourth principle is: BRINGING PEOPLE TOGETHER TO WORK ON PROBLEMS (OFTEN CALLED COMMUNITY ORGANIZATION) IS A COMPLEX PROCESS INVOLVING: (1) ANALYSIS OF THE VALIDITY OF THE OBJECTIVES FOR THE GROUP; (2) RELATION OF OBJECTIVES TO THE VARIOUS LEVELS AND KINDS OF POWER STRUCTURE IN THE COMMUNITY, AND; (3) THE CONCEPTS OF LEADERSHIP HELD BY PROFESSIONAL WORKERS. Of all the principles described by Dr. Nyswander, this one appears to offer unique and singular opportunities for the health educator. And probably of all the principles, this one is the most likely to offer opportunities for the health educator to build credibility in the medical setting. The sense of readiness being expressed by other health professions has created a climate of positive support. It is in the context of interprofessional education that the understandings and skills of the community organization processes become especially relevant.

With the proliferation of occupations in the health field, now counted in the hundreds instead of by the dozens, and the increased focus on "team" development, the health educator can help develop and mold

realistic expectations of what can be accomplished through a multi-discipline or interprofessional approach. The language used to describe the "team" with the physician serving as "captain" has in itself set the stage for problems of hierarchy and power struggles. The term "non-physician" workers or "paramedical" underscores the status problem. Gradually, however, there are significant changes occurring to make possible dynamic, viable, interprofessional relationships.

Beginning with the Coggeshall Report on medical education about ten years ago,[8] increasing attention has been given to developing an awareness of the hazards of isolated professionalism in the medical schools. Since that time many papers have been written, and speeches have been given at national and international meetings extolling the virtues of team work. Yet there appears to be a wide gap between the philosophical sanction and the reality of the working world. As recently as a year and a half ago, out of 575 projects concentrated on manpower development in regional medical programs, only 25 described themselves as a "health team approach".

One approach which merits replication in several different designs is the one carried out under Dr. George Miller's direction eight years ago at the University of Illinois. In an effort to identify what professions should learn, how they should learn, and whether they can learn together, he established an Interprofessional Task Force composed of dentistry, pharmacy, medicine, nursing, and physical therapy to work in a community for several months to gain answers to these questions. In this case the health educator served as the project officer for the contract, designing the terms and conditions under which the work was carried out. A major issue identified by the Task Force was the communication of attitudes and values rather than the instruction about health changes. The important finding of how to deal with professionalism could no longer be handled by "delivering neat packets of information to needy practitioners"[9] New ways of working with each other, not merely debating strategy and tactics, had to be found. The Task Force reported a great need for expertise in education and understanding of the dynamics of interprofessional relationships.

There are many aspects of interprofessional education and team work which need amplification, but two aspects which are receiving national attention and are particularly significant for health educators will be cited. It is the understanding and skill in applying the analytical process for development of objectives, the levels and kinds of power structure in the community, and the concepts of leadership as studied by health educators which are the essence of the health educator's expertise in these instances.

The one aspect is in the difficult area of curriculum design as it is being studied by several national allied health professions through private foundation support. The National Academy of Sciences has set up a new Committee on the Interrelationships of Educational Programs for Health Professionals, and has already sponsored one conference to try to develop guidelines for the design of educational programs which will facilitate interprofessional collaboration among all health workers. This is a beginning step in a journey of a thousand miles, but it reflects more than just an awareness of need to begin to tackle the dynamics of change in professional preparation for health manpower.

The second aspect is in the consortia development of health services/educational activities. These are instruments of cooperation and coordination between and among health facilities, consumer interests, health personnel, and academic health institutions. When the Carnegie Commission report on Higher Education and the Nation's Health came out in October, 1970, the one recommendation which skyrocketed to fame was the area health education center concept. The AHEC was just one in a series of recommendations, and had not been given special attention in the report. Apparently, it was an idea "whose time had come", for it triggered federal support from several sources within a short time. The role that health educators have played in interpreting to medical practitioners and administrators is key to the strategies and success already experienced in this program. Credibility because of expertise in applying the principles of sound community organization, has been built by health educators at a number of different levels of program operation.

In summary, this principle illustrates the heart of the educational process, since it includes objectives, their relationship to the gate-keepers of power and authority, and perceptions of professional workers about leadership. The illustrations given are based upon the "community" of health workers and the medical practice settings in which health care delivery occurs. It is the way that the health professionals organize themselves for problem-solving that the author believes needs attention.

The fifth principle is: THE SOCIAL DISTANCE BETWEEN THE EDUCATOR AND THE GROUP TAUGHT IS A SIGNIFICANT FACTOR IN EDUCATION. Social distance between the health educator and the physician may be of less importance to the building of credibility than it first appears. The social distance within the physician community between family practitioners, specialists, researchers, and administrators may be a greater problem than between the health educator and the physician.

Another way of looking at this principle is the view that what the health educators and physicians have in common may be more significant than their differences. Both are highly educated, belong to a professional field which is based upon a helping relationship, have received training in scientific inquiry, and want to believe that decision-making can become a rational process. While the educators and physicians stem from different orientations to the helping relationship, social concerns permeate both the medical and educational environments.

It is possible that more change has occurred in this dimension of the educational principles than in any of the others. As one looks back over the past ten years at the changes in equal opportunity for employment, affirmative action plans across both the public and private sector, and patient rights now being incorporated in formal legal language for hospitals and health care settings, the way we now view ourselves as being part of a group may be changing. What was a fight for entry into a group some years ago, may now be written into qualification requirements. This is not to say that tokenism no longer exists, or that episodes of resistance no longer occur. It does seem to indicate that the climate of acceptance has grown and stabilized to an extent that role descriptions of health educators can be stated in conceptual terms rather than in pragmatic technique terms. The evidence for having established credibility in the medical practice setting may in itself be the reason why the social distance is of less importance.

Before leaving the subject of social distance, the responsibility of the health educator in finding, training and employing change agents who, in Dr. Nyswander's words, "are closer to the understandings and value patterns of the groups needing help" may be illustrated somewhat differently. The recruitment and utilization of social scientists by health educators within the Cancer Control Program, (PHS) to conduct moderator training sessions for family practitioners is a reversal of the usual "outward reach" for securing change-agents. In this experience it was recognition by the health educators that the group to be taught (physicians) needed theory and skill-training beyond the scope of the health educators' competence. For about five years a network of social scientists over the country worked with thirteen State Academies of Family Practice in developing effective continuing education programs.[10]

The objective served was a contractual agreement to purchase expertise from a group closer to the knowledge level of the group to be served than existed at that time within the health educators. Social distance usually is thought of in "upward" and "downward" terms, but in this case it was perceived as "lateral" outreach.

The sixth principle is: EVALUATION OF EDUCATIONAL PROGRAMS AND METHODS BY STAFF PROVIDES A SUPPORTING STRUCTURE FOR INTRODUCING CHANGES IN CONTENT AND METHODS. Interest in evaluation has reached such proportions that the risks lie more in the concept being oversold than in stimulating interest in the subject. Two reactions at oppostite ends of the continuum seem to occur, "education can't be evaluated" or "let's evaluate everything". The credibility of the health educator appears to be high in the area of evaluation with greater danger of unrealistic expectations than non-acceptance of evaluation as part of the learning process.

Interest in studying the effect of continuing medical education upon physician behavior is not a recent advance, but acceptance of the importance of learning the impact of education has grown considerably in recent years. As long as education is seen by the participants as contributing to their self-improvement and meeting personal goals, then the rigorous techniques to measure change in performance seem less than essential. It is when education is seen as the means for correcting performance deficits and is related to problems in practice that the evaluation techniques become critical to the planning of the program. Evaluation is not often seen as part of the continuous feed-back to improve program as this principle states... "supporting structure for introducing changes in content and methods".

A CHALLENGE

Public health education and continuing education for health professionals may be on a collision course, if turf and jurisdictional areas are allowed to develop as though the fields are independent and separate. The public health educator who feels that continuing education of health professionals is a separate field, narrows the focus and interrupts the continuity of the educational cycle. The danger lies in that the public health educator may stop short of where the action may need to occur, the health care provider.

On the other hand, the continuing education specialist who does not perceive the community context of problem-solving, likewise restricts the action and overlooks the dynamic interaction of the health care provider with consumers. Without understanding the need for interaction with the community, the fragmentation of service and the increase in demand for resources may spiral.

The challenge ahead of us is to find ways and means to keep the educational cycle in focus, and prevent fragmentation from occurring. The credibility of the health educator as a change agent in the

medical care setting has passed the demonstration phase. Collaborative relationships are a reality. As a bridge between the two social systems of education and health, the health educator as a change agent lives in the ambiguity of doubts and certainties. Shall we meet the challenge of Francis Bacon when he said, "If we begin with certainties, we shall end in doubts; but if we begin with doubts and are patient in them, we shall end in certainties"? It is up to us.

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NOTES

1. Rogers, Everett, M. and Shoemaker, F. Floyd Communications of Innovations, 1971. The Free Press, N.Y. pp. 243-246.

2. WHO Technical Report: Series No. 534, Continuing Education for Physicians, 1973, p. 30.

3. op.cit. p. 229, 244-248. The definitions, "change agent" and "credibility" come from Rogers: A change agent is a professional who influences innovation-decisions in a direction deemed desirable by a change agency...the change agent functions as the link between two or more social systems... typical disparities between such systems include subcultural language difference (even though both may ostensibly share a common tongue) socioeconomic status, technical competence, and beliefs and attitudes. As a bridge between two differing social systems, the change agent is necessarily a marginal man with one foot in each of two worlds. His success in linking the change agency with his client system lies at the heart of the process of planned change.

   Credibility is the degree to which a communication source or channel is perceived as trustworthy and competent by the receiver...change agent success is positively related to his credibility in the eyes of his clients.

4. California's Health, Vol. 14, No. 9, Nov. 1, 1956.

N O T E S, continued

5. Scheffey, Lewis, C., M.D. "The Delay Period in the Diagnosis of Pelvic Malignancy." Obstetrics and Gynecology, Vol. 1, No. 5, 1953.

6. Brown, Clement R., M.D. and Fleisher, Daniel I., M.D. "Bi-Cycle Concept-Relating Continuing Education directly to Patient Care", New England Journal of Medicine (supplement) Vol. 284, No. 88, May 20, 1971.

7. Dohner, Charles W., Ph.D. "On Correction of Patient Care Deficits", Quality Assurance of Medical Care Monograph, February, 1973, RMPS, HSMHA, DHEW.

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9. CONTINUING EDUCATION FOR THE HEALTH PROFESSIONS, Report of an Interprofessional Task Force, Center for Educational Development, College of Medicine, University of Illinois, Dec. 1966.

10. Burroughs, Lenward R., M.D. "Shop Talk: An Experiment in the Education of Physicians". GP, October 1966, Vol XXXIV. No. 4.

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NEW APPLICATIONS OF STIMULUS-RESPONSE THEORIES IN HEALTH EDUCATION

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NEW APPLICATIONS OF STIMULUS-RESPONSE THEORIES IN HEALTH EDUCATION

With each new experience in health education, my appreciation grows for the value of theory in guiding practice. Nevertheless, until recently I found little relevance in stimulus-response theories for explaining and predicting, let alone for influencing, the complex patterns of human health behavior with which health educators are concerned. While I still regard S-R theories as inadequate in many respects, this very viewpoint led me to discover some new ways in which such theories may be applied to strengthen the rationale upon which health education efforts are based.

Applications in Health Education Planning

Insight into a potential new use for the S-R model first came as I was discussing family planning programs with a group of bright and dedicated clinicians and administrators. After exploring with sophistication women-years of pregnancy averted by various contraceptive methods and alternative approaches to assessing the cost-effectiveness of family planning service delivery, attention turned to the educational aspects of family planning programs. Concurring that educational efforts to date have not resolved problems of patient motivation, my confreres proceeded to design a mass media campaign which they were convinced would not only increase clinic attendance, but would also improve continuation of contraceptive use. With an inward sigh, I recognized the taped-cassette type of thinking which has led to so many superficial educational efforts all around the world. The "input-output mentality", I thought.

I made the usual protest. "You are talking as if just a simple message is going to get people to make all sorts of behavior changes." Then in exasperation I sacrificed accuracy and added, "Don't you realize that stimulus-response theories have been out-of-date in education for over thirty years?"

In stunned amazement they stopped. Taking advantage of the silence, I pointed out that most current S-R theorists have found it necessary to consider "O" (organism) variables in their equations, and that it is in this realm that the answers to human motivation must be sought. "Therefore," I told them, "it is extremely naive to think that we can plan for education without knowing a good deal

about the people whose response to programs we are trying to stimulate." Continuing in less than logical progression, I explained that even those psychologists who are still investigating simple S-R relationships recognize that responses vary according to the type of stimulus employed, as well as with its intensity, duration, frequency, and pattern of repetition. "Where are such considerations in your planning?" I asked.

My friends recuperated enough to admit that they really didn't know much about educational theory, and that, in fact, their great campaign ideas were based upon little more than their fascination with the potential of the media and the fun of conjuring up clever slogans. Then they went on to identify, from their own extensive experiences, human factors which must be taken into account in developing people-oriented educational approaches. What followed was the most thoughtful and thought-provoking discussion of health education that I have ever held with physicians and administrators. As we parted, I felt sure that they had gained new understanding of the educational process, and that they also had acquired new respect for the educational expertise upon which effective educational planning must be based.

Intrigued by this breakthrough, I pondered its broader implications. Could it be that conscious or unconscious acceptance of the S-R model of learning and behavior change underlies the simplistic thinking which dominates so many activities parading under the name of health education practice?

Certainly stimulus-response theories have been a tradition in American psychology, and in my own experience at least, introductory courses in psychology give them great emphasis. At the same time, few program policy-makers or administrators claim advanced study in psychology or education, and thus the majority have probably never been exposed to Gestalt, Lewinian, or personality theories which stress the importance of dynamic individual variables in the selective perception of stimuli and in the mediation of response. Therefore in the absence of alternative models, perhaps these decision-makers tend to rely upon the S-R prototype.

This explanation I decided was generous, however, for most showy extravaganzas of educational technology lack even the suggestion of a conscious theoretical rationale for determining how

educational resources will be used. Thus I wondered whether the highly clinical orientation of most health care programs might lead medical administrators unconsciously to assume that, just as the physiological being will respond more or less predictably to the stimuli of drugs, diet, or surgery, the socio-psychological being will respond in a fairly straightforward manner to health communications. The missing human element in the S-R paradigm therefore makes it perfectly suited to "the veterinary approach in medicine."

At the same time, I recognized that increasing administrative reliance on computerized data processing, cost-accounting, and neatly Perted program flow charts, all of which emphasize input-output relationships, is spilling over to influence notions of how educational programs ought to be conducted. Nevertheless, commitment to organizational efficiency, effectiveness, and accountability is not always compatible with goals of human development, learning, and self-determination. As a result, the operational decisions of program administrators and health educators may be governed by rather different criteria. Since administrators control the pursestrings, however, health educators often find themselves on the defensive in attempting to justify the need for multi-faceted, long-range, and people-oriented educational approaches.

In this context, the parallel between stimulus-response theories of behavior and a focus on input-output relationships in program direction took on new meaning. Might health educators use the weaknesses of the S-R model to point out the inadequacies of an input-output emphasis in educational planning? If this worked, would there then be a more effective basis for helping others to recognize the need for diversified educational approaches adapted to the unique characteristics of each human situation?

Informally testing this notion on a few more occasions, I found in every instance that colleagues from other disciplines readily agreed that the S-R explanation of human behavior is overly simplistic. Moreover, they easily understood that a primary concern with educational technology is akin to isolated emphasis upon "S" variables. This then did indeed provide a positive opportunity for explaining why "people" variables must be considered in educational planning and how specific educational approaches are tailored to the dynamics influencing health behavior.

In addition to confirming my initial hunch, these conversational experiments paid other dividends. I found, for example, that the S-R model was useful in assisting planners to define more precisely the specific responses needed from people in order to prevent, control, or minimize the health problem under study. Thus without ever developing resistances to "educational jargon," they began to identify the behavioral objectives toward which education should be directed. This step also helped them to recognize that multiple and differentiated stimuli would be needed to produce the various behaviors required, and so without prompting on my part, they abandoned enchantment with pre-programmed educational packages and began to think of phased and coordinated educational strategies.

I also found, with no small satisfaction, that introducing the S-R model into planning enabled me to get my points across without launching into complex theoretical justifications or detailed accounts of documented program experiences. Further, even minimal reference to S-R theories helped to establish my role as a planning strategist and to legitimize my participation as an educator in the planning process. Perhaps stimulus-response concepts are so widely associated with learning that the slightest mention of them in interdisciplinary circles reminds others that an educator's expertise is present. Another delightful discovery was that an examination of S-R relationships shifted emphasis away from the pros and cons of particular educational techniques, so that my efforts to achieve a more comprehensive perspective no longer resulted in accusations that I was "down on media."

By sharing these minor successes, I do not mean to suggest that tackling the S-R model in planning will always circumvent disproportionate reliance on the media or divert needlessly expensive investments in television spot announcements, roadside billboards, and pamphlets by the thousands. Deeper issues are at stake. At their heart, these concern the conflicts between the regulatory requirements of a scientific, industrial society and the openness of a humanistic one.

Functional Value of the S-R Model in the Health Care System

Dedication to science, of course, has achieved spectacular advances in medicine, which in turn have led to continually rising health expectations and continually improving standards of health care. Fulfilling these expectations and meeting these standards, however, requires ever-increasing reliance on medical technology. At the same time, the high costs of delivering such technology to the

public has resulted in expanded organizational systems, each with accompanying rules, regulations, and requirements to provide essential scientific, economic, and administrative controls.

Overcoming simplistic input-output approaches in health education thus involves more than refuting the S-R model of human behavior. It concerns changing structurally functional systems which are imbedded in the fabric of our technological society.

Since the mechanistic S-R explanation of human behavior, with its implications of external manipulation and control, closely parallels a focus upon programmed inputs to achieve pre-determined outputs, its application to guide health education practice is consistent with a technological approach to health care delivery. It therefore may have special appeal to physicians, disciplined by scientific rigor to intervene in human response to disease, and to administrators, committed to the production of visible results in return for the allocation of scarce resources. Moreover, since the application of this model leads to major emphasis upon the methods, materials, and techniques of education, which, after all, are "S" variables, its acceptance is supported and promulgated by massive commercial interests which have developed as part of industrialization.

Adoption of the S-R model in health education is technologically functional in another respect, for if responses are not as anticipated, failure can be attributed to only one of two sources. Either the stimuli have been inadequate, in which case more and better technology is indicated, or something is wrong with the response mechanisms of the people, in which case they are labelled "hard-to-reach", "apathetic", or otherwise abnormal. The possibility is not considered that the system itself may need to change in ways which those who rely upon it define, for the S-R model leaves thinking people out. The system therefore maintains control, tinkering with the "S" of education to improve the "R" of the public it purports to serve through human engineering.

Practice Dedicated to the Goals of Health or Education?

Within this milieu, health educators have long endeavored to involve people in problem-solving as a primary approach to facilitating learning and change. Therefore, we have largely rejected stimulus-response theories as antithetical to our purposes and methods, for

these theories neglect the potential of individuals, families, and communities to identify and solve their own health problems and to develop increasing capacity to do so. Instead we have preferred theoretical guides to practice which emphasize the dynamics of human behavior and change.

Nevertheless, even as our understanding of these dynamic theories has grown, we have been handicapped in their application by the increasing restrictions imposed upon our work and the behavior of the people whom we seek to educate by the bureaucratic demands of the agencies which fund, plan, and deliver health services. Consequently, we have come to recognize the need for learning and change, not just in individuals and communities, but also in the very institutions of which we are a part.

These observations are hardly novel, but as I reviewed them from my S-R starting point, I began to put some of the problems of our profession in a new perspective. Even though we have largely rejected the S-R model as a theoretical basis for our practice because it omits both the people and the process of education, have we substituted anything better? Or has our committment to education been overshadowed by our socialization into the technology of health?

Take our stress upon behavioral objectives in educational programming, for example. Such objectives define the goals of education in terms of the behaviors which are needed to improve health status. Although we use all the insight we can muster from the behavioral sciences to design educational strategies which will achieve these objectives, our approaches are primarily targeted to result in health <u>action</u> rather than health <u>education</u>. Further, although we state that our ultimate purpose is to enable people to make more informed decisions about those behaviors affecting their health, we persist in evaluating our success in terms of these health behaviors themselves rather than by indications of whether or not an informed decision has actually been made.

In spite of this practice, as educators we well know that neither action nor inaction is simply related to the degree of education which has taken place, for other psychological, sociological, and situational variables intervene. We, in fact, analyze these variables in making our educational diagnosis and utilize those which are subject to our influence in order to attain the objectives which have been defined within the context of the health care system. Yet in the absence of a clear emphasis upon <u>educational</u> outcomes, is not this reliance upon dynamic human factors to achieve specific health objectives just as manipulative as application of the S-R model itself would imply?

If, on the other hand, we focus on truly educational goals, helping others to help themselves in achieving those objectives which they themselves have selected, we jeopardize our position in the health care system. No conflict occurs as long as our efforts result in decisions leading to health actions which are consistent with what science knows and technology provides. If people opt not to take those health actions which the system specifies, however, then health education is considered unsuccessful by ourselves, by our professional peers, and by the agencies within which we work. The system thus reduces support for our positions and the type of health education which we espouse, replacing our efforts with methods and goals more amenable to system requirements.

Caught in this web, we have struggled to alter the systems which employ us as we simultaneously endeavor to educate the public about the need to utilize the services that these systems provide. Our activities thus are sometimes confusing to others, and the rationale behind them cannot be simply explained. This confusion is compounded because as change agents we have adopted different strategies, sometimes working within the system by educating administrators or even by becoming administrators ourselves, and sometimes by working to mobilize consumer action groups or, more recently, by entering the political arena directly.

While we have been encouraged by new national interest in health education, we have tended to overlook the economic motives underlying this development. Thus many of us have been disappointed in our early attempts to influence public policy. Our pleas for legislation, funds, and the administrative freedom supportive of community-based educational programs have largely gone unheeded, and most of the increased public monies earmarked for health education are tied to categorical health programs and administrative time-tables which hinder setting in motion free and open educational processes.

Nevertheless, we have optimistically greeted the availability of new funds for health education and have joined in the scramble to secure them, only to be again disallusioned by the fact that our grant applications must compete with those written by persons who have no training in health education whatsoever. We are dismayed to discover that sound educational proposals are being discarded while "show and tell" projects are being funded in staggering amounts. Meanwhile, commercial enterprises are turning tidy profits from skillfully marketing standardized health messages canned through the miracles of modern educational technology.

Health education is being exploited, we decide, and we as health educators are being exploited with it. We have moaned and complained and protested among ourselves about the failure to utilize our educational expertise in planning and implementing broadly-conceived health education programs, even as we have raced to demonstrate that more limited health education endeavors can save the system money. In the resulting paranoia, we have fragmented ourselves and our profession, and missed the fundamental issue.

The goals of consumer health education, if fully realized, do indeed promise to result in greater individual and community responsibility for health. Full exercise of this responsibility, however, extends far beyond simply responding to the stimuli which the health care system provides. Ultimately the educated and responsible health consumer must evaluate the adequacy of the health care system itself, acting to restructure it where necessary to better serve the public interests.

In that such restructuring is initiated by forces outside of the system, it violates system requirements of internal control. Moreover, since the system already embodies all available health technology, external efforts to change it inevitably must be directed by non-technological interests. From this perspective, effective health education threatens the very foundations upon which our health care system is based, and the system therefore cannot be expected to support health education except in limited ways which clearly serve the system's goals. The proliferation of commercial health education activities, on the other hand, is compatible with our industrialized free enterprise system, which is not endangered by the probability that such activities are likely to have only minimal impact on the public's health-related behavior.

Although the ideals of health and those of education are complementary and humanitarian, the technological systems which have developed in pursuit of health place us, as health educators, in a marginal position. We have recognized this marginality before, usually defining it in terms of conflicting demands between the health agency and the community, and explaining away dilemmas about our roles as normal phenomena experienced by change agents.

Nevertheless, to the extent that the technologically identified goals of our current health care system are incompatible with the goals of education, our conflicts cannot be so easily resolved. We must face them in all their force and make some

hard decisions in dealing with them, or else accept increasing loss of professional identity as health educators, meekly resigning health education itself to a peripheral part in the drama of change which is occuring throughout our society, with or without our participation.

Perhaps the implications of the S-R model, fully explored, can help us to clarify these issues not only among ourselves, but also with others who state a commitment to educating the public about health. Utilizing the simplicity of the S-R framework for analyzing the goals and purposes of such commitment, as well as the methodologies by which it is to be expressed, hopefully will enable us and the people with whom we work to make more informed decisions about the extent to which education will be incorporated in health education and how this is to be accomplished. This approach may also provide a new focal point for identifying those alliances which we wish to foster and sharpen areas of disagreement which remain to be resolved before we can join with others in working toward the realization of ideal goals in both health and education.

Applications in Teaching Health Education

Encouraged by the thought and insight generated through my casual experiments with the S-R model in planning, I began to test its use in the classroom too. Results were equally provocative.

Much like the informal groups of interdisciplinary planners and philosophers, students in analyzing the model's weaknesses began to identify from their own experiences factors which influence the learning process. This led into lively and productive discussions of the relationships between learning and change, while it also provided a context for understanding the relevance to health education of those theories which are more concerned with the latter than the former. This approach thus proved effective in helping both graduates and undergraduates to understand the scope of health education practice and in developing a framework for further teaching, especially in communications and the educational aspects of health program planning.

Playing with the S-R model, I also found it useful in introducing concepts of research methodology to first-year graduate students. When just "Experiment - Outcome" was written on the blackboard, they had difficulty in identifying potential problems biasing measurement and interpretation of data. When I wrote "Stimulus - Response" underneath, however, suggesting that there was a

parallel, they quickly began to point out possibilities that outcome might be determined by something other than the experimental variable being investigated, that combinations of stimuli might be involved, that measurement itself could be a stimulus, that response might be delayed or vary for different people at different times and under different conditions, and so forth. From here, the seminar advanced naturally to consider methods for avoiding or controlling these problems, and soon we were actively involved in studying fundamental principles of research design.

Such classroom experimentation led to another revelation. My own rejection of the fruitfulness of stimulus-response theories for health education had previously led me to ignore them in teaching out of preference for other theories of learning and change. Nevertheless, as we discussed the S-R model, student comments made me realize that my prior neglect of this important thrust in learning theory had left some with the impression that health education courses didn't deal with learning theory at all. Consequently, the expectations of non-majors were often so severely jarred that they didn't understand the direction of our introductory course until it was half-way over (when fortunately some "Ahas" occurred). For the same reason, our graduate health education majors felt insecurely grounded in education and considerably confused about the curriculum emphasis on the change process, group dynamics, community organization, and communication. This evidently heightened the annual identity crisis and created a credibility gap, in their own minds at least, of themselves as <u>educators</u> working in health.

With recognition of this problem, graduate students in one seminar requested an intensive review of learning theories. The objective of this undertaking was to identify, for each specific theory, implications for health education practice. We decided to begin, as was historically appropriate, with an examination of the stimulus-response grouping. The students were clearly excited. At last they were going to be initiated to the secrets of education which the faculty had stubbornly withheld from them so long.

Until this time, it must be pointed out, my applications of the S-R concept had been limited only to the presentation of the simple model with heavy emphasis upon its inadequacies. Although my conscience had complained that this usage lacked academic objectivity, I had overcome my guilt pangs by resolving someday soon to re-familiarize myself with the formal details of S-R theories and the research related to them just in case they offered some value to health education practice which I had previously

overlooked. This intent was reinforced by the pragmatic recognition that unless I was intimately acquainted with these theories, my grounds for attacking them were too easily subject to question. Therefore with the students' request, I dragged out the books once more, resigned to re-reading descriptions of cats escaping from puzzle boxes, rats running in mazes, pigeons pecking levers, and monkeys playing with sticks.

To my surprise, I enjoyed it. Equally amazing was the students' reaction. They didn't. They arrived on the appointed seminar day discouraged with the poverty of the S-R theories for health education, disappointed that they found few concepts with which they were not already familiar, and incredulous that anyone would presume to generalize results from experimentation with minute animal responses to the complexities of human behavior. Their conclusions left them newly respectful of the theories we had been teaching in our health education courses, and so this exercise brought the faculty and students closer together.

Some Prospects for Applying Aspects of S-R Theories Themselves

While the students' independent evaluations of S-R theories agreed with much of my own previous thinking about them, I found that through this most recent review I developed heightened appreciation for the rigor, creativity, and years of effort with which S-R theorists had approached the difficult problems of studying learning. I was not so quick to reject their contributions, and in fact, saw several fresh links with cognitive theories which I felt might provide good avenues for helping others to understand principles of health education. Although these applications involved some bending of formal theoretical definitions, I also found myself having rather a good time identifying possible ways to apply certain postulates from S-R theories to health education practice, and this, in turn suggested some new ideas for research and informal experimentation.

Thus, for example, I was pleased to re-discover Thorndike's emphasis upon the importance of the situation, his law of learning readiness, and his concept of action tendencies. While I continually rely on these concepts, I had not paid all that much attention to their origin. Being able to attribute them to Thorndike himself would be marvelous ammunition for combatting the "input-output mentality," I thought.

I further speculated that Thorndike's view of learning through trial and error might productively be introduced in discussions

of what happens to people attempting to utilize the health care system. Similarly, his stress on the importance of externally-provided reinforcements might lead health workers to consider what rewards and punishments are associated with the seeking of health services, and under what conditions the service provided is sufficient reward to stimulate keeping return appointments.

The review of classical conditioning theory suggested that in health education we might do more to involve people in analyzing their own stimulus-response patterns which are associated with recurrent behaviors non-supportive of health, following this with the self-identification of personally acceptable alternative responses. This has been tried to some extent, I know, in anti-smoking and weight reduction programs, but I question whether we are using this approach as widely as we might and whether we have compared our experiences with eachother on a practical level, and on a theoretical level with Pavlovian experiments in which the dogs had little part in determining how they would respond.

Since long ago I had taken a psychology course from Guthrie at the University of Washington, I was particularly pleased to discover relevance in his work that escaped me in my under-graduate years. Now it occurred to me that his concept of the generalized response might be useful in helping health workers to see why every clinic contact is important in affecting future clinic attendance. The notion that certain stimuli can lead to automatic responses might also be useful in training interviewers to become more aware of factors potentially biasing the data they collect, as well as in assisting health workers to realize that their actions and experiences can consciously or unconsciously serve as stimuli eliciting both positive and negative patient responses.

Similarly, Guthrie's work on habit formation suggested the possibility that we might attempt to identify habitual series of movements that become generalized to routine responses which nevertheless are counterproductive to the effective delivery of health services. The impersonalized registration of patients at clinic desks and the mumbled routine with which medical histories are taken constitute two problem areas in which I think we might profitably experiment with Guthrie's ideas for bringing about habit extinction.

Two concepts from Hull's intricate theory of learning struck me as particularly applicable to health education practice today. One is the importance of specifying exactly what kind of learning is involved in a task. If we did this more in educational planning, surely we could select our methods and evaluate their effectiveness

with more precision. We also might try helping those who are overly enchanted with educational technology to take an occasional look at educational objectives by asking them, for example, whether their pet method has proved most effective in serial learning, transfer learning, or rote learning. Secondly, Hull's concept that a certain threshold must be reached before learning results in performance could, I think, be useful in helping legislators and program administrators to understand that the magic results produced by educational allocations will not necessarily be visible by the end of each fiscal year.

These are only a few illustrations of ideas hatched while thumbing through already dog-eared books. As I returned them to their shelves, I found myself hoping for the opportunity to subject these thoughts to the fire of other viewpoints in one of those intense discussions that one can rarely plan but which sometimes unexpectedly just happen. I also resolved to spend some time in the library up-dating myself on current thinking and research among learning theorists with the anticipation that this venture would be, at the very least, stimulating.

S-R Theories in Health Education Today

The chance to debate S-R theory came sooner than expected, arriving in the form of a lanky and likeable graduate student in nutrition, whose undergraduate major was physiopsychology. John had done well in an introductory course in health education for nutritionists and dieticians, and so I had invited him to join me in teaching the course another time around.

As we started to plan together, John stated his strong opinion that the course should give more emphasis to learning theory. "Fine," I agreed, and asked him which theories he thought we should stress. "Well, you know, learning theory," he said. "But there are so many," I answered. In John's view there was only one--Skinner's operant conditioning.

He was convinced that health education offers little promise for changing food habits and improving nutritional status except through behavior modification techniques. Although he personally had not been involved in programs using behavior modification, he had heard of many success stories and his undergraduate work with rats had shown him how effective behavior modification could be. Visions of Beyond Freedom and Dignity surrounded me as I asked John whether he believed at all in man's ability to control his own behavior. The intense discussion I'd been hoping for was underway.

The prospect of working with John for an entire academic quarter sent me to the library in a hurry. I made a beeline for Psychological Abstracts and spent a long afternoon getting a feel for the literature on operant conditioning over the last several years. It is enormous and obviously growing. Animal studies still abound, but increasing experimentation with people is evident. Behavior modification was added as a separate index heading in 1972, with cross-references to a number of other subject areas.

I had expected to find a good deal of human research in behavior modification with the mentally ill and retarded, but was surprised to see so much classroom work with school children reported. Of particular interest was the discovery of a small but expanding literature on the utilization of behavior modification techniques in training programs, including the development of group discussion skills and parent education. My hair almost stood on end, however, as I picked out an emerging trend toward the application of behavior modification to health problems, especially by nutritionists and nurses. Where are we, as health educators, in this development?

I do not mean to imply that we should plunge headlong into the utilization of behavior modification techniques ourselves, but certainly if we are to present ourselves as health education specialists, we need to become familiar with this methodology, the ways in which it is being applied in health, and the results which are being obtained. Moreover, we have a responsibility to help define the situations in which it may be effective and those in which it may not, as well as an ethical obligation to point out the implications of its use. All this will require understanding the theories of operant conditioning, classical conditioning, and observational learning upon which behavior modification is based.

Against the background of my discussion with John, my afternoon in the library, and an accumulation of other indications, I am convinced that this is an urgent challenge to health education. Behavior modification may well be on its way to becoming the latest fad in health education, even though research supporting this development is as yet scarce. The promise of the "cure-all" in education, as in health, is too attractive, and the possibility of controlling the behavior of others, even for "their own good," is too appealing to our technological society and its input-output mentality.

This larger issue is by no means ignored by learning theorists, who are debating behavior modification on philosphical as well as experimental grounds. The long-standing division between the stimulus-response and cognitive psychologists thus continues, and as such represents another facet of the deeper question permeating our society about the degree to which people's actions are--and can be--controlled by external forces and the extent to which they are--and can be--controlled by the people themselves.

Until a commonly accepted theory of human learning and behavior is developed, answers to these questions depend on both fact and value. As educators in health, we need to ask ourselves what will be our contribution to the discovery of fact and where will we stand on the matter of value.

S-R Theories as Guides to Health Education Practice

In health education, we have drawn upon a variety of theoretical positions to provide a framework for problem analysis and solution. Although we have found certain concepts from S-R theories fruitful, we have probably not been as systematic, rigorous, or evaluative in their application as we might. Moreover, we have tended to reject these theories in their totality as adequate guides for our practice because of their lack of focus upon the processes through which learning and change occur.

Through challenging the S-R paradigm directly with those whose notions of health education seem to be based upon this simple model, I came to the broader understanding that theory provides more than a pattern for our own practice to follow. It also can serve as a tool to question and evaluate the practice of others. To use theory most effectively in this way, however, we must be intimately familiar with it. This, in turn, can lead to new insights to guide our own practice, not only as these are derived directly from theory, but also as they emerge out of disagreements with it.

The fundamental division between S-R theories and other learning theories concerns the role of the individual in determining the goals of learning and the direction of change, as well as the processes through which learning and change occur. In that this disagreement also lies at the root of many current issues in health education practice and in our society as a whole, clarifying our theoretical position may well be the most effective step we can take in developing more adequate guides to practice.

PARTICIPATION BY THE INDIVIDUAL

IN

COMMUNITY PROBLEM SOLVING

by

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PARTICIPATION BY THE INDIVIDUAL IN COMMUNITY PROBLEM SOLVING

This paper contains abstracts from five unpublished papers that I believe were Nyswanderian in character in that the philosophy developed grew out of Dorothy's early insistance that health education was synonymous with community and/or citizen participation.

The thesis I am proposing is this:

> Citizen participation must include control and autonomy by the individual over those activities and decisions that concern his own and his family's welfare. The individual must be able to manipulate the system and not be manipulated by the system as many of the minority group members and other citizens of the United States are today.

Hopefully, the concepts and ideas expressed in this paper will contribute to this goal.

My experiences in the last eighteen years have been with the American Indians of the Southwest. While it is my opinion that much of what I am going to present is applicable to other ethnic minorities, the philosophy, concepts, and experiences to be described will be based on a long association with those Indians residing in the states of Arizona, Nevada, Utah, and certain parts of California.

The Phoenix Area Health Education program does not follow the more traditional lines of health education as found in state and county Health Departments or similar health education programs. We are more concerned in developing participation of the Indian population in programs that concern their health and/or are health related. It seems to me that the only people who can solve Indian problems are the Indian people themselves. Therefore, our health education efforts are directed almost entirely toward encouraging Indian involvement and helping them develop problem solving skills.

In April, 1969, I had the pleasure of co-authoring and presenting a paper entitled "Community Participation as an Indicator of Developmental Change"[1,2] at the annual meeting of the Society for Applied Anthropology in Mexico City. The basic hypothesis described in this paper was developed as follows:

In the past 10 years the emphasis in the Indian Health Service has been shifting from hospital clinic-oriented treatment programs to community-directed preventive health programs. A guideline thesis is needed, therefore, to develop, predict, and evaluate the results of these new programs. A history and case study analysis of tribal and village development programs over the last half century suggests an hypothesis and methodology for developing, measuring, and predicting community problem solving ability and community responsibility for directing its own preventive health programs. The hypothesis describes the kind and extent of community participation necessary before the community will take the responsibility for a health program. The hypothesis is this: When members of a community or local group describe a program as their own as opposed to belonging to an outside group or change agent, they will take responsibility for directing and maintaining it after the change agent has left.

In order for them to come to call a program their own, the members must participate in some combination of the following aspects of the program's development:

1) They have to come to accept the initiator or change agent of the development process as a person who can be trusted, who has demonstrated concern for the well-being of the community and has respect for its members and their potential for developmental change. He must possess the knowledge; skills, and potential resources sufficient to help them solve the problems. Once the change agent has been accepted by the community the following kinds of participation can be initiated.

2) The community members have to help identify the problems that they wish to resolve.

3) The community members must participate in planning a program solution to the problems they helped to identify.

4) They must believe there will be benefits for themselves derived from the program's success.

5) They must be allowed the time and opportunity needed to adapt the planning, organization, project, and evaluation to their own socio-cultural life.

6) They must recognize as their own the organization and its functions responsible for carrying out the program, and then participate through it.

7) They have to accept the major responsibility for organizing and carrying out the program solution and do the work themselves or select those who do.

8) They must come to decide whether or not new skills and technical knowledge are necessary to carry out their plans and they have to identify and obtain the resources that can assist them.

9) Finally, they have to recognize the results of their efforts, success or failure, as their own.

These are probably not the only critical aspects of community participation necessary to transfer change agent initiated-development to the community's jurisdiction, but they appear to be fundamental to the problem described above. The above hypothesis sets out the kind of community participation necessary to transfer program planning direction and implementation from professional administrators and technicians to the local people and the kind of community involvement that encourages the growth of skills to cope with non-traditional demands.

A theoretical explanation of the hypothesis would have to involve a discussion of two or more societies confronting each other through selected members in a contact situation. The wider and more intense the conflict between them, the more attention is paid to who possesses the elements of power and status. These elements may be organizations, positions in organizations, persons, programs in the process of development, facilities, equipment, funds, etc. that belong to "us" as opposed to "them". Such distinctions between elements belonging to either one society or the other, become more evident to the observer when members of one society believe that the activities of the other society are threatening their most valued institutions. Recognition of who possesses the elements of power has survival value for the members of the threatened society or group. The decision whether to resist or to cooperate can then be directed toward the appropriate elements. The elements themselves may not be threatening except as they are controlled and used by members of one or the other society for purposes that threaten. For example, the Papago Community Health Representative program, an element in the Papago-Anglo contact situation is viewed as less of a threat to Papago tribal life than when it was originally proposed as a pilot project by the Indian Health Service. The tribe is now taking greater control and responsibility for their CHR program. Slowly it is being run more and more by the communities and used for their own purposes. Similar programs, when run by a federal agency, have been viewed as a direct threat to village community life. This view reflects their past experience with too many programs carried out for the purposes of the dominant society.

In the period following the development of the hypothetical constructs referred to, I have come to believe that a further extention of the concept is needed.

In the earlier paper the emphasis was directed toward establishing several sub-hypotheses that described the kinds of participation that members of the community would undertake in order to achieve the program goal as outlined. Unfortunately, too many of the resources and change agents working with problem communities honestly feel that they have involved the people in the planning and decision making when, in fact, they have imposed decisions upon them. If the change agent is really concerned in helping the depressed population achieve the goals outlined in the hypothesis, it would seem to me that there are six additional objectives that need to be achieved as follows:

1) To Help the Indian people resolve some of the overwhelmingly acute problems that they face daily that affect the individual or group welfare; examples of these problems would be serious illness, deprivation, child neglect, hunger, acute alcoholism, disaster, or others.

2) To assist the Indian people in identifying and seeking resources, then provide consultation and guidance to individuals and families. Such consultation and guidance would involve community members in the steps and procedures taken in the problem-solving process. This could eventually develop the necessary expertise among grassroots people so they can solve these problems themselves. Examples of these problems would be--chronic illness, malnutrition, chronic alcoholism, poor housing, lack of job skills, drug use, and similar needs.

3) To develop the family as a unit for problem-solving; to strengthen the role of the family head and develop a concept of unity and mutual support among family members.

4) To develop the appropriate group--as family, community, neighborhood--into an organized problem-solving unit. This would be accomplished through regularly scheduled forum-type meetings.

5) To develop a communication bridge linking the Indian and non-Indian community and its resources (specifically, those resources that affect the routine matters of concern: economy, education, welfare, physical environment, health, social-psychological relations, as well as others). The objective of this portion of the project would be to provide opportunity for the adult community members to experience those personal contacts, participate in group meetings, and observe how staff and members of organizations concerned with problems approach the solutions.

6) To develop more fully the concept of total involvement of the entire community, including men, women and children, in the problem-solving process. If we are ever going to resolve the problems created by paternalistic bureaucratic institutions where the system continues to do things to or for people, we must explore other approaches to problem solving.

HOW DOES THE ROLE OF THE OMBUDSMAN OR ADVOCATE FIT INTO THIS HYPOTHETICAL CONCEPT?

It seems to me that the traditional Ombudsman/Advocate role would perpetuate the paternalism that initially created the problem for which the ombudsman/advocate is needed. Recent experiences have convinced me that a further adaptation of the concept of Ombudsman/Advocacy is needed.

Because the Indian people had no written language, communications, historically, among the Indian people, was primarily oral. We have found that traditional health education approaches and material describing diseases and health concepts in written form have less of an impact than they would have on most other population groups. Also, because the majority of the Indian populations with whom we work are small, discrete populations, we have found that the town meeting or forum approach is very successful and much of our health education activity is conducted in this kind of a setting.

Unfortunately, the historical relationship between the Indian community members and the dominant society has created what could be called a "dependency syndrome". This phenomenon can be observed in most Southwestern Indian communities. In the extreme it resembles very closely Durkheim's concept of Anomie.

This dependency syndrome is an outgrowth of the kind of paternalism that developed over the long association of the Indian people with the dominant culture. It is fostered, promoted and developed, in my opinion, through the concept of "experts"; the expert, in this capacity, plays the role of doing things to and for the Indian people. In fact, the expert feels that the Indian people are incapable of resolving their own problems, and, as a result, must be treated as children. In addition to creating the dependency syndrome, this kind of relationship is most demeaning. Among other things, it communicates that the expert has little respect or confidence in the individual with whom he is dealing and it is impossible to expect any kind of progress in this kind of an environment. Unless one has respect and confidence in the people with whom he is working the job is pretty futile.

How can we utilize "the expert" and still help the participating community and/or citizen get and retain control over those activities and decisions that concern his own and his family's welfare?

I think that the description of how the Advocacy Team Concept was developed and followed by the "core team members" in the Payson Project is one way.

In working with a small group of Tonto Apache Indians (20 families or approximately 80 people) in Payson, Arizona, the concept of the Advocacy Team[3,4,5] evolved as a result of meetings held over a four-year period. Very briefly, community meetings, including men, women, and children were held on a regularly scheduled basis. The primary objective of the meetings was to involve the community members in problem-solving activities, and develop participation and leadership within the group. At the same time, those resources concerned with problems of a depressed minority were invited to participate in the meetings. The philosophy concerning the role and function of the advocacy team grew out of these meetings.

When working with people with problems, particularly those who have had long exposure to paternalistic bureaucratic institutions, we have all experienced the great need for dependency on their part and reluctance to change. A feeling of hopelessness, not unlike Anomie, exists among the members of the depressed community.

In addition, many of us, myself included, have been reluctant to relinquish the leadership role that we have worked so hard to achieve in order to help those we feel are less fortunate than us. However, in order for the advocacy team concept to function, it is essential that those in historical leadership roles, e.g. experts such as core team members, clearly see their role as consultants and resources to the Indian members of the team. Unless the core team members recognize that the community members must solve their own problems in order to achieve self determination and break the shackles of dependency, there can be little hope for success. In Payson, the core team members not only saw themselves in this role, but also supported and stressed the self help concept where the Indian people made the decisions.

For purposes of clarification, the "core" of the advocacy team is described as those individuals who possessed the kinds of skills, expertise, and competencies not found in the Payson Tonto population. The core team membership consisted of representatives from the following disciplines: Anthropology, Architecture, Education, Health

Education, Industry, Law, and last but certainly not least, outside experienced Indian tribal leadership. These outsiders provided the theoretical and practical experience and expertise so necessary in a project of this type.

However, the Advocacy Team included all of the members--men, women, and children--of the Apache community as well. All decisions--even those considered to be of little importance--were made by the local Apache community members or their designated tribal representatives. The decision to function in this fashion had much to do with the forming of the advocacy team philosophy. We (core team members) identified ourselves as resources and consultants, not as decision-makers. In a sense we functioned as servants to the Apache community and have continued to act in this capacity.

In conclusion, I would like to restate my introductory remarks--the real goal is for the individual to get and retain control over those activities and decisions that concern his own and his family's welfare. Control in this frame of reference means when the Indian people describe a program or activity as "theirs" rather than belonging to outsiders; when the resources or experts are invited to participate--to contribute, not dominate; when the Indian people make the decisions, not outside authorities; when the local Indian people are recognized as intelligent, able, concerned members of the community; when programs and activities are conducted by the Indian people themselves in a democratic fashion, where concepts, ideas and recommendations are solicited and encouraged, not discouraged.

When this happens, we will have reached our goal.

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NURSES' PERCEPTIONS OF THEIR HEALTH EDUCATION ROLE

IN

CROSS-CULTURAL HEALTH PROGRAMMES IN NORTHERN AUSTRALIA

by

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IN SUMMARY

There exists a considerable diversity of views on health education of Aborigines in Australia. In this paper, the author presents some information concerning the nurses' perceptions of nurses in their health education roles. The results of the study lead to the formulation of two models of health education; the information-giving model, and the human and community development model. The salient features of these two models and their implications in terms of staff-training of both European and Aboriginal workers in the health field in general, and in health education in particular, are discussed.

INTRODUCTION

In the Northern Territory there are about 24,000 aboriginal people who live mainly in small communities of between 50--1200 people. Their major health problems are: gastroenteritis, respiratory infections, malnutrition, ear and eye infections, leprosy, hookworm, and tuberculosis.

The factors that produce these conditions include: poor physical facilities, such as housing and sanitation, low socio-economic status, cultural change and social disintegration (Rowley 1970); and problems associated with the use of alcohol.

Efforts to improve aboriginal health will have to be directed towards:

1. The physical and social conditions of living: e.g., housing, environmental sanitation and work opportunities, economic independence, education and recreation facilities.

2. The human aspect, generally known as health education: i.e., involvement and participation of the people themselves in the improvement of their health, so that lasting changes occur.

3. The technical aspect: i.e., the provision of medical and health care.

The aim of this paper is to analyse the health education role of the nurse, who is an important member of the health team in an aboriginal community. Her perceptions of her role in seeking involvement and participation of the aboriginal people is the basis of this analysis. Information about the nurse and her functions is first presented.

THE NURSE AND HER FUNCTIONS

In the larger aboriginal communities, the nursing and aboiginal staff members carry out the functions of basic medical and nursing care together with preventive measures and health education. Regular visits are made by a visiting aerial medical doctor to see new patients referred by the nurse or to follow up previous patients. In between the doctor's visits, the nurse can discuss cases, or seek advice over the radio from the Aerial Medical Service: Visits are also made by specialists, paramedical personnel, and other nurses on occasion. In the smaller communities regular visits are made by a mobile health nurse and sometimes the aerial medical doctor.

The nurses who elect to work in aboriginal communities bring with them a varying degree of experience. Most of them are trained in one of the nursing schools in other parts of Australia, but some are overseas-trained. Most of them have had the benefit of additional courses such as infant health, midwifery and public health. A considerable number have worked overseas, in Papua Nuigini, Asia, Africa, or with the aboriginal people of other states.

The nurse's motives for working among Aboriginal people have not been studied, but include the desire to help Aboriginal people, broaden personal experience, share in the excitement of rural health work, see the country or because her husband is taking up a job in an aboriginal community.

FINDINGS ON NURSES' PERCEPTIONS OF THEIR HEALTH EDUCATION ROLE

In the early part of 1973, a questionnaire was sent to all nurses working in the field. It specifically sought their views on health education and their needs for training in this aspect of their work. Their response was good, and replies were received from 42 nurses. I have summarized the findings as follows:

A. Perceptions of the health education needs of the Aboriginal people.
   1) There was considerable agreement on the health education needs. These were diet and nutrition, budgeting, personal hygiene, child care, mothers' health, prevention of diarrhea, sanitation, and awareness and understanding of the necessity to seek early treatment for sicknesses. Depending on where they were working, some nurses also perceived hookworm, abuse of alcohol, and eye problems as important health problems.

B. Perceptions relating to their health education role.

1. Importance of information-giving role.

There was general agreement that aboriginal people need much more information about achieving and maintaining health. Most respondents perceived themselves as important sources of this information.

Replies such as these were received: "I teach them about the harm done by flies, and how to look after the facilities provided for them." "I need information in the form of prepared leaflets I could use for instruction."

2. Authoritarian versus non-authoritarian relationship.

Information on the type of relationship was obtained indirectly. A considerable degree of authoritarianism was evident from some of the replies: "I do remind them (aboriginal people) to pick up the rubbish." "There is no discussion, or very little. I show them and tell them how to look after sick children properly."

On the other hand, some were totally non-authoritarian in their approach: "Until they (the aboriginal people) really want our advice (which they feel is degrading to ask, sometimes) we cannot force it on them." "I try to foster a sense of their own worth and, consequently, retention of dignity."

3. Individual versus group or community approach.

Most of the respondents stated that they carried out health education activities informally with a person-to-person approach. "The only method I have used is informal person-to-person discussion." "I speak to them individually when something is wrong."

Group activities such as talks, demonstrations and films are planned. Some respondents regarded the involvement of the community as important. "Consult with the Aboriginal community and Aboriginal Councils for THEIR ideas and advice, and heed them." "Too many things are planned for these people (Aboriginal people) without them knowing anything about it--one reason for the resentment towards our ideas and help."

4. Health education activities in the Clinic and outside the Clinic situation.

Most of the respondents stated that they use the clinical situation for teaching purposes: "I give the mother advice when I am treating the baby." "An attempt is made to make every examination an educational experience."

Non-clinic situations such as meeting people in the shop, on the way to work, at church meetings, and on fishing trips, were also used as opportunities for education.

5. Amount of time spent on health education.

The replies to this revealed a wide variation in the amount of time spent in health education activities (See Table 1). As expected, many were unable to state the exact proportion of time they spend on health education. It is significant that 12 out of 42; i.e., more than a quarter of the respondents, claimed that they spent 25% or more of their time in health education work.

TABLE 1---PROPORTION OF TIME SPENT ON HEALTH EDUCATION BY NUMBER OF RESPONDENTS

Proportion of time spent on health educ.	No. of respondents
Little, to below 25%	12
25%, to below 50%	11
50%, or more	1
Variable	18
Total	42

C. Perceptions of barriers to health education programmes.

The barriers to health education as perceived by the respondents fell into the following categories:

1. Working in a cross-cultural situation--

The majority of respondents were very aware of cross-cultural problems.

16 respondents perceived that they had inadequate knowledge and understanding of aboriginal people.

15 respondents perceived that their inability to speak the language was a barrier.

2 respondents perceived that they had difficulties in establishing rapport. Examples of statements made: "I need a deeper knowledge of the culture of the people and their language--it all takes a great deal of time to learn." "I feel the culture gap and lack of knowledge of local customs."

2. Educational Methods and Materials--

18 respondents perceived that they had insufficient teaching aids such as posters, pamphlets, pictures and films, especially those with an aboriginal background (See Table 2).

9 respondents felt that they needed training on educational methods to be effective in their health education work.

TABLE 2---RESPONDENTS' REPLIES CONCERNING EDUCATIONAL METHODS AND MATERIALS

Respondents' Replies	No. of Respondents
Insufficient teaching aids	18
Inexperience in education methods	9
Lack of educational equipment	6
Lack of buildings	4
Inadequate knowledge of how to motivate people	2

3. Inadequate time available--

7 respondents felt that lack of time was a problem.

"We need time to establish good relations with the people, and this is not often available."
"I do what I can (in health education) when I am free from clinical duties."

4. No convenient means of transport available--

Some aboriginal groups live away from the main settlement area, and 3 respondents felt that a vehicle was needed for travel to involve them in health education activities.

5. Inadequate physical facilities--

Several respondents emphasized that unless adequate facilities, such as housing, toilets and water supply are available, health education programmes relating to these problems are unlikely to be successful. One respondent, who worked amongst a relatively sophisticated group, stated "they (the aboriginal people) know... what they want are the facilities to put into practice what they know."

D. Perceptions of involvement of other staff in the area:

The respondents were asked which other staff members could be utilized in health education. 9 respondents mentioned members of local committees, such as village councils and health committees. 9 respondents mentioned local management staff members, such as the superintendent, storekeeper and hygiene supervisor. 7 respondents mentioned teachers. 2 respondents stated that they worked with linguists, particularly in learning the language or in the production of visual aids.

E. Perceptions of involvement of aboriginal staff:

Most of the respondents had aboriginal staff members in the health centers. They assisted the nurse with nursing functions. The respondents perceived the role of their aboriginal staff members in health education as interpreting for the nurse, conducting teaching sessions on their own or under supervision of the nurse, and follow-up teaching in the camp. "I use the aboriginal staff to explain (health matters) to people in their own language."

Already, several respondents envisaged a wider role for the aboriginal staff. One respondent stated, "I think we should aim at making the Aboriginal health worker replace the European health worker."

F. Perceptions of the need for training in health education:

It was evident from the information presented under (C), i.e., barriers to health education, that a considerable number of respondents were aware of their own short-comings in working in a cross-cultural situation and would like to have further preparation for health education work.

One respondent said, "What has been learned by a nurse in the course of training...has been in the context of ill-health--not as a means of preventing ill-health. I feel that a positive programme of training for health education is required before they (the nurses) can be expected to carry out efficiently the task of educating others."

Regarding the most suitable length of time for a course in health education, the majority of respondents saw a period of two weeks as adequate, although a few would prefer a longer period.

Two respondents suggested that a small team including experienced health educators should visit an area for a week to conduct training programmes locally.

DISCUSSION OF THE FINDINGS

This study reveals that the nurses who replied to the questionnaire held a wide range of perceptions on health education approaches and activities, as well as their role in health education. McCloskey (1969) has also observed this: "there is confusing diversity of opinions, ideas and feelings concerning health education, and particularly, health education of aborigines..."

The results of this study led the author to formulate two models of health education (Table 3) to represent two different approaches. It is hoped that discussion of the models could lead to a clarification of health education concepts and practices.

TABLE 3--TWO MODELS OF HEALTH EDUCATION

	Information-giving Model	Human and Community Development Model
Main features	"Telling people the facts" "Telling them what to do"	Involve people in solving their problems
Basic assumptions	People lack knowledge about health. Increasing their knowledge will lead to better health practice.	Relations between members of community and between the health worker and the community can be fostered and used for health-promoting activities.
Orientation	Usually individual oriented.	Usually group oriented.
Relationship between health workers and members of the community	Authoritarian type.	Mutual participation type.
Method of action	Decide what health knowledge people need. Initiate talks, films, distribution of pamphlets, etc. Arrangements regarding time and place made to suit the health worker. Formal approach to learning.	Understanding of people: their culture, social structure, assess their capacity for self-help, establish rapport. Involve individuals and leaders in problem-solving situations, act as a resource for health information when requested. Informal, non-directive approach to learning.

TABLE 3--TWO MODELS OF HEALTH EDUCATION, continued

	Information-giving Model	Human and Community Development Model
Involvement of aboriginal staff members	As interpreter, or transmitter of health information originating from health worker.	Develop their health role in consultation with the community.
Involvement of other professional people.	Limited, mainly for facts, visual aids, etc.	Extensive, as resource people to assist the community in discussions.
Assessment of results	Mainly for changes in health knowledge and less for health behavior.	Primarily in terms of the community's capacity to solve problems, quality of relations between the health worker and the community and participation in health activities. Secondarily, in terms of change in health knowledge.
Needs for training perceived by health worker.	Competence and knowledge in health matters. Skills in formal education methods and techniques.	Good understanding of people whether as individuals or as a community. Skills in human relations and community development process. Some knowledge of health matters.

Some salient features of the two models:

A. One stresses information-giving, and the other human relations and community development.

Research into human behaviour (Hochbaum 1958 and Knutson 1965) has shown that merely giving information is unlikely to lead to action, unless the readiness to act already exists. Moreover, western concepts of disease, such as the germ theory and individual responsibility for health, differ from traditional concepts of disease, and its management (Hamilton 1971 and Eastwell 1973).

Studies in human relations and community development (Cartwright 1951, Batten 1965) reveal that group influence is an important factor in attitude and behaviour change. By involving people in planning this change, resistance to new ideas can be reduced.

B. Authoritarian--non-authoritarian relationship

The nurse is generally regarded as a high status person, the "Sister", by the Aboriginal people. In her interaction with the aboriginal people, an authoritarian-type relationship tends to develop (Francis et at 1971). It is possible to bring about substantial changes in behaviour within a short period through an authoritarian approach. (Clements 1969) noted that child nutrition was better in a settlement where a highly regimented system was adopted. However, he questioned whether any permanent "learning" ensued, and at what cost in terms of human relationships.

GENERAL DISCUSSION

This study raises several pertinent questions:

Which model of health education is more appropriate for aboriginal communities?

Who should be involved in the health education program?

What type of preparation is needed for the health education role?

How can the Aboriginal people be encouraged to assume a greater role in health and health education programs?

Each of the above questions will now be discussed briefly.

A. WHICH MODEL OF HEALTH EDUCATION IS MORE APPROPRIATE FOR ABORIGINAL COMMUNITIES?

In answering this question, consideration has to be given to the following: How do the aboriginal people view learning in the traditional setting? How are new ideas and practices adopted by individuals in community? What is the policy regarding the advancement of aboriginal people? In the traditional setting, aboriginal people teach their young mainly through involving the young in various situations and activities like corroborees, food-collecting and hunting, pointing out social relationships with their privileges and obligations; by storytelling, and so on. This approach to teaching tends to be informal and more directly related to the "present" than the "future" situation, and the reinforcement to learning is immediate (Hamilton, 1970).

Studies on diffusion of innovations (reviewed by Rogers 1968) indicate that the adoption of new ideas tends to be related to certain personal, social and cultural factors, e.g., personal sources of information, especially from opinion leaders, are important in the spread of an innovation throughout a community; cultural beliefs in relation to "hot" and "cold" water can act as a barrier to the adoption of boiling (Wellin 1955).

Foster (1969) holds the view that new health behaviour has a good chance of being adopted by the community if it can be integrated easily into the existing pattern of behaviour. In the Aboriginal community, where the bonds of relationship are still strong, new health ideas and practices may stand a better chance of being adopted and maintained if these communication channels are used.

The human and community development model is consistent with the present policy of self-determination (Coombs 1972). Through participation in solving their problems the community can develop a greater sense of responsibility and solidarity (Nyswander 1956).

Assuming the validity of the above arguments, which strongly favour the human and community development model, should the information-giving model be discarded? Not at all, for the following reasons: Firstly, certain parts of the two models are not antagonistic. Concepts such as individual or group and community orientation, and authoritarian or mutual participation types of relationships are relative, being parts of a continuum. Through a better understanding of these

concepts the health worker can develop a greater sensitivity about her role.

Secondly, in practice, certain techniques used in the information-giving model may be used to enhance the relationship between the health worker and the people, or as a means of giving information to the people when they are ready for it. For example, a suitable film may be shown to supply certain health information, or survey and assessment techniques may be used as parts of the evaluation of the program.

B. WHO SHOULD BE INVOLVED IN THE HEALTH EDUCATION PROGRAMS?

With the present impetus for community development programs in the aboriginal communities, the nurse as part of the community development team can contribute towards such activities by:

1. adopting the human and community development model as her main approach,
2. working closely with other staff members in the health areas, and
3. participating in the training of aboriginal staff members.

As her educational training role expands, it would be extremely desirable to provide opportunities for full time health education work for the nurse who has the necessary qualities and experience (Stacy 1973).

C. WHAT TYPE OF PREPARATION IS NEEDED FOR THE HEALTH EDUCATION ROLE?

The findings of this study showed that most of the respondents were already aware that they needed preparation in two main areas:

1. how to work effectively in a cross-cultural situation
2. development of health education skills in human relations, community development processes, and educational methods and techniques.

WORKING IN A CROSS-CULTURAL SITUATION--The main problems are highlighted:

Communication--These arise from language difficulties (Lester 1972) as well as different beliefs, values and expectations. Learning the language, development of sensitivity towards other people's values and expectations, and obtaining feedback of how others perceive health workers are some ways of establishing a better rapport with the people (Keneally 1962).

Culture Shock--It is expected that some nurses may experience disorientation in varying degrees when they first arrive in an aboriginal community. Careful selection of nurses, an orientation program designed to bring about a more realistic expectation of the Aboriginal people and the nurse's own role, continuing administrative and social support for the new arrivals are some ways to reduce culture shock.

DEVELOPMENT OF SKILLS IN HEALTH EDUCATION

A health educator is a user of knowledge from the fields of social sciences, such as anthropology, sociology, psychology, education, etc. and the health sciences. Working in an aboriginal community, the nurse is likely to achieve more with a high level of human skills and a low level of medical skills than with the reverse (Hausfeld 1973). Education programs to prepare her in the areas of aboriginal customs and society, human relations, community development processes, and educational methods and techniques are of high priority.

D. HOW CAN THE ABORIGINAL PEOPLE BE ENCOURAGED TO ASSUME A GREATER ROLE IN HEALTH AND HEALTH EDUCATION PROGRAMS?

As discussed previously, the adoption of the human and community development model as the basic health education approach would lead to greatly enhanced involvement of the aboriginal people in the health programs. Concurrent with this approach, education programs to provide training for suitable aboriginal men and women in health and medical work should be expanded. Certain community development principles should be followed, e.g., involvement of the community in the selection of trainees, consultation with the community on the training program and progress of trainees, and continuing supervision of the aboriginal health worker by the local community representatives.

The preparation of the aboriginal health worker should include not only the medical skills, but also human skills as well, e.g., ability to identify and understand community problems,

including health and helping the community in taking appropriate action. The relationship between the nurse and the Aboriginal health worker will be a critical factor. Her role will include:

1. assisting the community in achieving a good understanding of the training program and the community's role;

2. acting as an advisor, and not the "Boss" of the aboriginal health worker;

3. imparting knowledge and skills according to the needs of the trainee and the community;

4. regarding the health worker primarily as a member of the community and consequently, promoting a good relationship between him and the community.

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WHAT DID THE JAPANESE FIND OUT

FROM

AMERICAN LITERATURE ON COMMUNITY HEALTH

ORGANIZATION?

By

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"WHAT DID THE JAPANESE FIND OUT FROM AMERICAN LITERATURE ON COMMUNITY HEALTH ORGANIZATION?"

by

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It is widely recognized among Japanese health professionals that what was called the "People's Organized Self-help Activities" until approximately ten years ago, and presently called "Community Organization for Health," originated in the health unions ("eisei-kumiai") of the early Meiji era in Japan. At that time, around 1880, there was a widespread cholera epidemic and people wanted to do something to fight against the disease.

For this purpose the health unions were organized; first in small areas of cities and then in rural towns and villages. This did something to prevent the spread of the disease. An important point to note is that the unions were organized not under any governmental or professional leadership, but by the people's own initiatives. The activities of health unions, supported by people's initiatives, continued until about 1897 when the Communicable Disease Prevention Act was promulgated by the national government. The Act contained an article stating that a mayor, or head of town or village, could issue an order to set up a health union and collect compulsory union fees when deemed necessary. Furthermore, subsidies were made available to the unions which were set up or came under this article.

After the promulgation of the Act, most unions were incorporated into the subsystems of government administration, thus taking the initiative from the people themselves. This was expedient for both national and local government officials, since government administration then was completely centralized; in other words, there was no local autonomy.

This situation was such until the end of the last World War in 1945. By this time more than 50,000 health unions, all functioning as subsystems of governmental administration, had been established all over Japan. They had county, prefectural(provincial) and national headquarters in accordance with adminstrative levels (the local health administration was executed by the police as well as by city, town, and village officials).

Although the unions' official purpose was only assistive to the government public health policies and activities, they did, however, play an important part in preventing communicable diseases such as typhoid fever and bacillary dysentry, in their own right. As a result, outbreaks of cholera were almost under control by the end of the Meiji era in 1912.

In 1948, when Japanese administration was under the control of General Healdquarters and the Supreme Commander of Allies Powers, (GHQ and SCAP), health unions were abolished by GHQ mainly because they were not democratic organizations. (Complete democratization of Japan was one of the main objectives of SCAP).

For several years after the end of the war, an important task for the Japanese Government's Ministry of Health and Welfare was to establish a network of health centers to render various kinds of public health services. The aim was one health center for 100,000 population, with the police no longer acting as public health administrators. Also, each prefectural government was equipped with a department of health.

Around 1950, new concepts and ideas of health education and community organization began to be introduced from the United States of America; (not by GHQ officials, but by Japanese officials). A few years later, a new type of "health union," or what was called "People's Organized Self-help Activities," was conceptualized chiefly by health officials of the national government.

Next followed a drive for public education; emphasis was laid upon democratic leadership, self-help and people's own intiative. It was helpful to the new concept of community organization when, through their own efforts, the people of a number of towns and villages in agricultural areas succeeded in eliminating mosquitos and certain flies. Similar examples encouraged and strengthened the spread of the new type of community organization for health in Japan.

From 1953, for roughly a decade, people's activities along the lines of the new concept of community organization were very active and fruitful in both rural and urban parts of Japan. The main health problems to be dealt with were bacillary dissentry, intestinal parasitic diseases, fly and mosquito control, nutrition, maternal and child health, dental health, and tuberculosis.

As already mentioned, emphasis was laid upon people's self-help and initiative in planning public health projects. But this did not mean that technical advice, assistance and services from the health center concerned, and other health agencies were excluded. However, the point of controversy was often who was to make the final decisions.

Since 1965, great socio-economic changes have taken place, chiefly as a result of industrialization in both urban and political areas, and this has made it difficult for community organization to continue. For instance, few people are willing to act as community leaders, even in agricultural areas; farmers are often busy working at two jobs, agricultural and industrial; many housewives are part-time workers of near-

by industries; and young people leave the country to find work in the cities. Today, many health professionalsfeel community organization in Japan is deadlocked.

PURPOSE OF STUDY

The authors believe that community organization is fundamentally indispensable and important for health and health education; that community organization is psycho-physiologically based on the instinctive human desire to belong to a group; that community organization is an essential and necessary part of the human community and plays an important role in mental health. We feel it necessary to completely reassess the potential of community organization; for this we need to ask the basic questions: "What is community organization?" "What are its basic concepts?" "What are its essential elements?"

METHOD OF STUDY

In order to research the essential elements of community organization, an analysis was first made of American books and articles published between 1941 and 1966 on the subject. Journals from which articles were selected are as follows:

American Journal of Public Health (A.J.P.H.)
Public Health Reports)P.H.R.)
Health Education Monographs (H.E.M.)
Health Educators at Work (H.E.W.)
Journal of Health and Social Behavior (J.H.S.B.)
International Journal of Health Education (I.J.H.E.)

69 articles and 24 books seemed related to community organization; summaries were made of each (by the authors and two colleagues), and discussions then followed before16 articles and 8 books were finally selected as distinctly relating to the area of research, i.e. the basic elements of community health organization. Therefore, literature on methodological or technicalaspects of community organization was not considered relevant. Examples of the literature are listed in the Appendix.

RESULTS AND DISCUSSIONS

The following ten items were extracted from the readings and considered as necessary factors of community organization:

1. PROBLEM SOLVING (or meeting needs): emphasized as the purpose or effectivenees of community organization.

2. SELF-HELP: people's self-help in community organization

3. PARTICIPATION in community activities by people: ideally people's participation in community planning

4. CO-OPERATION: co-operation among people (not among agencies).

5. UTILIZATION OF SOCIAL RESOURCES: emphasize well-planned utilization (including creating) of social resources for meeting needs.

6. USE OF VOLUNTEERS: could be included in above item 5.

7. CO-ORDINATION: co-ordination among programs and agencies.

8. FORMATION OF COUNCIL: more complete type of co-ordination.

9. EDUCATION: emphasize educational objectives or functions such as health education, adult education, education in democracy, etc.

10. NON-OFFICIAL NATURES: emphasize non-official natures or characteristics of voluntary agencies in community organization in contrast to official, government agencies.

The table on page 6 shows the distribution of essential elements of community organization discussed by American authors. As the number of articles from which the elements were drawn is limited, it seems unfair to make any statistical observation about the numbers in the table. However, the following two points could be mentioned:

1. Compared with other items (elements), items 4, 5, and 6, were emphasized less often, perhaps because item 4 (co-operation) was taken for granted in community organization, and 5 and 6 had been emphasized chiefly in the field of social welfare.

2. Judging from the distribution of the elements by five-year intervals, there was no shift or change of emphasis in the elements in the U.S.A. during the twenty-five years. This seems to indicate that these elements are common or universal through a long period of time as well as for any culture or country.

Table: Distribution of Elements by Five-Year Interval

Year \ Element**	Number*	1	2	3	4	5	6	7	8	9	10
1941-45	2	1						1		1	1
1946-50	7	1	2	1	1	1		2	4	2	2
1951-55	6	2	2	2	1	1		1		2	
1956-60	4		1	2			1		2		1
1961-66	5	1		1				2		1	2
Total	24	5	5	6	2	2	1	6	6	6	6

* Number of articles. One article often contains more than one element.

**Essential elements of community organization are as follows:

1 Problem solving
2 Self-help
3 Participation
4 Co-operation
5 Utilization of social resources
6 Use of volunteers
7 Co-ordination
8 Formation of council
9 Education
10 Non-official natures

The ten elements, however, stand for different aspects or levels of community organization. For instance, items 1 and 9 mainly concern the purpose or objectives of community organization. The authors are of the opinion that item 1 is more direct while item 9 is less direct or indirect in the sense that the latter (education objectives) are usually achieved through the former (solving some health problems).

Item 2 is related to a different aspect of community organization from those of items 3, 4, 5,6, and 8; item 2 is a more basic or ideological concept. Item 10 also deals with a different kind of aspect than the others.

It might be needless to mention that the authors' cultural background as Japanese affect their standpoints in making this sort of discussion and in drawing conclusions.

From a practical, experiential standpoint, items 1 (problem solving), 3 (participation), 4 (co-operation), 5 (utilization of social resources) and 7 (co-ordination) seem to be the most important elements of community organization.

SUMMARY

Community organization in Japan has met a deadlock mainly because of great socio-economic changes taking place since around 1965. In order to find out the essential element of community health organization, analysis was made of American literature related to community organization. From a practical, experiential standpoint, the most important elements of community organization were found to be: problem solving; participation in community activities, particularly in planning; co-operation among people; utilization of social resources; and co-ordination among programs and agencies.

APPENDIX: Examples of Literature Used

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A MODEL FOR EDUCATIONAL INTERVENTION:

ETHICAL AND SCIENTIFIC DIMENSIONS

By

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A MODEL FOR EDUCATIONAL INTERVENTION: ETHICAL AND SCIENTIFIC DIMENSIONS

by

SNEHENDU B. KAR

INTRODUCTION

This paper reviews several ethical and scientific issues relevant to an intervention through communication and education inputs for changing a health behavior. Based upon this review, the author presents a model for a diagnosis of the determinants of a health behavior and for planning for interventions for changing such a behavior. The content of this paper is organized in two sections: 1) Ethical Dimensions of an Intervention, and 2) A Model for Intervention Strategy. The illustrations used in this paper are primarily derived from the literature on fertility behavior and interventions, simply to insure a consistant and relevant set of behavior as a frame of reference; many other sets of behavior could have been used for this purpose. Although the model is based upon an analysis of fertility behavior, the issues relevant to the diagnosis and interventions for changing a fertility behavior would be equally valid for interventions in many other areas of health behavior as well. The validity of this model, therefore, transcends fertility behavior to a wide range of human behavior.

A basic question an intervention strategist needs to answer is under what conditions an intervention strategy is both ethically justifiable and scientifically valid? It is likely that a scientifically valid and effective means for intervention for changing behavior may not be ethically and morally acceptable to the persons responsible for planning a program or to the people whose behavior is to be changed; on the other hand, an intervention plan based upon very scrupulous ethical standards and humane considerations may be highly ineffective. It is therefore essential that the justifications of an intervention strategy be evaluated by two inter-related but separate sets of standards: ethical and scientific standards.

1. ETHICAL DIMENSIONS OF AN INTERVENTION

Considerable difference in opinion exists among the behavioral scientists and the professionals about the nature and extent of control of human behavior which is justifiable, and the standard of values and ethics which should be used as a guideline for intervention decisions. Kelman (1969), in his discussion of the ethical dilemma of a social scientist concerned with the manipulation of human behavior, has very aptly summarized the central problem as follows:

"The two horns of the dilemma then, are represented by the view that any manipulation of human behavior inherently violates a fundamental value, but that there exists no formula for so structuring an effective change situation that such manipulation is totally absent (p. 584)."

The complexity of this dilemma is clearly articulated in a symposium by Rogers and Skinner (1956). In this very lively and pertinent debate, Rogers and Skinner present their differences on the standards which can be used to arrive at a decision as to the appropriateness of intervention for control of human behavior.

Skinner maintains that control of human behavior, however unpopular and unpleasant it may appear to be, is inevitable, and that as long as human beings are organized in social groups such control will continue. According to him, a control is justifiable as long as the controller is not motivated by selfish need; the controller has the professional competency; and as long as the controller has legitimate ascribed or delegated rights to exercise such control.

This strategy would require 1) more careful and acceptable definitions of professional roles, and 2) ethical as well as professional preparation of teachers, government officials, health professionals, behavioral scientists, and legislators to perform their roles more effectively.

Rogers agrees about the inevitability of some control, but argues that several questions central to the ethical dilemma are unsolved and there is a lack of clearly articulated and acceptable standards of values which could be used as a guideline for controlling human behavior. Consequently, it is undesirable to allow a small group of individuals (e.g. professionals), to have the power to control other people's behavior and allow these professionals to answer these questions at their own convenience. Rogers (1956) believes that the answers to the following questions are central to this issue:

"Who will be controlled? Who will exercise control? What type of control will be exercised? Most important of all, toward what end or what purpose, or in the pursuant of what value, will control be exercised (p. 1062)?"

Callahan (1972) carries on this debate within the context of family planning and raises several ethical issues specifically relevant to planned intervention for the purposes of population

limitation, and suggests how the three dominant values (a. freedom, b. justice, and c. security-survival) can be operationalized for decisions for interventions. While individuals unquestioningly have the right to make their own reproductive decisions, they also have the obligation to respect and protect the freedom of others and they do not have the right to violate others' welfare by their own behavior. He further argues that when some individuals behave in such a way which threatens the other individuals' rights to these freedoms, the legitimate representatives of the society, such as a government, have the obligation to intervene to protect those whose rights are being violated.

Hardin (1968) in his discussion of "The Tragedy of the Commons," argues that if individual members of a society are allowed with complete freedom to benefit limitlessly at the cost of the commons, it will eventually bring ruin to the entire society. Under such conditions, society should introduce controls, and demand that individual members bear the costs and consequences of their own decisions and behaviors.

Both Callahan and Hardin advocate the need for some form of control, but the solutions proposed by them may be debatable to the various readers of this paper. Hardin proposes a democratized control or a control based upon mutual consensus. To some readers, it may appear too idealistic and simplistic. Callahan proposes that when the rights of some individuals are violated by others, the legitimate representatives of the people (government) have the obligation to intervene to protect the rights of the victims. According to him, government should not only introduce voluntary family planning measures, but if such measures fail, it would be necessary to go beyond family planning. The right of a few government officials to decide when and how a citizen's behavior should be controlled may not be an acceptable solution to most of us, particularly during the post-Watergate decades.

What then are the criteria through which we as health professionals can resolve the ethical issues of interventions and provide moral justifications of our actions? The author believes that "consumer participation" and "informed consent" of those whose behavior is to be changed through a planned intervention constitute the two key criteria to deal partially with the ethical issues raised in this paper. The profession of Health Education must deal with the problem of operationalizing these criteria, and the profession should be more serious in the future about the articulation and internalization of a set of "Ethics of Health Education". Those of us who share Dorothy Nyswander's philosophy and values cannot shy away from this challenge any longer. Let the remaining years of this decade be the years of "Ethical and Value Clarifications of Health Education Profession."

II. A MODEL FOR INTERVENTION STRATEGY

While ethical justification attempts to answer when an intervention is justifiable from ethical and moral standpoints, a scientific justification attempts to answer, "what types of interventions are more effective for a pre-determined purpose?" A scientific justification for an intervention thus must begin with a sound understanding of the causes of the particular behavior and then deal with the effectiveness and efficiency of various alternatives available.

This paper presents an analytic model for 1) diagnosis of determinants of health behavior, and 2) interventions for changing health behavior in a predetermined direction. The fundamental assumption underlying this model is the multiple causality of human behavior. The literature abounds with examples in which students of human behavior have attempted to explain human behavior in terms of one major causal factor which Allport (1959 p.9) terms a "simple and sovereign" theory. Although there is a general consensus among the behavioral scientists today that human behavior cannot be explained through such simple and sovereign theories, variations of simple and sovereign theories still dominate the scene. Kaplan (1964), based upon his observations of the behavioral scientists at work, formulated "the law of the instrument," which is stated as:

> "Give a small boy a hammer, and he will find that everything he encounters needs pounding. It comes as no particular surprise to discover that a scientist formulates problems in a way which requires for their solution just those techniques in which he himself is specially skilled (p. 28)."

This "law of the instrument" underscores the tendency of a behavioral scientist to use his own skill regardless of whether such a skill is valid for solving the problems he confronts. This tendency is widespread in terms of selection of a conceptual framework for a study design, decisions on methodology, analysis and interpretation of data, and conclusions.

A review of the most frequently used strategies of interventions in family planning in several countries reveals the amazingly high frequency of simple and sovereign assumptions about the determinants of fertility behavior. Some of these causal assumptions and their likely expressions in family planning are presented in Table 1. An examination of the various categories of interventions in Table 1 would lead to the conclusion that interventions primarily based upon different simplistic causal explanations of human behavior are likely

TABLE 1

INTERVENTION STRATEGIES BY SIMPLE CAUSAL ASSUMPTIONS

Simple and sovereign causal assumptions	Possible interventions
1. empirical-rational assumption: the basic assumption is that men are guided by reason and knowledge.	1. intervention characterized by heavy emphasis on information dissemination, formal training, education and appeal to national and societal benefits from family planning.
2. normative-re-educative assumption: the basic assumption is that man is essentially active and constantly striving for need satisfaction. However, his behavior is guided by socially structured norms, institutions and existing communications and social influence.	2. intervention based upon this assumption would emphasize creating new sets of social norms, utilization of social systems, greater dependence on reference groups and an attempt towards internalization of norms and values. Such an intervention would aim toward greater utilization of social system, institutions, leadership and population education.
3. power-coercive assumption: the basic assumption is that the effective way of changing behavior is neither through a rational appeal nor through a process of creating sets of norms: rather through external sanctions and controls. Such control could include moral, economic, political or physical coercions or sanctions.	3. intervention based upon this assumption would emphasize legislative measures, rewards for conformity and punishment for non-conformity, appealing to sense of guilt or morality or arousing a high level of anxiety and fear by exaggerating or even distorting ill-consequences of un-planned families and population growth.
4. hedonistic and materialistic assumption: the basic assumption is that man is primarily motivated by the pleasure principle, striving for comfort and obsession with material possessions.	4. intervention based upon this assumption would emphasize luring people with monetary and material incentives, providing free contraceptive facilities, and on the convenience of obtaining these services.

Note: the first three assumptions of column 1 of this table have been adapted from Chin and Benne (1969).

to vary significantly and may be indifferent to the true causal factors of a behavior. Such efforts are more likely to be ineffective than an intervention based upon a careful diagnosis using a multiple causality or a systems model of behavior.

The diagnosis model presented in this paper (Fig. 1) is based upon an assumption of multiple causality of a behavior and presents a systems approach for analyzing the determinants of this behavior (as against a simple or sovereign or linear approach). An attempt to explain a behavior entirely by using one of the four subsystems while ignoring the other three is likely to lead to a faulty or at best distorted description of the reality similar to the description of an elephant by five blind men, each of whom had sampled only one limited area of the elephant and ignored the others.

The model (Fig. 1) proposed for diagnosis of determinants of health behavior consists of four subsystems: 1) cultural and political, 2) social-structured and economic, 3) socio-psychological and intra-personal, and 4) environmental and situational. According to this model, the decision to accept or reject a health measure can be caused by either one or more or all of the four subsystems (categories of variables), and unless a study of the determinants of a behavior systematically explores causal factors in each of these areas, the conclusions are not likely to be sound and valid. The nature of interactions (of the factors within each) of these subsystems would determine the initial decision to adopt or reject a health measure. If the initial decision is favorable, a trial action or trial adoption may follow. If the experience with the trial adoption is gratifying, it is likely to lead toward a stable or sustained practice. On the other hand, if the experience with the trial adoption is unsatisfactory, this will reinforce the initial hesitations and would cause a discontinuation.

It is true, however, that not too many behavioral scientists can treat each of these subsystems with an equal degree of sophistication in their own studies. Depending upon their own theoretical frame of reference, they are more likely to give preferential treatment to these subsystems. The significant thesis of this model is that a behavior is determined by multiple causes which can be categorized under four subsystems, and, therefore, a research to determine the causes of behavior which does not include these four subsystems is inadequate. The principle to be used in such a design is to formulate sets of alternative hypotheses to test the influence of various causal factors belonging to these four subsystems rather than to test a single set of hypotheses which atrribute the behavior to one category of causal factors

(either cultural, or social structural, or psychological, or environmental).

This model excludes several categories of determinants (subsystems) which many students of human behavior would consider very pertinent. Some of these are: genetic and hereditary determinants, physiological and biological determinants, and unconscious or subconscious determinants. The classificatory principle used to exclude these (and other) subsystems is that they are not amenable to change through educational and communication interventions and therefore are beyond the scope of the paper. Several such subsystems have been excluded from this model not because they do not influence behavior, but because they are not within the scope of diagnosis and intervention by behavioral scientists and specialists in communication and education.

It would be highly pertinent to indicate the precautions that should be followed while using this mode. First, behavioral scientists are usually trained in specialized disciplines and therefore are not adequately prepared to use a holistic approach. The emphasis on specialization has the inevitable consequence of narrowing down the area of competency, but it increases skill within a given area of specialization. As a result, very few behavioral scientists would be skilled enough to do justice to all four subsystems and treat them with equal competence. However, this limitation can be overcome by involving a multi-disciplinary team for designing a study which uses such a model.

The involvement of the multi-disciplinary team is primarily needed at the initial phase for conceptualizing and designing the operational strategy of the research project; and once the methodology and the design are developed, competent behavioral scientists could implement the project. The critical point, however, is that the original conceptualization and operational design should involve those behavioral scientists who are competent to deal with the various subsystems, and formulate hypotheses and measurement devices to obtain necessary data to examine the relationship between various causal variables and the behavior being studied.

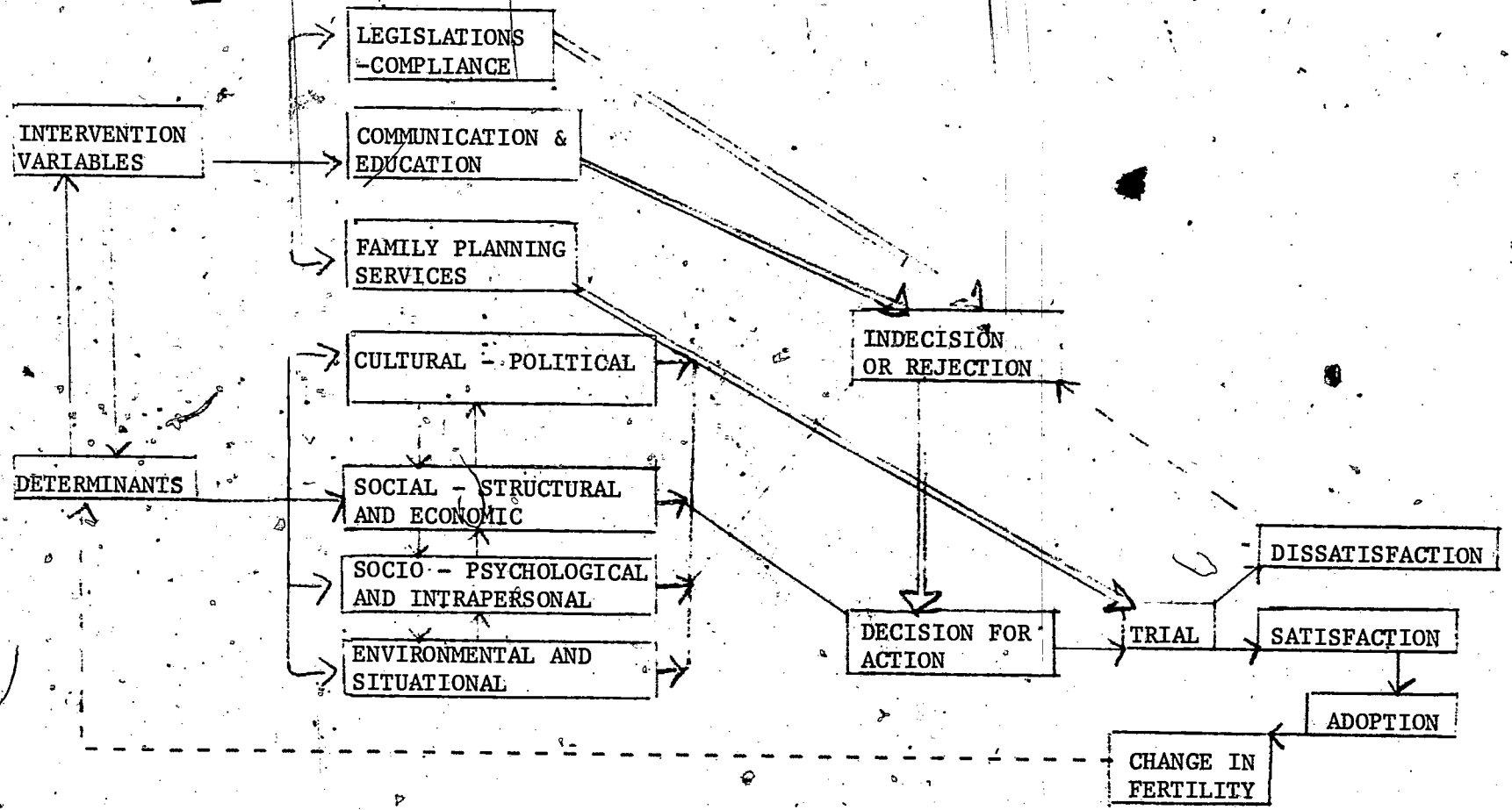


FIGURE 1

A MODEL FOR INTERVENTION DECISIONS

LEVELS OF INTRAPERSONAL INTERVENTIONS

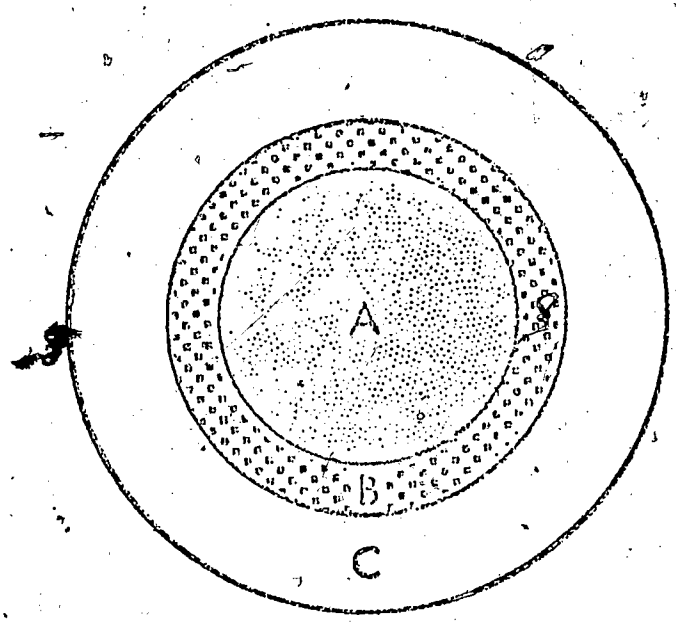
In order to plan an effective communication intervention, the next issue one should deal with is "what level of intrapersonal and psychological change is necessary to produce the desired behavior change?" The levels of intrapersonal and psychological changes at which communication intervention can be directed may be conceptualized as a continuum ranging from the primary, intermediate and tertiary psychological characteristics (Fig. 2). The primary intrapersonal variables include basic personality traits, unconscious and subconscious psychological determinants, basic and stable motivational structure, fundamental belief systems and core or dominant values of the individuals. It is assumed that not only is it most difficult to change these primary determinants but, a change in any of these primary determinants is likely to produce a larger magnitude of change including other determinants. The cost for initiating such change and the consequencss of such changes on other aspects of psychological characteristics and behavior is considerably greater. An intervention which aims at changing the primary variables must be very carefully evaluated in terms of ethics, cost, effectiveness, consequences, and obligations of the persons who initiate such changes. The intermediate intrapersonal determinants consist of reasonable stable and learned motivates, attitudes, preferences, secondary beliefs, and institutionalized norms which govern an individual's behavior. Changing these intermediate intrapersonal determinants will be relatively easier than changing the primary determinants. The tertiary intrapersonal determinants include those cognitive and affective variables which are transitory in nature and yet exert influence on a behavior such as information level, knowledge, opinion, and tentative beliefs and attitudes related to issues which are not deeply rooted in the primary psychological determinants. As compared to the other two categories, the tertiary determinants are easier to change.

A careful analysis of various situations in which a behavior can be changed through various interventions seems to indicate that it is not always necessary to change primary intrapersonal characterictics; often behavior can be changed by initiating changes in the peripheral characteristics of the individuals. Table 2 presents a conceptual scheme for utilization of various intervention models depending upon the types of changes in the causal factors which are necessary for changing fertility behavior.

The first column of Table 2 presents five types of interventions. The columns two, three, and four present categories of causal factors which may determine the particular behavior which is to be changed

FIGURE -2

LEVELS OF INTRAPERSONAL DETERMINANTS AND INTERVENTIONS



Note: A: Primary intrapersonal determinants
B: Intermediate intrapersonal determinants
C: Tertiary intrapersonal determinants

by a particular intervention model: Column two is entitled "Motivation" which includes all those inner psychological factors which create a decision for a change in order to achieve a particular goal. The title of the third column, "Cognitive-motor skills," is used to include the knowledge and specific skills which are necessary to adopt means for achieving a particular goal. Column four is entitled "Accessibility of means" and includes all those situational environmental factors which determine the accessibility of the means necessary to achieve the particular goal. The plus, minus or neutral sign within each cell indicates the positive, negative, or neutral influence of these causal categories. Each of the models for intervention, presented in column one, is valid under the circumstances and a combination of causal categories presented in Table 2.

TABLE 2

		CAUSAL FACTORS	
INTERVENTIONS	MOTIVATION	COGNITIVE motor skills	ACCESSIBILITY of means
INFORMATIONAL MODEL	+	o −	+
INSTRUCTIONAL MODEL	+	− o	+
CONSONANCE MODEL	±	±	+
EV. SITUATIONAL MODEL	+	+	−
MOTIVATIONAL MODEL	−	+	+

The informational model of intervention is appropriate when there is a positive motive to achieve a goal and when there is an accessibility of the means necessary for achieving the goal, but the persons cannot act because they lack necessary information or skill. In such cases, it is a waste of communication effort to try to create a motivation since it already exists; it would be an equally wasted effort to try to change the environment. An appropriate intervention should attempt to provide relevant information or skills which will enable the person to reach the goal. An example of such an intervention would be to inform and instruct motivated persons to take precautionary measures during an epidemic or disaster warning.

The instructional model is appropriate in ways similar to those of the informational model, except that in the instructional model the intervention would be much more intensive and prolonged to develop more complex cognitive structure and skills. Under these conditions, the person is highly motivated to develop a set of complex skills and competencies, he has the necessary resources and environmental and situational support to undertake intensive effort to develop complex skills, but he does not actually possess these skills. An example of such a condition would be a professional and formal educational program.

The consonance model is appropriate when the person's reluctance to accept a health measure is caused by conflicitng motives, values, attitudes, or beliefs. For example, under this condition, a woman may be highly motivated to regulate fertility, but simultaneously possess a high level of anxiety about the ill consequences of various contraceptives. Such a situation is characterized by strong conflicting motives rather than due to simple absence of a positive motive or a presence of a negative motive. An appropriate intervention strategy would be to remove the negative forces or to reduce the anxieties, worries, and unfounded concerns which prohibit the acceptance of family planning. It would be a wasteful effort in this case to repeat the virtues of a small family since the particular woman already is in favor of a small family. The central theme of this model is to reduce the dissonance or conflict by removal of anxieties, fears and worries and lead towards a state of consonance. Such strategy does not call for creating new motives; it calls for building upon the existing motivational system (strengthening) assisting positive motives and eliminating fears and anxieties which serve as self-preservation and defensive motivations).

The environmental and situational model is appropriate when non-acceptance is due to inaccessibility of service or absence of environmental

support and not due to lack of motivation, knowledge, or skills. Under such conditions it is unnecessary and wasteful to invest resource and efforts for changing motivational structure or providing information and skills which the person already possesses. An appropriate intervention under such conditions would be to increase the accessibility of services and to remove the environmental barriers which inhibit the adoption of family planning. High cost of contraceptives, inconvenience in obtaining necessary services and lack of adequate and dependable contraceptive measures are some of the factors which warrant an intervention through environmental and situational manipulation.

The motivational model is appropriate when non-acceptance of family planning is primarily due to an absence of a positive motive (desire for fertility control) or presence of a strong negative motive (desire for a large family). The non-acceptance under this condition is not due to a lack of environmental support nor the absence of adequate intensive input to create a strong desire for a small family and to overcome the strong negative motives when necessary.

On the basis of various studies in public health and family planning, this author is convinced that non-acceptance of a public health practice is not necessarily due to a lack of motivation for using modern health practices, nor is it due to strong negative motives or ethical opposition against such practices. High incidence of abortions in many countries, primarily in the countries of Central and South America, clearly demonstrates the strong motivation for controlling family size. Experiences with family planning programs in many developing countries also indicate that people are in general not opposed to the concept of limiting their family size. On the contrary, the majority of those interviewed in several hundreds of KAP studies in many countries indicate that the family size considered "ideal" or "desirable" by these respondents is significatnly lower than their actual family size. Ammost none wanted unlimited fertility, and most of the respondents wanted some limit on their fertility and were in favor of family planning. Yet, in spite of high level of awareness, and generally favorable disposition towards some form of family planning, the level of actual practice of contraception is very low (Ryder, 1971; Westoff, 1961; and Rogers, 1973). One of the major implications of this experience is that a low level of acceptance of family planning in such instances is not primarily due to the lack of a positive motive for fertility control, but rather due to the presence of strong opposing forces (e.g., misconceptions, fears, anxieties, apprehensions concerning the effectiveness and undesirable side effects of various methods; suspicion of the motives of the promoters and providers, etc.) which act as negative motives and cancel the influence of the positive motives.

The appropriate means for intervention for changing the fertility behavior in such instances would be to create a consonance or reduce the dissonance by removing or minimizing the negative motives. In most such instances, the author believes that it is not necessary to change the basic motivational structure for initiating a change in the fertility behavior. In some instances acceptance can be promoted by the informational model, in some by the environmental and situational model, but in most instances, the consonance model would be most appropriate to reduce conflicting psychological forces. The author believes that the most frequent and challenging problem a communication strategist has to deal with is that of non-adoption caused by a dissonance or conflict between positive and negative motives, knowledge, and attitudes; and such conditions call for a consonance model which attempts to eliminate or reduce the negative motivational forces and to utilize existing motivational forces rather than to restructure basic motivation.

The conceptual model presented in this paper consists of two major components: 1) a framework for analysis of determinants of a behavior, and 2) a pattern of interactions between the "determinant" and "intervention" variables (services, legislation and coercion, incentives, persuasive communication, etc.) It is suggested that the pre-intervention diagnosis of determinants of a behavior should be carried out by using a "system" model consisting of four subsystems or four categories of "determinants"(Fig. 1). Different categories of determinants may exert varying degrees of influence and the "force field" of these subsystems collectively determine the behavioral outcome. It is therefore important to ascertain to the extent as best as possible the relevant causal variables and their relative influences before a strategy for intervention is planned and implemented. Once specific intervention "inputs" are implemented, these "intervention" variables interact with the "determinants" and a new force field emerges. One of the central themes of this model is that, this new force field which within a social environmental context determines the final acceptance or non-acceptance of a health prescribed health measure.

In our model for the analysis of the determinants of a behavior, we suggested that the various subsystems interacting among themselves may produce one of two likely outcomes. When a person is psychologically ready, and when appropriate services are available, a trial adoption would occur. If the initial experience of the trial adoption is satisfactory, it will increase the chances of sustained adoption. On the other hand, if the initial experience of the trial adoption is unsatisfactory, it will reinforce the initial resistance, hesitation or indecision and the person is most likely to discontinue initial adoption. The new dimension added here emphasizes that the adoption

would depend upon the nature of interaction between psychological readiness (which in turn is determined by the four subsystems), and the accessibility of services (an intervention variable).

If a person is unwilling or not in a psychological state of readiness to accept a health measure (even when adequate services and environmental support for positive action exists), the primary and immediate objective of an intervention program would be to change the initial unwillingness to a state of psychological readiness or willingness. This objective can be achieved through one of or a combination of various intervention strategies such as legislative-coercive means, incentives-disincentives, increased accessibility of services, and persuasive communication and education efforts. The model presented in this paper is based upon a sustained and internalized behavior change and when the environmental conditions play supportive roles for a sustained change of the behavior, persuasive communication and education would be most appropriate means for intervention both by the ethical as well as scientific standards.

SUMMARY

This paper reviews some significant issues relevant to intervention through communication inputs for changing a health behavior. The author cautions against the bias introduced by the "law of the instrument," and suggests a model for an analysis of the determinants of a behavior consisting of four subsystems: a) cultural, b) social-structural, c) social-psychological, and d) environmental-situational. Such a diagnosis will enable a communication strategist to determine which or what combination of factors determine a particular behavior.

This paper also discusses the issues relevant to the two proposed standards of justification for an intervention. These are: a) ethical and b) scientific justifications. The author presents an analysis of various causal conditions and five forms of interventions pertinent to these situations, these are: 1) informational, 2) instructional, 3) consonance (resolution of conflicting motivations, attitudes, cognitions, etc.), 4) environmental-situational, and 5) motivational (changing in the motivational structure). It is suggested that in many or most situations, the non-acceptors of a health measure can be favorably persuaded through a consonance model, and that it is not always necessary to change the deeply rooted beliefs, values, and motives (primary intrapersonal variables).

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SOCIAL ECOLOGY,

HUMAN BEHAVIOR

AND

SOCIAL CHANGE

by

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SOCIAL ECOLOGY, HUMAN BEHAVIOR AND SOCIAL CHANGE

Richard Reynolds

> "I am not my life, my fate. Or, rather, I am not wholly that. I can turn from my actualities to my potentialities..." H. J. Blackham (1965)

Who we are - how we see ourselves and how we wish others to see us--may be entirely at odds with the way we are actually seen. Laing, et al., (1966) have pointed out that our experience of ourselves is also a function of how others experience us and communicate that experience to us. We may reject their definitions in favor of our own, but we have, nevertheless, experienced those definitions and can never entirely exclude them from a personal reality.

In a science of social ecology and in the practice of health education and planned social change it is useful to recall the words of W. I. Thomas (1923), "If men define situations as real, they are real in their consequences." Too often health professionals and other agents of social change have conveyed to the public - particularly to that part of the public that is economically or socially oppressed--a clear statement of value which places the professional in a position of superior worth. Members of minority groups, the poor and those who are otherwise disadvantaged learn early in life that they are somehow responsible for their sorry state.

This paper is about human behavior and social change as viewed from a social ecological perspective. As such it is concerned with the environment of ideas (de Chardin 1965) and its impact on human experience of reality and upon individual and group response to programs of planned social change.

The definition of health that underlies this paper differs from that of the World Health Organization[1] although it is not in disagreement with it.

> Health is a process of adaptation to internal and external environments - biological, physical, psychological and social--to achieve a state of dynamic equilibrium or homeostasis. Illness is the lack of internal and/or external balance or homeostasis. This balance might include physical, mental, social and spiritual dimensions. Therefore, health and illness are subjectively defined; how an individual feels about her/himself (well, not well) may not be congruent with professional opinion. (Reynolds 1973)

The definition of social change which I will use is that of Everett Rogers (1969) "Social Change is the process by which alteration occurs in the structure and function of a social system." The impetus for such change may be planned or unplanned; and its source may be internal or external to the society. For the purposes of this paper I will deal with planned programs of social change which are from the individual, group or community viewpoint--externally generated.

SOCIAL ECOLOGY AND HEALTH BEHAVIOR[2]

Although human ecologists make reference to a social environment and to an environment of ideas, the use of the term social ecology is not common. To my knowledge there is no definition in the published literature. The definition I will use is as follows: Social ecology is that part of human ecology concerned with the study of human kind's environment of ideas, a nonmaterial environment which is expressed through culture, social interaction, and individual and group definitions and interpretations of reality. From the community development and health education perspective social ecology is concerned with how peoples' beliefs and ideas are related to behavior in response to organized efforts at individual, group and societal change.

Not every human ecologist would accept the inclusion of the social environment as an appropriate area of study. Duncan and Schnore (1959), for example, say

> ...The behavioral scientist studies society as a system of social interaction and inter-personal relations, the culture theorist approaches it as a culture pattern or value system, and the human ecologist examines society as the functional organization of a population in process of achieving and maintaining an adaptation to its environment.

However, other writers (e.g., Edward Rogers 1967, 1968), would not rule out the social environment as an appropriate field of study for the human ecologist.

In 1967 Gilbertson and Rogers, in a response to a report of the Committee on Environment of the American Public Health Association, which had confined its definition of the environment to the physical and biotic components, moved that the Governing Council of APHA reconstitute the Committee so that a broader

definition could be formulated which would include the social environment. They suggested the following:

> Public Health is concerned with every factor in the milieu of man that affects, or may affect, his individual or social well-being. It is the sum of these factors that comprise the environment of relevance.
>
> The environment so defined embraces a spectrum ranging from the material world of physical and biological phenomena, at one extreme, to the abstract phenomena of the world of human ideas and thought at the other. Mediating between these extremes there exist the behavioral phenomena of culture and social interaction which also constitute important components of the environment at any given point in time.

The view of human ecology taken here is an active one. It sees each human as struggling to predict and anticipate outcomes of her/his acts (Kelly 1955). It presupposes that any one individual's knowledge of the world is incomplete and that "The relevant facts and forces include not only what is happening but also what men think is going to happen" (Vickers 1963). Put another way (Nietzche 1886)

> The answer to the question "What is that?" is a process of fixing a meaning from a different standpoint ...Fundamentally, the question is "What is that for me?"

CHANGING AND INFLUENCING HUMAN BEHAVIOR

In all efforts at social change we must deal with changes in self identity, self perception and self understanding on the parts of individuals and groups in the society. In seeking to affect change on the part of others, we must understand how people organize and reorganize their social knowledge of the world, including how they define the world, how they interpret the meaning of events in their lives, how they determine their courses of action and how they ultimately choose to act. These definitions, meanings and interpretations are arrived at by an individual bringing together his own unique experience of the world (his personal history and biography) with the commonsense understanding of everyday life which he shares with other members of his society (Schutz 1971). The commonsense understanding of everyday life is simply that "everyone" in the society "knows" to be "true" about how the society works and why (Garfinkel 1967). This understanding is derived through pro-

cesses of socialization (in families, schools, work, community life) in which the culture is transmitted from individual to individual.

However, because each individual views the world from his own unique position in the world and with reference to several primary and secondary groups to which he belongs (e.g., family, profession, community, ethnicity), we live in a world of multiple realities (Schutz 1971). No event has exactly the same meaning or appears exactly the same for each of the persons experiencing it. The fact that our worlds are not exactly congruent is in general not a problem--for the match is close enough, or appears close enough, for the participation to accept the shared experience of an event is the same for each. We are forced to question the reality of our personal worlds only when they come into conflict with another's view. Here are some obvious examples:

--inter-group conflict (e.g., Marxist and Capitalist interpretation of economics and social organization);

--professional versus consumer points of view in health planning;

--cross-cultural communication in community development.

In public health the social aspects of man's environment have not been left untreated. Hinkle and Wolff (1958), for example, collected data on episodes of illness experienced by 3,000 patients, investigating the relationship between illness and the patients' life experiences and social environment. They found that a small proportion of patients (10%) experienced about 25% of all illnesses, showing a general susceptibility to illness regardless of type, experiencing the involvement of several organs, and showing an increase in the number of psychic disturbances as the number of bodily illnesses increased. They wrote:

> ....one can scarcely escape the conclusion that, whoever a man may be, and whatever may happen to him, the way he perceives his life situation and reacts to it is an important determinant of his health. It is reasonable to estimate that at least one third of all the illness episodes that occurred among these people were influenced in their time of occurrence, or in their course, by the attempts of the individual to adapt to the events and situations that he encountered.

Public and private health professionals often see a person dealing with an illness from a clinical perspective that tends to classify the human on a medical (biological) rather than a social basis. For the human, however, the illness has personal and social meanings that may be of far greater consequence to him than the medical "facts." Mullen (1973), in a study of persons who had suffered a myocardial infarction, found that the meaning of a heart attack for the individual and her or his family could have serious consequences for more general social health and for the manner in which patients responded to regimens such as diet and weight control and restrictions on smoking, drinking, exercise and sexuality. For example, a patient who saw himself as self-reliant and whose hobby was working on his home, began shingling his roof soon after his return from the hospital. A young man who had always observed the rules of a healthy life--diet and weight control, no smoking or drinking, daily exercise (running five miles a day)--was left uncertain about what he could do to insure his longevity and worried about what would happen to his young son and his wife (some years younger and without job skills) should he die or become unable to work.[3]

> When the patient feels he is unable to do things which will help him control his future, anxiety is likely to be increased. He may then find it more difficult to behave in a way consistent with his physician's advice. And, a physician's recommendation may seem arbitrary if it is made without the patient's participation and if it does not take into account his unique needs and life styles. The meaning of "taking it easy" can be quite different for a young man with a family than for an elderly widow living alone.

Following a regimen may not be the heart patient's problem so much as creating a new life style and a sense of having a future.

In health sciences, one of the popular professional concerns is with patient compliance. But patients must and should comply only with what is best for them from their own perspective on self, family, their place in the social system and a sense of what is possible, all things considered. The kind of "educational" inputs which such patients might utilize include personal and family counseling as well as medical information and follow-up. These patient (human) needs require a redefinition of health on the part of professionals to include concepts of social, psychological, and spiritual well-being. Unfortunately, feelings and values related to self and to social life (marriage, family, friendships) are rarely a focus of educational programs or other efforts to change or influence human health behavior. The problem stated briefly is that the patient takes an ecologic (or

holistic view of her/his life condition and the professional a narrow, disease or symptom-oriented view. The latter view generally excludes elements of living that may be more important to the patient's overall social-psychological balance than his physiological well-being alone.

Broader social issues than individual health behavior are also involved. Many members of our society are seriously disadvantaged by reason of race, economics, or physical or mental impairment. Thus the meanings of a society and its institutions as ideas – freedom, opportunity, equality, definitions of economic, physical and social well-being - may vary greatly for groups and individuals within a society. A social system and how it operates have different meanings for those who rule and for those who are ruled, for those who have power and those who are powerless. Social scientists, health educators, and other social change agents have too often looked at disadvantaged groups and described them as apathetic and disorganized or used other stigmatizing adjectives to explain the disadvantaged's inability to change the conditions of their daily lives. In the environment of ideas "The imaginations which people have of each other are the social facts of society" (Cooley 1902).

In 1957, Sol Alinsky attacked the popular view of disorganized communities "populated by a demoralized citizenry existing in apathy and anonymity; a people neither caring for others nor expecting others to care for them."

> There is no such animal as a disorganized community. It is a contradiction in terms to use the two words together. . .The word community itself implies an organized, communal life; people living in an organized fashion. These people. . .may have experienced successive frustrations to the point that their will to participate has seemingly atrophied. They may be living in anonymity and starved for recognition. They may be suffering from various forms of deprivation and discrimination. They may have accepted anonymity and resigned in apathy. They may despair and feel hopeless about their children inheriting a little better world. From your point of view they may be presenting a very negative form of existence, but the fact is that they are organized in that way of life.

Alinsky concluded, therefore, that "the first function of community organization is community disorganization." By this he meant

that the old social forms and arrangements must be broken down so that the new may arise.

Put in the terms of social ecology, the "disorganized" community functions as an ecosystem with its own internal balance and external relationships with larger ecosystems. The life one leads in such an ecosystem may not be a good one but at least it is a life and there are mechanisms for survival. In order to bring about change that will allow for a more decent and humane life for all members of society, change agents must consciously accept the responsibility to undermine those elements in society which lead to oppression and the destruction of human dignity. When I worked as a community organizer in Richmond, California, one summer I learned a lesson about reality and about oppression and its forms of expression that I will not forget. A local industry had advertised the availability of summer jobs for high school students over a local radio station. A number of the members of a black youth group with whom I worked went to apply. Not only were they denied access to these jobs but the reality of their perceptions of the world was also denied. The firm said simply that it couldn't imagine how the young men could have heard a radio announcement that was never broadcast.

SUMMARY AND CONCLUSIONS

As I was writing this paper my teenage daughter asked me again what health education and community development are all about. She finds it difficult to explain how I earn my living. I gave her two brief answers--the first, as a social change agent and health educator; the second, as a social ecologist:

1. Health education as community development is a subversive activity.

2. Community development is trying to change the world without breaking it.

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[1] "...a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." (WHO 1946)

[2] This section is derived from a chapter of a work in progress, Readings in Human Ecology and Health Behavior, by Richard Reynolds and Paula Stamps (Eds.) 1974. See also Social Ecology and Health Behavior, unpublished paper presented at the Seminar in Public Health, University of Massachusetts, October 1973 (Reynolds 1973).

[3] These particular examples are discussed in Mullen's paper but in less detail. Reference to the original data was with her permission and reflects her interpretation and analysis.

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A PSYCHOLOGICAL COST-REWARD ANALYSIS

OF

THE DOCTOR-PATIENT RELATIONSHIP

by

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A PSYCHOLOGICAL COST-REWARD ANALYSIS OF THE DOCTOR-PATIENT RELATIONSHIP

by

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The concepts of the sick role (1,2,3) and sick role (4,5) or illness behavior (6,7) are basic to understanding preventive health behavior (8,9) and the doctor-patient relationship (10). The sick role can be conceived of in terms of 1) the rights and duties associated with illness as a social role, (2,3,11,12) 2) as a social phenomenon including the definition of illness (13,14,15,16) and deviance categories, (17,18) and 3) as a process over time involving personal and social decisions at specific stages in the continuum from the transition to illness, through treatment, and to recovery. (3,7,19,20,21) Several of these analyses of the sick role and the doctor-patient relationship are psychoanalytical in nature. Concepts of unconscious motivation, regression and transference are prominent. (11,20,22) More recently, others utilize detailed models of motivation and decision making related to modifying social and cultural variables. (7,23) While not to disregard the ultimate importance of these approaches, a general and simpler perceptual conceptualization might be valuable to both the researcher and practitioner by providing an additional easily applied frame of reference from which to evaluate their hypotheses and educational approaches.

Thibaut and Kelley attempt to develop such an orienting conceptualization by applying the basic pleasure-pain principle of motivation to the action of groups to analyze and predict group behavior through a cost-reward matrix. It is their contention

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that a relatively simple assumption as an analytical base will be "useful both as a guide to research and in contributing some social order and simplification to an increasingly bewildering congeries of fact." (24:1) This paper will attempt to use the matrix of Thibaut and Kelley to analyze some aspects of the doctor-patient relationship and the sick role. The patient is defined here as an individual who perceives himself to be sick to a degree that limits his capacity to function normally, or as an individual who seeks or receives medical services from a practitioner. The relationship will be analyzed primarily from the patient's point of view..

Although the interaction of individuals in groups can be described in many ways, Thibaut and Kelley distinguish only between the rewards an individual receives and the costs he incurs. Rewards and costs can be combined into a single measure of goodness of outcome for the relationship. It is assumed that an individual will remain in interaction with another individual or group only so long as his outcome compares favorably with some criterion of acceptability of outcomes that he has set. "At least two important kinds of standard for such an evaluation can be identified.....The comparison level (or CL), is the standard against which the member evaluates the 'attractiveness' of the relationship or how satisfactory it is. The second, called the comparison level alternatives (or CL_{alt}), is the standard the member uses in deciding to remain in or leave the relationship. The two standards are distinguished in recognition of the fact that circumstances may require a person to remain in a relationship that he regards as unsatisfactory.....CL is a standard by which the person evaluates the rewards and costs of a given relationship in terms of what he feels he 'deserves'. Relationships, the outcome of which fall above CL, would be relatively 'satisfying' and attractive to the member; those entailing outcomes that fall below CL would be relatively 'unsatisfying'

and unattractive.....CL_{alt} can be defined informally as the lowest level of outcomes a member will accept in the light of available alternative opportunities." (24:21)

"CL provides a standard against which an evaluation is made of how satisfactory or unsatisfactory the relationship is.....CL_{alt} provides a standard in terms of which decisions about remaining in or leaving the relationship are made." (24:80) CL equals what a person wants or thinks he should have. CL_{alt} equals what a person will have to settle for. CL refers to attraction, while CL_{alt} refers to dependency. The degree to which a person's outcomes exceed his CL_{alt} determines how dependent he is upon the relationship. A person can be highly dependent upon the relationship without it being attractive or satisfying if his outcome is below his CL, but higher than a low CL_{alt}. The further outcome falls below CL, the less satisfying and voluntary is the relationship.

The basic assumption underlying this paper's analysis of the doctor-patient relationship is that for most patients their outcome falls below their CL, but above their CL_{alt}. Therefore, the relationship is unsatisfactory and one of low power, of dependency rather than attraction.

A person's power in a relationship is determined in part by the availability of alternative relationships. The lower his CL_{alt}, the less power he has and the more dependent he is upon the relationship. Illness diminishes a person's power by severely limiting his capacity to function normally (provide rewards for himself and others) and reduces his CL_{alt}. Death, a perceived potentiality of illness for most people, is the ultimate curtailment of CL_{alt}. For the person entering into the doctor-patient relationship, illness has dropped his CL_{alt} perceptively. He enters a relationship far below his initial CL of health, but from which he has limited alternatives and is, therefore highly dependent. His power is curtailed drastically because his only other alternatives may be further incapacity or death.

Since a person's CL is achieved by comparing himself with others similar to himself,(25) the assumption of dissatisfaction is tenable to the extent that a person beginning an illness episode compares himself with healthy people. "If the sick role contains stages involving 1) the transition period from health to illness, 2) the period of 'accepted' illness and, 3) convalescence." (20:247), the patient's CL and dissatisfaction would be highest in the first and last stages. During the period of sick role assumption, the patient is more likely to compare himself with other patients and lower his CL. One might hypothesize that affection for the doctor and attraction to the relationship would be highest in this stage. Attraction to the relationship would show a positive correlation to the degree that the patient could see himself as belonging to the world of the sick. For the physician and hospital, the initially "good" patient is probably the one who accepts his illness state and lowers his CL to correspond to his condition. From this point of view, the problem of overdependency in convalescence could be conceived of as a refusal by the patient to raise his adjusted CL or recognize possibilities for increasing his CL_{alt} or choices.

Thibaut and Kelley define a relationship as nonvoluntary "when an individual is constrained to a relationship in which his outcomes are relatively poor and/or is excluded from alternative relationships in which his outcomes are relatively good. Furthermore, for the relationship to be nonvoluntary, the outcomes in the alternative relationship must be sufficiently favorable and sufficiently salient so that the individual finds himself below CL.....In stating that the individual is constrained to a relationship and/or excluded from alternative ones it is meant that the other persons are able to impose heavy costs on the individual if he tries to abandon his present relationship and/or enter another (more attractive) relationship. In other words, other persons are able to exercise fate control over the individual to enforce a nonvoluntary relationship." (24:186) If we substitute illness for other persons in the above quotation, we have a fair description of the doctor-patient relationship and the patient's sick role. To the degree that

the patient associates the physician with the forces of health and illness (or fate) over which the patient has no control, the doctor also has fate control. Many of the types of situations and behavior that Thibaut and Kelley associate with nonvoluntary relationships should be apparent in the doctor-patient relationship.

Nonvoluntary relationships are characterized by deprivation and frustration. Anyone who has been a patient in some hospitals should be familiar with the emotional deprivation involved in surrendering one's individuality and familiar possessions to the impersonality of the hospital gown and routine. One's repertory of behavior is reduced while his life space and the variety and amount of social and physical sensory stimulation is reduced. The typical adjustment to this kind of deprivation is a lowering of CL.(24:174) If Lederer's interpretation of the sick role is correct, this is actually what happens when one accepts his illness.(20) It may be that what is regarded as common regressive behavior associated with the shock of illness is (in part) the patient's lowering of his CL by decreasing the saliency of his previous higher CL relationships.

An important part of many nonvoluntary relationships is the fate control exercised over the individual. As noted, the patient may perceive his illness and the treatment associated with it as exercising this sort of control. The indefinite nature of illness in regard to duration (time-perspective) and outcome (eventual CL_{alt}) will increase the patient's psychological costs. (24:178) In this situation, it can be expected that the patient will attempt to discover or develop behavior norms.

"For the person over whom fate control is thus exercised, the severities of deprivation and pain can be ameliorated--an adjustment can be made--if he can somehow have the power converted from fate control to behavior control, for example, by discovering a behavior-controlling norm to live by." (24:179) The norms that patients work out

with their doctors and many of the professional norms of the physician (dress, speech, etc.) could be viewed as security fostering devices. The compulsive and ritualistic behavior that some patients exhibit could be viewed as intrapersonal norm setting, or individual norm setting with an impersonal fate. (Religious ritual could serve the same function in an environment viewed as hostile or over which a person had little behavior control.) One interpretation of suicide (and there are many) could be an attempt to gain behavioral control in a nonvoluntary situation dominated by fate control.

From the physician's point of view, the patient has few or no alternatives but to enter the standard doctor-patient relationship. Doctors, however, often overestimate their power by refusing to realize that the patient may see alternatives that the doctor does not recognize. These alternatives include the refusal to notice symptoms or seek treatment, going to a medical quack, taking patent medicines, or committing suicide. To the degree that the doctor sees that alternatives exist for the patient, the perception of his own power is lessened. It would not be unexpected for some doctors to protect their perceptions of power by resisting an understanding of the frame of reference of the patient. This could be accomplished by classifying the alternatives as ignorant, fanatical, irrational, or unexplainable. (Many teachers who refuse to recognize or try to understand alternative goals of children whose motivational systems are incongruent with their own could be considered analogously.) Whether or not the doctor perceives the patient's alternatives as legitimate, it is the patient's perceptions that guide his behavior.

The patient's alternatives of not seeking treatment or going to a quack are all too commonly utilized. Why is it that the physician, backed with the powerful expertise of modern medicine, cannot establish a viable relationship with some patients? Why is the cost of the relationship sometimes so high that it falls below the patient's now meager CL_{alt} and he refuses to accept it? There are always present those basic costs associated with the illness and the fear of death that might

cause the individual to deny symptoms or reject treatment. These costs to a certain degree would be a given variable for any particular patient, although an unfortunate relationship could increase them. They form the raw liabilities with which the doctor must contend. There are also those costs associated directly with the doctor-patient interaction, related to, but not stemming directly from the patient's state of illness.

The statement of a patient who chose the alternative of a quack over a physician furnishes one example of the strictly interactive costs associated with some doctor-patient relationships. In speaking of her relations with a fraudulent cancer clinic, a fifty-six year old woman said, "They was all so courteous to me, I am going to stay with them no matter what else I do. The last doctor I went to was abrupt to me. He said I was in some stage of cancer and the way he said it scared me to death. Now these --- people said, 'Look on the bright side and enjoy life all you can.' This doctor took all the joy out of living because he scared me to death. Now with these --- people, I feel safe and happy. I went to the --- Clinic because I wasn't getting no satisfaction from my doctors. And well, like I said, I'll stick by them if it is the last thing I do. They helped me more than anybody. I feel better when I take that medicine, and when you start to hurting they give you something for it. They don't say, 'Well, that is just part of your illness, so we can't help it if you are sick at your stomach.' Or they don't say, 'You imagine you are hurting.' They give you medicine for anything that ails you." (26:285)

Within any relationship there are those problems dealing with tasks not directly related to the personal interaction of the group. Actions directed toward these problems can be called task functions. The curing of illness is the primary task function of a doctor-patient relationship. (To the degree that the emotional interaction of a doctor and patient directly affects the course of treatment, this distinction is too

gross. There are also those problems associated with the internal relations of the group, those "activities by which each member maintains his position above CL_{alt})." (24:275)

One might argue that while modern therapeutic knowledge has enabled the doctor to pursue his task functions more adequately, this increase in power may cause him to neglect his maintenance functions, an oversight in which no good medicine man or quack would be caught. The saliency of maintenance functions may not be high for some physicians because of their task orientation and power. They may not perceive a tendency to neglect these functions as particularly costly. The physician approaches the doctor-patient relationship with power, confidence, and a high CL_{alt}. In this position (as Thibaut and Kelley note), one has a tendency to emphasize the rewards and not the costs in calculating his interaction outcome. On the other hand, the patient comes to the relationship with little power. In calculating his outcome, he will rate the cost components heavily and the reward components only lightly. (24:89) A doctor may misjudge the patient's need for his performing maintenance functions. Also, from his position of power by virtue of his high CL_{alt} (there are more patients than doctors) he may not perceive them as being an important part of his professional role. In either case, the patient may find the relationship too costly.

If the patient approaches a quack, he finds a converse situation. Although the relationship may be ultimately more costly because the quack's curative powers (ability to fulfill task functions) are slight, the immediate cost aspect of the interaction is very low. Perception of initial low cost may be the deciding factor. "The early exploratory interactions are very important in determining the further fate of the potential relationship." (24:20)

Because the potential level of costs involved are high, there are no easy answers to the problems

associated with the doctor-patient relationship. (Are there ever any easy answers?) There are at least two approaches which might be profitable in light of the above analysis. 1) An emphasis on the preventive medical aspects of the doctor-patient relationship may induce the patient or potential patient to perceive the cost elements differently. Having a Pap smear is not a costly procedure when measured against the cost of cervical cancer, especially when the reward for early diagnosis includes a very high cure rate. Ideally, prophylactic behavior could be viewed as part of the CL_{alt} associated with illness by both the patient and the physician. This perspective would make the doctor-patient relationship slightly more voluntary because it would contain more outcomes above the patient's CL. 2) An understanding of group dynamics and the importance of maintenance functions would help the physician to cut the costs of the relationship. The types of functions the physician might perform would include "creating new rewards for the members, particularly affiliative ones,.....cutting costs by reducing anxieties, etc.,.....(and) cutting costs by improved communication." (24:276)

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SOME TECHNOLOGICAL DISTINCTIONS

IN THE

APPLICATION OF GROUP DYNAMICS FOR INDIVIDUAL CHANGE, ORGANIZATIONAL CHANGE, OR SOCIAL CHANGE

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SOME TECHNOLOGICAL DISTINCTIONS IN THE APPLICATION OF GROUP DYNAMICS FOR INDIVIDUAL CHANGE, ORGANIZATIONAL CHANGE, OR SOCIAL CHANGE

By

HELEN S. ROSS and PAUL R. MICO

INTRODUCTION

Most practitioners of the health education arts make use of groups of people toward the fulfillment of their objectives. Many were trained in the general methodology of group dynamics as a part of their formal academic preparation, or acquired the knowledge in short-term training workshops as a part of their own professional development. Those who haven't been trained, as such, have acquired some awareness of basic processes simply by being placed in leadership or educational roles in groups and learning how to cope with the problems or "getting things to happen." Certainly, most students being prepared for specific health education roles today study group dynamics as an important part of their professional preparation.

This is not to suggest that we health educators have any greater or lesser claim to the methodology as a part of our armamentarium than change agents engaged in other endeavors, although it is an important tool for us. It is rather that the focus on small groups, as a field of study and practice, is an almost universal preoccupation of western world behavioral science. One measure of this is the incidence of publications dealing with group phenomena. Golembiewski (1962) reported on a study conducted back in 1953, which counted the numbers of articles published over a period of 30 or 40 years; and termed as "explosive" then the number published in the short period following World War II. While we are not aware of any recent study which updates this particular census, there is every indication that the incidence of publications has risen rapidly ever since. Another measure is simply an observation of the commonplace role which groups have come to play in public life today. Is there anyone who is not more than casually aware of encounter groups, therapy groups, sensitivity groups, drug or alcohol groups, discussion groups, task force groups, management or health team groups, board groups, and the like? As we all know, health education personnel have used groups for years, in working with consumers and boards and staffs, and in the training of volunteers and nonprofessional workers. The trend is toward much greater uses in the future. As patient education becomes "popularized", the demands for these groups will certainly mushroom; and only the "tip of the iceberg"

can be seen, as the newer phenomenon of "developing health care teams" drifts into our field of endeavor. We would all agree that group dynamics is an important implement in our health education tool kit.

BASIS FOR AN INQUIRY INTO METHODOLOGICAL DISTINCTIONS

Recently, we (the authors) began to interest ourselves in the shared awareness between us that while groups are everywhere around and that while group dynamics is the method for working with them, the method as normally taught cannot be applied to all situations with consistent effectiveness. We have concluded that there are important technologic differences in how the method must be modified in order to fit certain distinctive problem situations.

While we have not undertaken an analysis of what various institutions teach their health education students, in the way of group dynamics, the course outlines we have seen suggest that most courses focus on basic group processes. Those "basics" are, for the most part: becoming conversant with group theory and research; stages in group growth and development and functioning; forces which influence group behavior; interpersonal processes; roles; and group norms (Napier and Gershenfield, 1973; Shaw, 1971; Luft, 1970; and Cartwright and Zander, 1968). These basics are essential, we want to emphasize, for anyone who wants to work with groups for health education purposes.

Our conclusions evolve out of similar backgrounds in behavioral science as well as in health education. The two of us have developed specialities in what we regard as the three basic technologies of applied behavioral science: 1) Personal Growth, 2) Organization Development, and 3) Problem Oriented Applied Behavioral Science. These three technologies have direct relevancy to our health education work and, for the purposes of this article, there are three specific areas of application in which we have modified group dynamics as a result of those technologic insights. One is in the area of patient education, where we see the primary issue as "individual change" and that groups can be made more effective by modifications which have their origin in the technology of Personal Growth. Another is in the area of health team-building, where we see the issue as "organizational change" and that groups can benefit from Organization Development. The third is in the area of board-training, where we see the issue as "social change" and the helping technology as Problems Oriented Applied Behavioral Science. We have

developed a conceptual model, shown in Figure 1, that guides our thinking; and a brief discussion of those thoughts follows:

MODIFYING GROUP DYNAMICS FOR INDIVIDUAL CHANGE

It is a generally-accepted premise that the primary responsibility for personal health behavior rests with the individual, and that change in health behavior requires an individual set of processes to be affected and internalized. This is especially true in the area of patient education.

For many exceptionally-motiviated individuals, a decision for changing health behavior can be triggered by a mere combination of a perceived threat-to-life coupled with a timely "behavioral prescription" to change dietary practices, or stop smoking, or undertake an extended, careful medication regimen. Not so, with most patients. They need the support of others until they can develop the self-sufficiency to carry through on their own.

Since the focal point of change, in most patient education strategies, is the individual patient, it follows that an individual-change oriented behavioral science technology would have much to offer. So, we have drawn much from Personal Growth. We suggest the following premise: the end result of the uses of groups in patient education is to enable individuals to develop and carry out "life plans" designed to enhance their personal health behavior.

Personal Growth is a term for "experience-based learning", sometimes referred to as sensitivity training, human relations training, or T-Groups (in which the "T" stands for "training"). It is "an educational strategy which is based primarily on the experiences generated in various social encounters by the learners themselves, and which aims to influence attitudes and develop competencies toward learning about human interactions. Essentially, therefore, laboratory training attempts to induce changes with regard to the learning process itself and to communicate a particular method of learning and inquiry. It has to do with learning how to learn (Schein and Bennis, 1965)."

Patient-education groups benefit, then, when they take on some of the characteristics of a T-Group. Patients need to be helped in dealing with their anxieties, in exploring their basic needs and values, in getting authentic feedback which can help them to see how

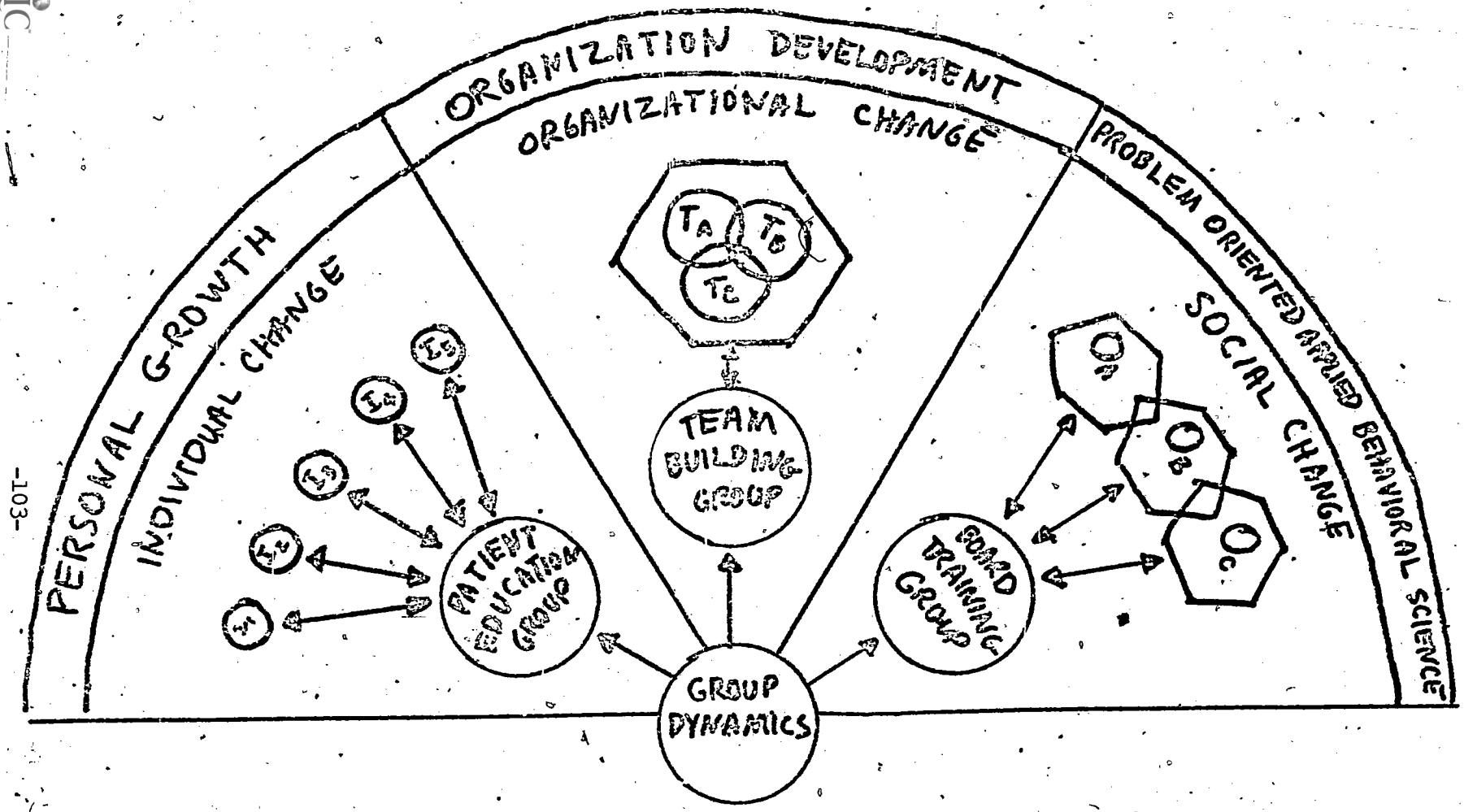

FIGURE 1. MODEL: APPLICATION OF GROUP DYNAMICS FOR INDIVIDUAL CHANGE, ORGANIZATIONAL CHANGE, OR SOCIAL CHANGE.

come across to others, in getting confronted around the inconsistencies between their thoughts and actions, in learning how to experiment with new behaviors, and in the risk-taking that is inherent in the development of caring, trusting relationships with others. The strategy is to use the group form to create learning conditions of individual health behavior change. The "bridging device" which we have found to be useful, in moving from the group stage to the individual action stage, is Life Planning. The Life Plan is a structured procedure, modified by us specifically for patients, which helps the individuals set goals for new health behavior, develop strategies for how they plan to carry out their new behavior, and build a "support system" to keep them on the courses of action they develop for themselves.

It is the "T-Group" aspects of Personal Growth that need to be incorporated into group dynamics when applied to patient education. Not only are these special processes different from "regular" group dynamics, but the "trainer" skills and insights needed by the health educator are different from those ordinarily learned in group dynamics.

MODIFYING GROUP DYNAMICS FOR ORGANIZATION CHANGE

One of the problems facing health care organizations is how to better organize their personnel resources in order to deliver the increasingly complex and comprehensive health services needed by consumers. One response is the formation and functioning of health care teams. While not a new idea in the health field, the movement towards operationalizing this concept throughout the industry has been gaining rapid momentum of late. This means that the need for the training and development of health teams will increase rapidly also.

We define a health team as follows: it is a special grouping of individuals drawn together from within a larger organizational context; whose mission and experience must be interrelated with those of the organization and its other teams; whose members possess different but complementary resources and skills, and perform them in separate but interrelated roles and functions; who are bound together by adherence to a common set of norms or standards; and whose resources must be delivered as a result of a well-defined strategy and procedure, if the basic tasks are to be carried out and if the team objectives are to be achieved.

The focal point of change, in team-building, is an organizational one. A team cannot, or should not, operate in a vacuum. The beha-

vioral science technology for organizational change is Organizational Development, or OD, in which team-building is a major method. The premise on which we base our thinking, then, is as follows: The end result of the uses of groups in team-building is to enable organizations to change in the direction of attaining the goals they have established for themselves. Underlying the OD process is "Lewin's notion that individual and group change is most effective when norms or standards regulating behavior are changed. When a norm is changed, group members change their behavior as a function of social pressures and their desire to conform to the new norm. Attempts to change group or organizational behavior by changing individual behavior often result in resistance to change, particularly when an individual percieves that the change is not endorsed by his peers. Thus, the primary focus in OD is normative change; individual change is simply a by-product (Burke and Hornstein, 1972)."

Team-building utilizes techniques such as data-feedback, for diagnozing the effectiveness of a groups' work procedures and interpersonal relationships; changing organizational structures and procedures, in order to improve group functioning and increase task accomplishment; training for improving role performance and for improving the processes of goal-setting, communication, decision-making, and problem-solving; the creative management of conflict, in the search for ways to maintain interdependent collaboration; inter-team and intra-organizational problem-solving; line-management relationships; evaluative measures such as "performance rating" and "cost-effectiveness"; and "third party" consultations and interventions. Team-building training and technical assistance should be provided over an extended period of time, and should move from team issues to organizational issues as it goes.

It is the concentration of the organizational context within which the team operates that guides how the group dynamics should be modified, along with the heavy emphasis on the team's task accomplishments and the technical assistance which it may need in order to restructure its operational procedures for carrying out its tasks. OD is an important professional specialty today, and those who would do team-building can learn much from the technology.

APPLYING GROUP DYNAMICS FOR SOCIAL CHANGE

Just as a health team cannot operate effectively in an organizational vacuum, neither can a health care organization operate in isolation from its social context. Many external forces impinge on it: the rising costs of health care, and the conflicting pressures of the demands for more and better services and for reducing costs, at the

same time; the rising growth of health consumerism, and increasing confrontations between consumers and providers; political actions to reshape the overall organization and delivery of health care services; equal opportunity and affirmative action programs; interrelatedness of health and other human resources; responsiveness of institutions to social and cultural concerns; community control; unmet health needs; ecologic threat; and uninformed citizenry.

One mechanism used to help organizations become more interdependent in this respect is the formation of groups of citizens who can operate as "boards." The potential use of boards for the development of collaborative, interdependent relationships between and among organizational systems -- between providers and consumers -- can be a major strategy for social or macro problem-solving. The behavioral science technology for this is called Problem Oriented Applied Behavioral Science, or PO-ABS. One of us, Mico, has been playing an important role in the development and refinement of this technology. The premise that we suggest, then, is as follows: the end result of the uses of groups in board training is to facilitate inter-organizational, collaborative approaches to macro problem-solving.

Some of the consequences of social problems, and of the failure to solve them, can be measured in terms of having produced negative-oriented "social behavioral forces," such as apathy, powerlessness, fear, institutions, anti-social behavior, and win-lose behavior. The PO-ABS technology focuses its problem-orientation on these social behavioral indicators. Since these problems "spill across" the boundaries of many different organizational systems, these organizations must be helped in developing and maintaining a "system of systems," or what we call a macrosystem, for collaborative problem-solving purposes. Training and technical assistance must be well-planned, and provided over an extended period of time. The development and sharing of "power," between providers and consumers, are fundamental processes in PO-ABS (Mico and Ross, 1974).

The implications for board training are considerable. A strong emphasis should be placed on the development of the leadership capabilities of the members. The relationships between board members and their "constituencies" are important, and should be fostered. The need for formalized meeting and decision-making procedures is essential, in view of the quasi-legal decisions that often get made. Conditions for constructive confrontation and the negotiation of differing positions are important, and members need to be trained in these skills and procedures. Board members should be envisaged as "swinging doors," between the health care organization and the larger

community or social context. An important board "product" is policy -- a political strategy for influencing social change as much as for shaping the delivery of the organization's resources. The board is a stepping stone to the dynamics of building effective interorganizational coalitions and alliances; to the negotiated problem-solving between "have not's and have's;" to the management of social conflict; to the development of informed citizen self-determination; and to other processes inherent in constructive social behavior..

From our perspective, then, board training differs from the others in that its purpose is to create an on-going, negotiation-based problem-solving process, which links up the health care organization with other relevant systems of the community, for the general health and welfare of the public.

SOME CONCLUDING THOUGHTS

In all three areas -- patient education, team-building, and board-training -- much of what is known as "group dynamics" is to be found. But, hopefully, you will agree with us that there are some significant distinctions in the separate applications. Those distinctions are based on the different end results for which the groups are employed, and on some technologic variations: individual change, for patient education groups; organizational change, for teams; and social change, for boards. It is our contention that group dynamics can be employed most effectively when modified to fit within the context of these end goals.

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THE APPLICABILITY OF THE LITERATURE ON DIFFUSION AND ADOPTION OF INNOVATIONS TO CARDIOVASCULAR RISK BEHAVIOR

By

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THE APPLICABILITY OF THE LITERATURE ON DIFFUSION AND ADOPTION OF INNOVATIONS TO CARDIOVASCULAR RISK BEHAVIOR

By Lawrence W. Green

The contribution of new thought on diffusion with another review of literature is improbable in the face of the recent volumes of Havelock and Associates (1971; 1972) with some 4,000 citations; Rogers and Shoemaker (1971) with generalizations from 1,200 empirical and 300 non-empirical studies covering some 20 different research traditions; and Rogers (1973) with over 400 references specifically in relation to family planning. But with the estimated addition of 1,000 new studies on diffusion or knowledge utilization every year (Havelock et al, 1971), and the paucity of attention to chronic diseases in any of these previous reviews, a statement on the applicability of this vast literature to cardiovascular risk behavior would seem not only justifiable but perhaps imperative. If the cumulative wisdom from this prodigious flood of research has nothing to contribute to the understanding or solution of behavioral problems associated with the most extensive cause of death in the United States, then Congress should place a moratorium on further support of such research from public funds.

This review asks of the literature whether certain behaviors associated with cardiovascular risk can be explained within the framework of diffusion and adoption-of-innovation models. Specifically, do the major generalizations derived from diffusion theory and research in areas other than health apply to behavioral change in relation to the prevention or management of coronary heart disease and the cardiovascular complications of hypertension? The answers to this question will be discussed in terms of the problem that Graham (1973) has said social scientists and public health workers have paid "appallingly little attention: developing ways of introducing innovations which will be successful in the shortest possible time, among the greatest number of people at the lowest cost" (p. 334).

The approach I have had to take to this otherwise presumptuous effort is to take the generalizations from the previous reviews at face value without questioning the original sources from which they were derived. Acknowledging, however, that most of those primary sources were unrelated--and in many cases irrelevant--to health behavior, I have sought to identify the specific parallels and discrepancies between the inferences drawn from non-health behavior and the evidence from recent research on heart-risk behaviors such as smoking, diet, exercise, utilization of health services, and compliance with prescribed medical regimens.

The recent secondary source providing the most thoroughly documented and organized set of generalizations, in my opinion, is that of Rogers and Shoemaker (1971). I have reorganized their generalizations into four broad sets applicable to heart-risk behaviors: system effects, attribution effects, discontinuation, and communication effects. (This paper deals with system effects. The more complete paper will be available upon request at the Dorothy Nyswander International Symposium.)

SYSTEM EFFECTS

The first set of generalizations offered by Rogers and Shoemaker from their comprehensive review of the literature on diffusion of innovations concern the ways in which "the social structure acts to impede or facilitate the rate of diffusion and adoption of new ideas through what are called 'system effects'" (R & S, 1971, p. 29). They thereby annex for diffusion theory the "norms, social statuses, hierarchy, and so on of a social system" as these influence the behavior of individual members of the system. I have been most intrigued with this set of generalizations in the Rogers and Shoemaker review because of the nearly perfect fit with a set of generalizations I had drawn earlier from a review of the literature specifically in relation to the diffusion of preventive health practices (Green, 1970b). The following table presents the logically ordered propositions derived from the literature on system effects in relation to preventive health behavior and the corresponding generalizations from Rogers and Shoemaker and another set of similar propositions derived from the general literature on communication by Nan Lin (1973). See Table I.

The underlying theme or construct of the social system generalizations is that the system itself generates increasing pressures toward adoption as an innovation gathers momentum and that these system effects result in a predictable pattern of diffusion with the rate of adoption following an S-shaped curve when plotted as the cumulative percentage of adopters over time. Rogers and Shoemaker term this the "diffusion effect" which they define as "the cumulatively increasing degree of influence upon an individual to adopt or reject an innovation, resulting from the increasing rate of knowledge and adoption or rejection of the innovation in the social system" (1971, p 161). They further assert, on the basis of six studies, that the main determinant of the rate of the diffusion effect is the degree of "communication integration" in a social system (pp. 163-164).

Table 1. PARALLEL GENERALIZATIONS FROM REVIEWS OF THE LITERATURE ON DIFFUSION OF PREVENTIVE HEALTH PRACTICES (Green), DIFFUSION OF OTHER INNOVATIONS (Rogers), AND GENERAL COMMUNICATION (Lin).

Green (1970b) Status-Identity & Preventive Health Behavior	Rogers & Shoemaker (1971) Communication of Innovations	Lin (1973) The Study of Human Communication
"Proposition No."	"Generalization No."	"Propositon No."
"1: There is an inverse association between SES and mortality and morbidity rates for diseases and conditions for which there are preventive measures available to the individual" (p. 15).	"1-1: System effects may be as important in explaining individual innovativeness as such individual characteristics as education, cosmopoliteness, and so on" (pp. 29-30). [Parallel to 1 & 2a in Green].	"1. Information flow is transmitted significantly more from the mass media (the popular forms) to people than it is from interpersonal sources" (p. 208). [No parallel in Green; paralle to 3-3 but not to 3-4 in Rogers & Shoemaker. Cf Chap. 8 in R & S.]
"2: Individual preventive health actions increase in frequency, earliness quality, range, and persistence with increasing SES" (p. 20). "Corollary 2a: Different socioeconomic strata are characterized by different norms of preventive health behavior" (p. 30).	"3-1,3-2,3-3,5-2,5-4,5-26: "Earlier knowers/adopters of an innovation have more education... higher social status ... greater exposure to mass channels of communication than later knowers/adopters" (pp. 107-108, 347-374). [Parallel to 2 in Green, 1 in Lin.]	
"3: In the absence of immediate threat, real or perceived, to physical well-being, preventive health actions are taken in response to social pressures and supports in the form of social norms, which vary with SES" (p. 32).	"3-4,5-25,5-27: Earlier knowers/adopters of an innovation have greater exposure to interpersonal channels of communication/more change agent contact than later knowers/adopters" (pp. 349-374). [Parallel to 3 & 4 in Green; 4a in Lin.]	"4a. Influence flow is more likely to be transmitted through the interpersonal network than through the mass media (p. 210). [Parallel to 3 in Green, 5-25 in Rogers & Shoemaker.]
"4: The probability of being influenced by the preventive health behavior norms of a given socioeconomic stratum increases with the propinquity of the individual to that stratum, i.e., his relative frequency of contact and communication with other individuals in that stratum" (p. 36). "Corollary 4a: Persons who are relatively isolated from their social stratum because of ethnic or physical segregation will be less influenced by the norms of that stratum" (p. 41). "Corollary 4b: Persons with a minimum of social participation and voluntary memberships will be less influenced by the norms of their social status" (p. 41).	"5-23: Earlier adopters are more highly integrated with the social system than later adopters" (p. 369). "6-1: Interpersonal diffusion is mostly homophilous" (p. 376). [Parallel to 4 in Green; 3a in Lin.] 5-31,5-32: "Earlier adopters are more likely to belong to systems with modern rather than traditional norms... to well integrated systems than are later adopters" (p. 376). [Parallel to 2a,3 & 4a in Green, 3a & 4a in Lin]. "5-22: Earlier adopters have more social participation than later adopters" (p. 368). "7-6: Change agent contact is positively related to greater social	"3a. Higher socioeconomic status, a more critical location in the spatial and social networks, and a higher educational level contribute to a person's participation in communication activities relative to a specific issue" (p. 210). [Parallel to 4 and 4a in Green; 5-32 in R & S.] "4a. Influence flow is more likely to be transmitted through the interpersonal network than through the mass media" (p. 210). [Parallel to 4a in Green; 5-25, 5-32 in R & S.] "3b. Active communication participat promotes a person's eventual beh commitment" (p. 210). [Parallel in Green; 5-22 in Rogers & Shoemaker.

Green (1970a)
Status Identity & Preventive Health Behavior

"Proposition No."

4: "Corollary 4c: Persons with significant communication and contact with individuals in more than one social stratum because of real or perceived inconsistencies in their statuses are exposed to the normative influence of more than one stratum" (p. 42).

"5: Persons choosing others for close relationships, for behavioral advice or models, and for self-evaluation tend to select those of equal or somewhat higher socioeconomic status more than those of lower status than themselves" (p. 46).

"Corollary 5a: Given a choice between the norms of two or more strata with which the individual can identify himself, he will tend to adopt the norms of that stratum which is most attractive to him, i.e., the higher stratum" (p. 47).

"Corollary 5b: If an individual is relatively higher in one social status characteristic than in another, his preventive health behavior will tend to be more in accordance with the norms of the higher status than with the norms of the lower status" (p. 48).

Rogers & Shoemaker (1971)
Communication of Innovations

"Generalization No."

"4-6: The degree of communication integration in a social system is positively related to the rate of adoption of innovations" (p. 164).

"5-24: Earlier adopters are more cosmopolite than later adopters" (p. 369).

7-5,7-7: "Change agent contact is positively related to higher social status... higher education and literacy among clients" (p. 381). [Parallel to 4c in Green, 4b in Lin.]

6-2,6-3: "When interpersonal diffusion is heterophilous, followers seek opinion leaders of higher social status... with more education... who are more innovative" (pp. 377-378). 6-14,6-15: "Opinion leaders have higher social status... are more innovative than their followers" (p. 379). [Parallel to 5 in Green, 4b in Lin.]

"5-5: Earlier adopters have a greater degree of upward social mobility than do later adopters" (p. 361). [Parallel to 5a in Green, 5b in Lin]

5-20,5-21: "Earlier adopters have higher levels of achievement motivation... higher aspirations (for education, occupations, and so on) than later adopters" (p. 367).

"6-8: Interpersonal diffusion is characterized by a greater degree of homophily in traditional than in modern systems" (p. 378). [Parallel to 5b in Green; 4 & 5 in Lin.]

Lin (1973)
The Study of Human Communication

"Proposition No."

"4b. Interpersonal influence is facilitated by status contiguity... between the source and the receiver" (p. 210). [Parallel to 4c in Green, 6-1 in R & S.]

"5. Commitment actualization is facilitate by less social distance, less social constraint, and greater consistency of role perceptions" (p. 211). [Parallel to the series under 4 in Green & under 6 in R & S, but applies more to traditional systems than to modern social systems.]

"4b. Interpersonal influence is facilitate by... perceptual identification betwee the source and the receiver" (p. 210). [Parallel to 5a in Green; 5-5 in R & S.]

"6. Sustained adoption is contingent upon effective feedback, effective dissemination, and continuous accessibility of the action" (p. 211). [Implied parallels in No. 1, 3 and 4 in Green; 1-1 in R & S.]

Some of these concepts and generalizations can best be illustrated with the concrete case of smoking as an innovation and its diffusion in the United States until the tide of social pressure turned against it in 1964.

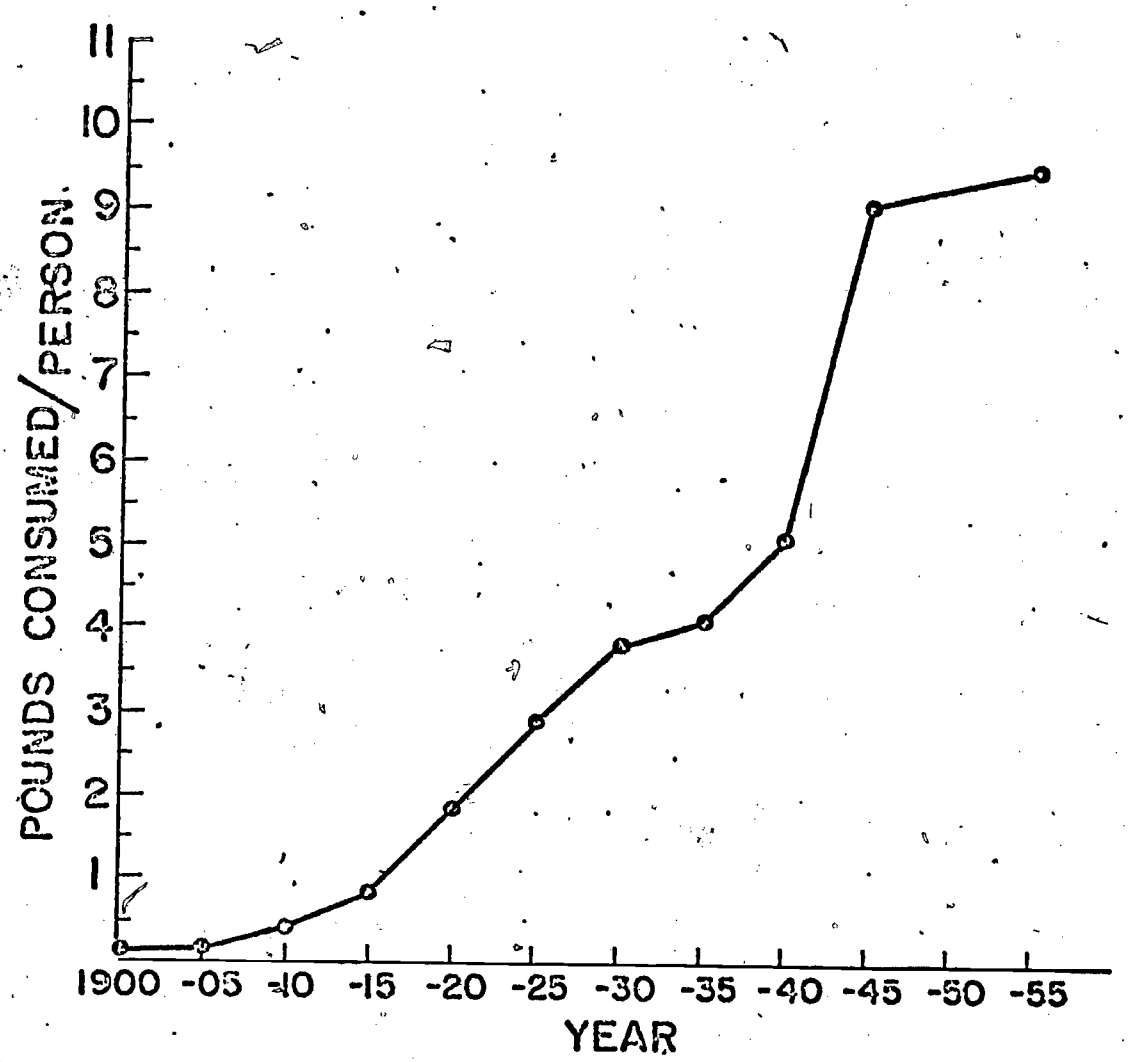
THE ADOPTION OF SMOKING AS A DIFFUSION PROCESS

It is perhaps appropriate to view cigarettes as an "innovation" only prior to the bad publicity they received in the late 1950s as the disadvantages of smoking became inescapably salient in the press (Connel & MacDonald, 1956; Toch et al, 1961). Indeed, the adoption of cigarettes over the past century did follow the usual S-shaped curve, as measured by annual consumption in pounds of tobacco per person over 14 years of age, until 1955 when this index showed its first two-year dip since 1900 except for the depression years 1930-1932 (Milmore & Conover, 1956). Current smokers then dropped from 56.9 percent in 1955 to 50.7 percent in 1966 among males, but continued to increase from 28.4 to 32.9 percent among females whose adoption curve started much later (Ahmed & Gleeson, 1970, Table A, p. 2). The 1900 to 1955 adoption-diffusion curve for cigarette consumption is shown in Figure 1.

Another way of finding the S-shaped curve, more typical of demographic and rural diffusion studies, is by graphing the cumulative percent of regular smokers in each age cohort according to their retrospective reports on the age at which they became regular smokers. These curves are shown for males and females in Figures 2 and 3 reproduced respectively from the 1955 and 1966 national survey reports (Haenszel et al, 1956, Fig. 19, p. 43; Ahmed & Gleeson, 1970, Fig. 3, p. 10). The first set, for males, also illustrates the importance of the social influence factor in the diffusion and adoption process. Those who had served in the Armed Forces where smoking is the norm had the same adoption rates as nonveterans up to the age of conscription, whereupon their adoption rates increased faster than those of nonveterans. This observation supports Rogers and Shoemaker's first generalization regarding system effects (1973, pp. 29-30), and their generalization, "4-6: The degree of communication integration in a social system is positively related to the rate of adoption of innovations" (p.164).

While the diffusion process on a national scale has probably ended in relation to the adoption of cigarettes by adults and has been replaced by filter-tips and smoking cessation as the new smoking innovations, the diffusion process apparently continues in relation to smoking adoption by youth and women. More than one million young people per year adopt smoking in the United States (Corwin, 1973, p. 96; Creswell & Creswell, 1970, National Clearinghouse for

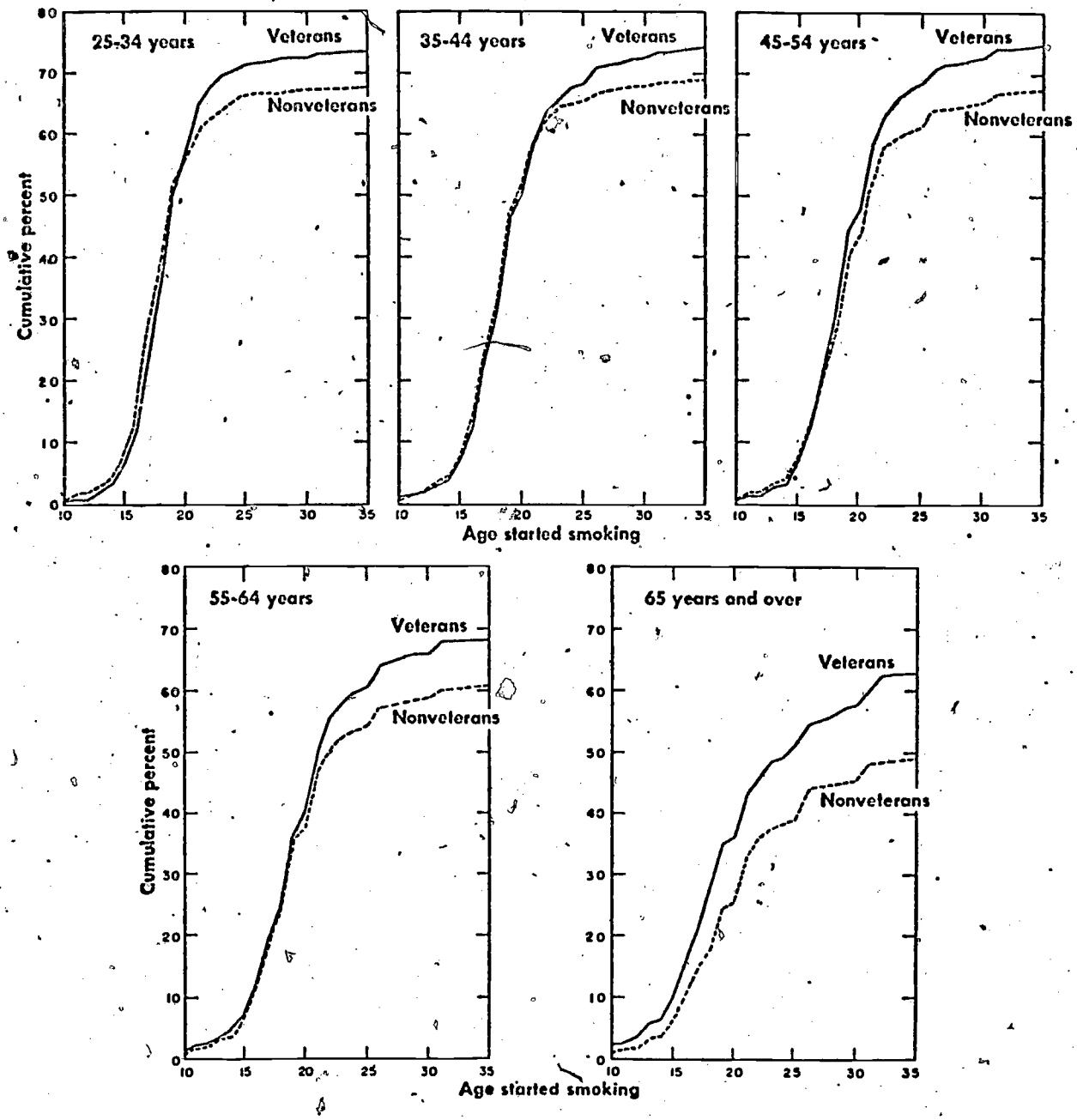
Figure 1. Cigarette consumption in pounds per person over 14 years of age, United States, 1900-1955.



SOURCE: Milmore & Conover, 1956, Table 1, p. 107

Note: The data after 1940 include Armed Forces overseas.

Figure 2. Cumulative percentage of males becoming regular smokers (any form) prior to age specified, by age and previous military service, United States.



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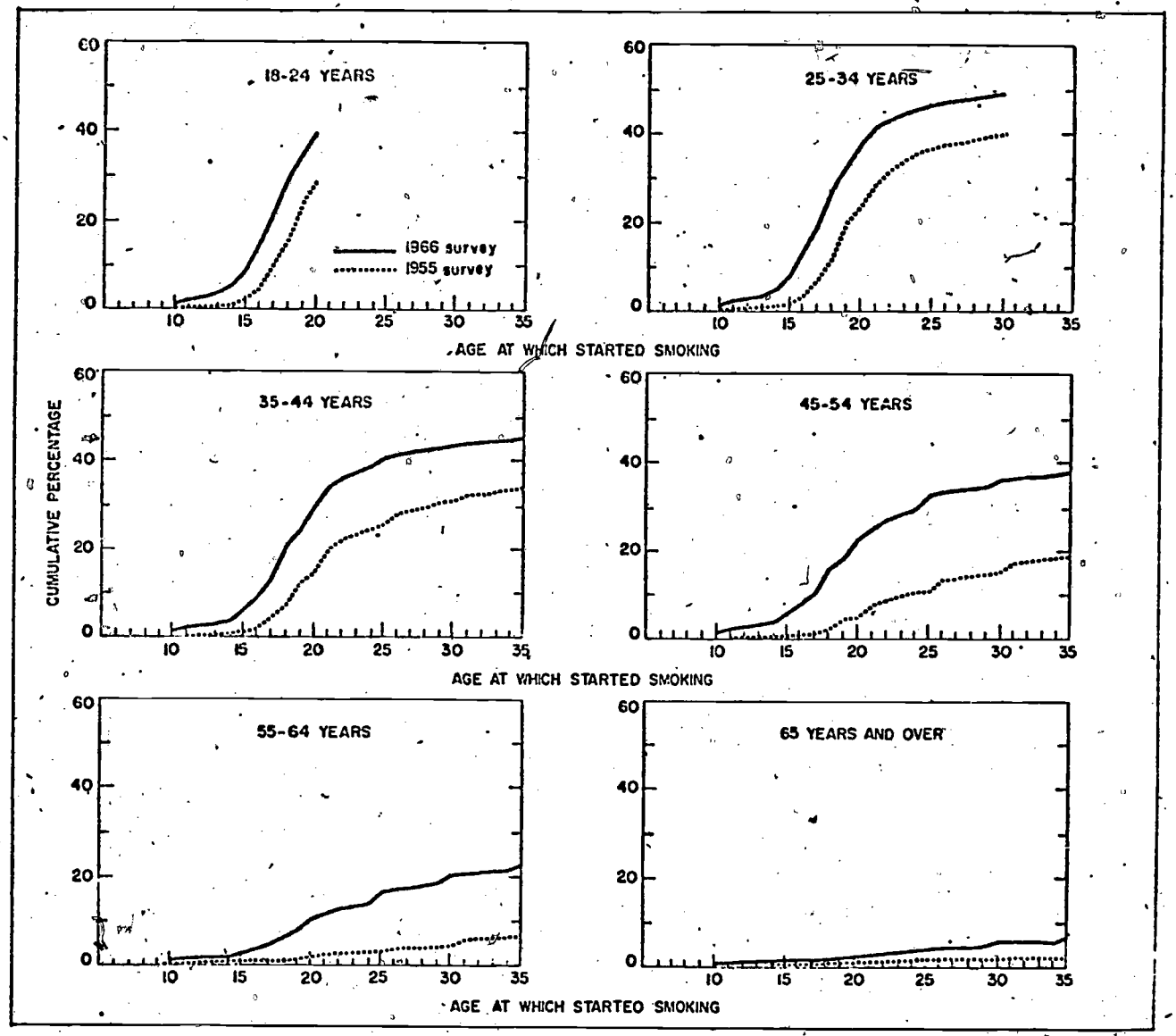
Source: Haenszel et al (1956, Fig. 19, p. 43).

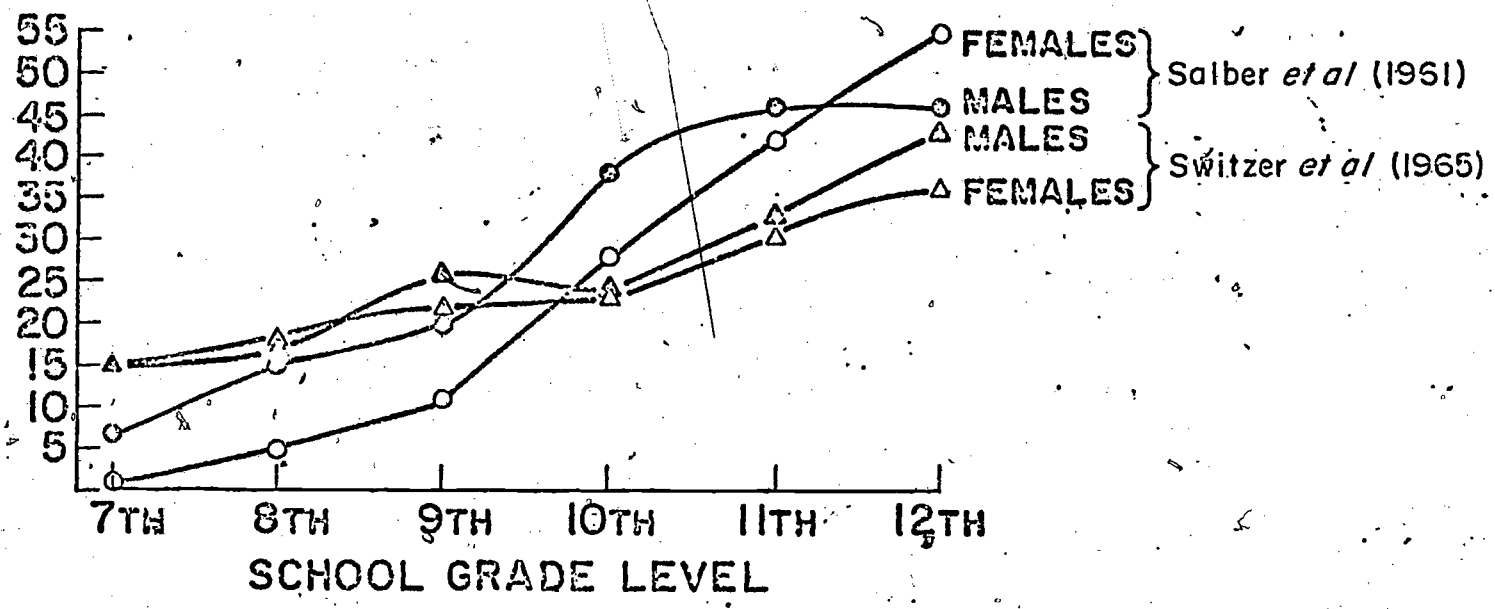
Figure 3. Cumulative percentage of females becoming regular cigarette smokers prior to age specified, by age at time of survey, United States.



Source: Ahmed & Gleeson (1970, Fig. 3, p. 10).

Smoking & Health, 1971). Recognizing the variations in definition of smokers between studies (O'Rourke, 1973), there is nevertheless consistency of findings on the increase in percentage currently smoking through the school grades prior to the report of the Advisory Committee to the Surgeon General on Smoking and Health in 1964 (See Fig. 4).

igure 4. Percent of students currently smoking in selected studies before and after the Surgeon General's Report.



The adoption curves yielded by the Salber study come closest to approximating the S-shaped theoretical curve. The drop in percentage smoking between the ninth and tenth grades in the study by Switzer et al (1965) can be explained consistently with the adoption-diffusion model as a function of the separation of the ninth and tenth grades in the Berkeley school district. This effect of discontinuity in the social system further supports generalization 4-6 quoted above from Rogers and Shoemaker (1971, p. 164; see also their related generalizations 5-22, 5-23, 5-31, 5-32 and 6-1. Other recent formulations of the communication integration concept include Burt, 1973; Hingson & Lin, 1972; Rogers, 1973, p. 317).

Another set of generalizations supported by the data on adoption of the negative innovation of smoking, is the personality factors associated with innovativeness, including greater empathy, less dogmatism, and more favorable attitudes toward change and toward risk (R & S, pp. 364-366). Heath's 20-year study contrasting smokers and nonsmokers found on personality variables identified trait differences in line with these generalizations (Heath, 1958, p. 387). The data on young starters would again be more pertinent because, as Horn has warned repeatedly, the factors influencing the development of the smoking habit are frequently quite different from those influencing the initial trial and adoption of smoking (Horn et al, 1959; Horn, 1966; 1973; see also Newman, 1971).

Weir (1966) used a projective technique to mask the purpose of his study and found that students tend to regard smoking by young males as adventurous and masculine. Whether these traits can actually be attributed to the personality of teen-age smokers is perhaps less important from a diffusion perspective than the fact that they are so attributed by peers. The diffusion implications of such perceived characteristics of early smokers take on added importance when students openly admit that "conformity" was their main reason for starting to smoke (Salber et al, 1963; Schwartz & Dubitzkey, 1967; Switzer et al, 1965; Foss, 1973).

Other generalizations from the diffusion literature that can be tested with the data on adoption of smoking are those concerning the distinguishing social characteristics of early adopters, including higher social status (R & S, 5-4), upward social mobility (5-5), more favorable attitude toward education (5-17) and toward science (5-18), higher levels of achievement motivation (5-20) and aspirations for education (5-21), and more social participation (5-22). The data from the high school studies of smoking prior to the Surgeon General's Report on Smoking and Health do not support these generalizations. Early adopters of smoking tend to be from lower rather than higher socio-economic families, tend to be less upwardly mobile in terms of education and occupational aspirations, less positive about education and science, and less engaged in extra-curricular activities than later adopters or non-smokers (Horn et al, 1959; Merki & Creswell, 1968; Rogers & Reese, 1964; Salber & MacMahon, 1961; 1962).

Finally, the propositions concerning opinion leadership and interpersonal diffusion can be tested against the smoking adoption and diffusion data. As reported above, students say that their primary source of influence in smoking is social. Among the social influences

they say that peer influence is greater than family (Switzer et al, 1965). The data comparing smoking rates according to peer and parental smoking habits indicate that both sources of interpersonal diffusion are independently influential, thus supporting generalization "6-1: Interpersonal diffusion is mostly homophylous" (Rogers and Shoemaker, 1971, p. 212). At the earlier ages, parental influence is maximal (Horn et al, 1959; Salber & MacMahon, 1961; Cresswell et al, 1969), but peer influence increases for later adopters (Horn et al, 1959; Switzer et al, 1965). At the college level parental influence declines markedly but peer influence persists (Dunn, 1967; Foss, 1973; Rosenblatt et al, 1967).

A specific aspect of the parental influence data that further supports the homophyly generalization is suggested in sex-specific smoker rates according to which parent smokes. In the following table, the data from the studies by Horn et al (1959) and Salber and MacMahon (1961) suggest that girls are more likely to adopt smoking if their mother is the only smoker than if their father is the only smoker, whereas the opposite pattern prevails for boys. In the study by Switzer et al (1965), however, the mother appears to have been the more influential model or change agent for both boys and girls, although the differences were not great.

From these illustrative data, it would appear that the adoption and diffusion of smoking has behaved in accordance with the diffusion model. The generalizations on system effects apply to smoking adoption in all respects except for the expected socio-economic characteristics of early adopters. The socio-economic aspect of system effects has received the most extensive attention in the health diffusion literature and deserves at least a summary review here in relation to heart-risk behavior.

* * * * * * * * * * * * * *

Table 2. Percent of students currently smoking by grade level, sex, and the smoking habits of their parents, in selected studies.

Author(s)	Date	Grades	Sex	Parental Smoking Habits: Neither	Father only	Mother only	Both
Barrett	(1964)	7-9	Both	9	8	7	16
Kuvin	(1963)	7-9	Both	9	20		16
Horn et al	(1959)	9-12	Boys	17	26	24	32
		9-12	Girls	7	12	18	19
		9	Boys	8	15	14	18
		10	"	15	24	23	33
		11	"	21	34	29	38
		12	"	26	36	30	43
		9	Girls	3	3	8	7
		10	"	4	10	10	15
		11	"	7	15	29	23
		12	"	15	25	31	33
Morrison et al	(1964)	10-12	Both	27	35	36	39
Salber & MacMahon	(1961)	10-12	Boys	28	43	38	49
		10-12	Girls	26	43	48	52
Switzer	(1965)	7-9	Both	10	24	23	28
		10-12	Both	24	34	38	25
		7	Boys	7	13	17	27
		8	"	6	18	27	25
		9	"	17	31	30	29
		10	"	16	32	30	29
		11	"	28	32	29	40
		12	"	32	37	47	61
		7	Girls	8	23	19	18
		8	"	6	27	18	32
		9	"	11	26	24	33
		10	"	18	20	30	29
		11	"	19	30	43	42
		12	"	27	46	47	39
Foss	(1973)	College	Both	33	48		44

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HEALTH KNOWLEDGE AND ATTITUDE ASSESSMENT

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HEALTH KNOWLEDGE AND ATTITUDE ASSESSMENT*

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I. ARE HEALTH INVENTORIES BARKING UP THE WRONG TREE?

The state of knowledge about any health problem in a community is said to influence the health related decisions within that community. Health inventories (knowledge tests) are used as basic instruments for measuring what people know about health problems, and are often bases for developing educational programs. Such inventories are constructed either by content specialists and/or test construction specialists. It is often assumed that the knowledge ascertained by the inventory is paramount in determining health behavior. It is the thesis of this paper that many items included in health inventories are not germaine to the health decision-making process. This thesis was arrived at by the following method of investigation:

1. Charting the generalized plan for the commonly practiced "health inventory-construction process".

2. Developing a health-decision-making process to determine information necessary for the decisions about a specific health problem (i.e., syphilis).

3. Examining in detail two health inventories to determine those items that are germaine to the decision-making process.

The generalized scheme presented in Chart I suggests a lack of orientation towards the relevance of each item included in the inventory that is being constructed. The process seems to indicate a "knowledge for knowledge's sake" flavor. Assessing the state of knowledge of any group utilizing this particular process may not provide information that is related to the decision-making process. The professional person who is responsible for developing an educational program that will change behavior may be led astray by utilizing information that is gained through the above described process. He may select "wrong" information or bury important information in meaningless detail.

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* Two papers, reprinted from Lysaught, Jerome P. (ed.) Instructional Technology in Medical Education Proceedings of the Fifth Rochester Conference on Self-Instruction in Medical Education. April 1-3, 1971.

Inventory items should be based upon the knowledge necessary for decision-making at either the individual or group level. Chart II portrays a health-decision-making process which has been developed with reference to syphilis. Two kinds of decision are considered in this chart: one kind of decision is made by members of the group (target group) after receiving information; another kind of decision is made by the professional educator when he determines the items that should be placed in the inventory. The knowledge necessary to make a decision is printed in italics. This is the information the professional educator must impart to the target group to facilitate decision-making. The decisions made by the professional educator are presented in capital letters. The target group's decisions are indicated by lower case letters. An illustration of the process is as follows: If a member of the target group suspected that one could have syphilis without observable external symptoms, he might be interested in acquiring knowledge about how to protect himself. The decision depends upon a specific bit of knowledge which, when imparted, is useful to the individual.

In Chart III, information presented in columns one and two are taken from Chart II. Column 1 presents decisions that must be made by the professional educator which, in turn, will determine the kind of information he must impart. Column 2 presents the information needed by members of the target group to reach their decision. Further, Chart III provides a comparison between the decision points and the required information with questions used in two existing inventories. The results appear in columns 3 and 4.

The following generalized scheme is commonly used in constructing health inventories. The chart below presents the stages in such inventory construction.

CHART I

Generalized Scheme for Health-Inventory-Construction

Decision Stage	Test construction specialists and/or health content specialists decide to learn the state of knowledge about a health problem in a community.
Composing Items	Engage in extensive library or related research in order to arrive at questions related to the specific health problem.
	Seek additional expert opinion about the items from individuals or a panel of experts.
	Formulate the health inventory.
Selecting Items	Pretest the inventory by administering it to a sample of a target group.
	Select best items through statistical analyses (item discrimination and reliability coefficient, etc.).
	Final formulation of the test instrument.
Establishing Norms	Test on a larger group of individuals to establish norms.

CHART II

HEALTH DECISION-MAKING PROCESS*

Sexual mores and other personality factors control the amount and degree of sexual activity. If sexual intercourse occurs between persons who are not infected with syphilis, the disease will not occur. Those persons who have sexual intercourse with a variety of partners increase the risk of infection with syphilis.

CAN MALE OR FEMALE (M OR F) FROM THE TARGET GROUP CONFINE SEXUAL INTERCOURSE TO A SINGLE PARTNER?

YES — No further consideration is necessary for this situation.

NO — *Infected person may not have observable external symptoms.* → M or F is concerned about the possibility of acquiring syphilis.

DOES M OR F KNOW HOW TO AVOID ACQUIRING SYPHILIS EVEN THOUGH INTERCOURSE HAS TAKEN PLACE WITH A VARIETY OF PARTNERS?

YES

NO — *One way is to use a condom during each act of intercourse. Partners who use this technique may be relatively safe from syphilis.* → M or F decide that a condom will reduce the risk of infection.

DOES M OR F KNOW WHERE TO PROCURE CONDOMS? DO THEY KNOW HOW CONDOMS ARE USED?

YES

NO — *Knowledge of where to buy condoms accompanied by knowledge of how and when to use them.* → M or F decide to procure condoms and learn proper use.

ARE M OR F WILLING TO INSIST THAT A CONDOM BE USED?

YES

NO — *Reinforce knowledge that the risk of infection is increased.* → M or F agree that condom will be used.

CAN M OR F RECOGNIZE EARLY SYMPTOMS OF SYPHILIS? DO THEY KNOW SYMPTOMS DISAPPEAR WITHOUT TREATMENT?

YES

NO — *Symptoms Men/Women* → M or F decide to seek treatment if necessary.

DO M OR F KNOW THE MEDICAL RESOURCES IN THE COMMUNITY? DO THEY KNOW HOW TO FIND THESE RESOURCES?

YES

NO — *Information about free clinics, health department clinics, private physicians* → M or F do not hesitate in seeking treatment.

ARE M OR F WILLING TO NAME THEIR SEXUAL CONTACTS AND/OR BRING THEM FOR MEDICAL DIAGNOSIS?

YES

NO — *Contacts may not know they are infected. Contacts will continue to spread the disease to others.* → M or F decide to name contacts.

*Special recognition is given to Mrs. Kenneth Stevener for her editorial comments.

CHART III

COMPARISON OF THE KNOWLEDGE NEEDED FOR DECISION-MAKING TO AVOID SYPHILIS AND THE KNOWLEDGE TESTED BY TWO INVENTORIES

DECISION-MAKING	REQUIRED KNOWLEDGE FOR DECISION-MAKING	DO THE INVENTORIES OBTAIN NEEDED INFORMATION? ASSESSMENT OF INVENTORY 1	ASSESSMENT OF INVENTORY 2
1. Can Male or Female from the target group confine sexual intercourse to a single partner?	This is not a result of active decision-making but a reflection of sexual mores. Syphilis spreads through sexual intercourse. Infected person may not have observable external symptoms.	Three questions about outward symptoms but *does not* attempt to assess sexual mores. Two questions about transmission.	Three questions on outward symptoms. Five questions on transmission.
2. Does M or F know how to avoid acquiring syphilis even though intercourse has taken place with a variety of partners?	One way is to use a condom during each act of intercourse. Partners who use this technique may be relatively safe from syphilis.	None	None

3. Does M or F know where to procure condoms? Do they know how condoms are used?	Knowledge of where to buy condoms accompanied by knowledge of how and when to use them.	None	None
4. Are M or F willing to insist that a condom be used?	Reinforce knowledge that the risk of infection is increased.	None	None
5. Can M or F recognize early symptoms of syphilis? Do they know symptoms disappear without treatment?	Symptoms: Men; women	No questions about early symptoms. One question about ultimate consequences.	No questions about early symptoms. One Q about course of disease. One Q about ultimate consequences. One Q about cure.
6. Do M or F know the medical resources in the community? Do they know how to find these resources?	Information about free clinics, health department clinics, private physicians	None	None
7. Are M or F willing to name their sexual contacts and/or bring them for medical diagnosis?	Contacts may not know they are infected. Contacts will continue to spread the disease to others	None	None

Some of the information sought by the existing inventories may be indirectly related to decision-making, but not necessarily crucial:

Example: If gonorrhea goes untreated, it turns to syphilis. (True or false)

Syphilis can be genetically passed on from generation to generation. (True or false)

These two items, while interesting, may not be important. What seems to be lacking in the two inventories that were examined are questions that relate to important decisions (see decision points 2, 3, 4, 5, 6, and 7). This may be because the persons developing the inventories did not use a method that analyzed the decisions required to take action to reduce the incidence of syphilis.

Summary

A generalized scheme for the development of commonly used health inventories was presented to show that test items are generally selected on bases other than the necessity for decision-making either on an individual or group level. A health-decision-making process chart with reference to syphilis was developed in order to illustrate the kinds of knowledge necessary to prevent or reduce the incidence of syphilis.

Two health inventories were analyzed, item by item, and compared with the knowledge arrived at through the decision-chart process to see how germaine the items were for decision-making.

The results of the above inquiry suggest that many health inventory tests are not germaine to the decision-making process. They leave out many items which need to be assessed. Moreover, the process currently followed for health-inventory construction is not conducive to asking relevant questions. A different process must be followed to construct a relevant inventory.

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II. PRAGMATIC BEHAVIORAL OBJECTIVE FORMULATION AS A BASIS FOR HEALTH KNOWLEDGE AND ATTITUDE ASSESSMENT*

One important objective for the construction of health inventories should be to assess the knowledge of the target population as it is related to the decision-making process. A second important objective should be to assess some crucial attitudes that influence the utilization of knowledge. In a previous paper, "Are Health Inventories Barking Up the Wrong Tree?", the authors explored a way of investigating two existing health inventories dealing with venereal disease to see if they did in fact assess information relevant to the decision-making process. It was concluded that new ways were needed to construct a useful health inventory. It is the purpose of this paper to suggest a practical method of devising a health inventory using the disease syphilis as an example.

Writing general behavioral objectives is a familiar art to many though it has not been used for health inventory construction. However, general behavioral objectives may be inadequate for this purpose. It is the feeling of the authors that more pragmatic objectives could better be used.

Pragmatic behavioral objectives are those that are closest to the actual conditions under which the target population has to make decisions. This paper illustrates the development of a health inventory based upon pragmatic behavioral objectives derived from a decision chart which traces the decision-making process in the target population under different conditions. The stages in the inventory construction are as follows:

1. Definition of the target population and ultimate objective of the health inventory.

2. Development of a decision chart for pinpointing knowledge and related attitudes absolutely essential for the target group to take health action.

3. Formulation of pragmatic behavioral objectives in relation to the knowledge and attitudes contained in the decision chart.

4. Construction of the inventory items.

5. Testing of the inventory on one person at a time and revising the items until all ambiguities are eliminated.

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6. Formulation of final inventory.

7. Group testing and statistical analyses.

These developmental stages were utilized in constructing a health inventory about syphilis. Steps 5, 6, and 7 have not been completed at this time. A tested version will be available at a later date.

1. Definition of the target population:

Teenagers who may have only partial pragmatic knowledge about syphilis.

Ultimate objective:

Assessment of the pragmatic knowledge and related attitudes about syphilis possessed by the target population.

2. Decision chart:

The process chart pinpoints the decisions the target population needs to make. Two kinds of decisions are considered in this chart: one kind of decision is made by members of the target group after receiving information; another kind of decision is made by the professional educator when he determines the items that should be placed in the inventory. The knowledge necessary to make a decision is printed in italics. This is the information the professional educator must impart to the target group to facilitate decision-making. The decisions made by the professional educator are presented in capital letters. The target group's decisions are indicated by lower case italic letters. (see Chart II)

3. Pragmatic behavioral objectives:

After examining the decision chart, it is possible to delineate a body of knowledge that is needed by the target population. Following this, pragmatic behavioral objectives may be stated. For example:

Body of Knowledge	*Pragmatic Behavioral Objective*
If sexual intercourse occurs between persons who are not infected with syphilis, the disease will not occur.	Given several situations with differing crucial choices, members of the target group will be able to point out the individuals who are more likely to acquire syphilis.
Partners may engage in sexual intercourse and be relatively safe from syphilis if a condom is used.	Given several situations with differing crucial characteristics, members of the target group will be able to select the method that will reduce the risk of infection.

4. Construction of inventory items:

The inventory item that is constructed should be as close in form to the pragmatic behavioral objective as possible. The following is an example of an item derived from a pragmatic behavioral objective:

> Sue has syphilis.
> Tom has intercourse with her.
> Joe kisses her.
> Who is more likely to acquire syphilis? Tom, Joe (Circle one)

This type of item is more desirable since it requires processing of essential information in a situation closer to the objective. Where the behavior of the target population is dependent upon an attitude rather than a specific bit of knowledge, situations illustrating a variety of attitudes must be given so the target population can select the one closest to their attitude. This information is essential for the professional educators since it will assist him in designing his health education materials in an appropriate way. The following is an example of an item derived for this purpose:

> During the past month, Joe had intercourse with Sue, Alice and Helen. He was diagnosed and treated for syphilis. Afterwards, he considered taking one of the following actions. Which one do you think he should take?
>
> 1. Tell Sue, his closest friend, to see a doctor.
> 2. Tell Sue, Alice and Helen to see a doctor.
> 3. Take Sue to the doctor.
> 4. Take Sue, Alice and Helen (at different times) to see the doctor.
> 5. Ask a friend to tell Sue, Alice and Helen that they have a health problem.
> 6. Don't tell anyone.

SUMMARY

Existing health inventories may not be satisfactory because they usually elicit information that is not directly related to the decision-making process. By taking the decision-making process into consideration along with related pragmatic behavioral objectives, it is possible to develop inventory items that are more relevant. This paper presents a procedure for developing inventory items on this basis utilizing the disease syphilis as an example.

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PROBLEMS IN THE EVALUATION OF TRAINING OF HEALTH PERSONNEL

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PROBLEMS IN THE EVALUATION OF TRAINING OF HEALTH PERSONNEL

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The extent to which training activities can be evaluated successfully is a matter of current debate. The debate extends beyond the field of training and encompasses broader educational activities such as adult education[1], higher education[2,3] and compensatory education.[4] Some educators and social scientists profess the urgent need for precise and scientific evaluative research in education.[5] Others argue in favor of maintaining the non-formalist, heuristic approach currently prevalent in educational philosophy.[6]

The present evaluative proposal starts with the premise that, while not all training activities produce precise and anticipated changes, and while many of the changes produced cannot be detected by the available measurement techniques, evaluation remains a major mechanism for providing feedback to any training program. Such feedback is essential for the improvement of training programs. It must be clear from the outset that the evaluative scheme proposed here is not concerned exclusively with the "outcomes" of the training program. The training process does not lend itself readily to the summative evaluative approach which requires well-defined, stable, and replicable procedures. While certain selected portions of the training program might be subjected to a summative evaluation, the total program can only withstand an evaluative procedure which permits mid-course corrections known as "formative evaluation".[7] This type of evaluation is best suited for training programs, and it has actually been found to be the only type of evaluation compatible with many health related programs.[8]

REASONS FOR INCREASING EVALUATION OF TRAINING.

The current interest in evaluation of training programs can be attributed to a number of recent developments. First, training activities both in the private and the public sector are becoming increasingly common. According to one estimate,[9] the amount of money expended by business and industry in training activities exceeds the total annual budget of schools and colleges. Secondly, there is increasing interest in rational and systematic approaches

to social planning. The "Experimenting Society" [10] of tomorrow demands continuous testing and evaluation of proposed solutions before they are applied on a general scale. The trend to submit new solutions to critical evaluation is in fact producing considerable amounts of research evidence on the success or failures of the training programs for new professionals such as nurse practitioners,[11] mental health associates[12], social work aides [13], and other new community health workers [14]. It is of interest to note that such critical evaluations are almost never concerned with established training programs such as the training programs for physicians, nurses, social workers, dentists, pharmacists, public health specialists, and other health professionals.

The third main contributing factor to current interest in evaluation is related to advances in applied behavioral science methodologies. There are two major developments in this area. The first is the development and the popularization of evaluative research designs which permit the evaluator to establish causal relationships between the training input and the observed bahavioral outcomes. The second is the development of an educational science which defines objectives and learning outcomes sufficiently well to allow measurement of changes as a result of the training program.

CONSTRAINTS TO EVALUATION OF TRAINING

Both of these advances in methodology, however, have definite limitations when applied to the evaluation of training programs. The development of the experimental and quasi-experimental designs in educational research [15] is undoubtedly a definite step towards a more rigorous approach to training. However, many training programs are not easy to submit to this evaluative approach. Let us examine some of the more obvious limitations of this approach in the training setting:

1. The dependent variable (change in professional performance in this case) is a diffuse factor and is affected by many other independent variables in addition to the training program. Thus, the effect of the training program in and of itself may not be detectable without random assignment of very large numbers of trainees to training and non-training groups.

2. The specific sub-goals of a training program are often altered mid-stream in a program, a change which is incompatible with the requirements of the experimental design.

3. The experimental design requires that the treatment remains constant throughout the educational experiment, a procedure that often runs counter to the educational principle of "starting where the student is" and adjusting at every step according to the needs of the students.

4. The experimental design usually does not allow the assessment of unplanned or peripheral outcomes of an educational program which might be as important as the predicted ones.

5. The experimental design usually focuses on one narrow aspect: it deals with the effect that the program has had on the individual; it seldom attempts to establish more far reaching implications.

The narrowness of focus of the experimental design is both its strength and its greatest weakness. While its use is the only certain way of arriving at conclusions about specific program outcomes, its exclusive and indiscriminate use has been criticized as myopic by some of its strongest proponents [16,17]. The Evaluator of a training program cannot remain unconcerned with the long-term and the far-reaching effects of the program whether positive or negative.

This is particularly true in the health field, where health is the ultimate goal. We might add that the same principle should apply to other health education activities such as patient education. While the experimental clinical-trial-type design of patient education programs might focus on the evaluation of behavioral outcomes [18] (e.g., compliance with medical regimen), the educator as well as the evaluator of the eduational program cannot be unconcerned with the final health outcome of the recommended behavior. In an analogous way, a training program aimed at training health personnel should be concerned with its contribution to the health and well being of the community.

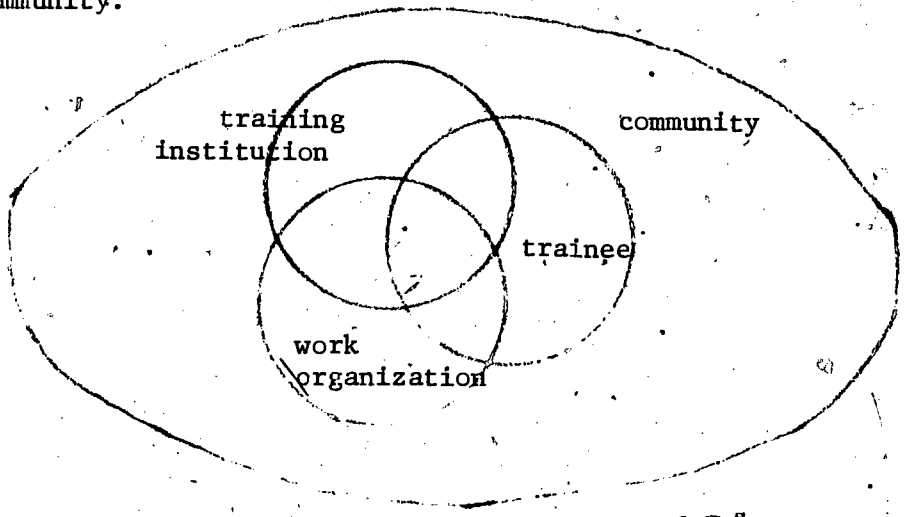
Unless the view of evaluative research is broad and open, and unless evaluation findings are stated with appropriate caution, there is potential danger for misinterpretation and abuse. As pointed out by others, evaluative research findings can be a powerful instrument in the hands ofdecision-makers and politicians. Research as well as evaluative endeavors are never free of values and of political implications [19].

Similar limitations can be cited in regard to the second technological advancement in educational science, namely the explicit statement of

goals in behavioral and therefore measurable terms. Training in the health profession is particularly problematic in this respect. Most of the training goals are in fact vague, while much of the behavioral change presumably resulting from the training program is difficult to measure with existing instruments. Non-verbal communication with clients is a good example of this difficulty, although instruments to measure non-verbal communicative behavior are now becoming available [20]. This methodological limitation has often served as an argument against those in favor of systematic evaluation. It has been observed, for example, that while "scientific" evaluation has condemned programs as having "no impact", informal impressionistic evaluations suggest the opposite [21]. In consequence, the validity of the whole approach has been questioned.[22]

It might be said that the evaluative methodologies presently available tend to focus primarily on training outcomes ("summative"), and less on the on-going aspects of the training process ("formative"). The summative approach might be of limited value to the training program staff in need of assistance in making decisions on a day-to-day basis. The evaluative approach suggested here is an attempt to provide a general framework of the various aspects to be taken into consideration in the evaluation of training programs for health personnel.

For the purpose of the present analysis, we will concentrate on the type of training which aims at the improvement of a health worker's job performance in an organizational setting. This focus purposely excludes some of the academic training programs where neither the sponsoring work organization nor the community that will eventually benefit from the training program are readily defineable. It might be useful to conceive of the training process as involving four systems: the trainees, the sponsoring organization which employs them or will employ them in the future, the training institution, and the community.



The amount of overlap and the type of relationship between the trainee, his work organization that sponsors the training, and the training institution are of critical importance to the success of the training programs. Often, these three systems are in fact hardly communicating and collaborating with each other. Of equal importance is the relationship between these three systems and the community. With rare exceptions [23], the role of the community is not given sufficient consideration, either in the program planning or in the evaluation of training programs.

The diagram (page 4), suggests that the intersection of the four systems constitutes a common ground. It is the ground where the goals, the needs, and the activities of the trainee, the training institution, and the sponsoring organization meet in their concerted efforts to solve the health problems of the community. This approach envisions training as part of a larger process, the process of meeting community needs and bringing about social change. As Mathews has pointed out, training can only be meaningful and effective if it is part of the process of planned change [24].

Evaluation of the training program seen in the above context should clearly attempt to answer questions that go beyond the final training outcome, i.e., the improvement of the trainee's performance. Questions of the relevance of the program to the community needs, the involvement of appropriate groups in the planning stages, and the planning process of the training itself are also objects of evaluation. At the later stages of the training, evaluation activities should be directed to the characteristics of the training facilities, the quality of the training process, as well as the effects of the training on participants' performance. Finally, the way the evaluative feedback is utilized and diffused and the consequences of the training activity for the organization and for the community are also objects of evaluative activity.

It must be obvious from the above that the evaluator or the evaluating team of a training program, if it is to employ the formative rather than the summative approach, and if it is to contribute to the day-to-day perfecting of the program, must be an integral part of the training program from its inception. In so doing, the evaluating activities keepthe program growing and progressing with continuous adjustment to changing demands and changing circumstances.

Let us now examine some of the specific training activites where evaluation should play an important role. In doing so, we are in

fact forced to examine the planning process of which evaluation is a "mirror image" 25. Table 1 summarizes some of the main phases of the program where activities need to be continuously evaluated. The first relates to the relationship of the training program to the community. The second phase is concerned with the evaluation of the on-going planning of the program. The third area of concern is specifically directed to the training institution, its policies, organization, and structure. The fourth is concerned with the training process, including methods used and quality of the educational experiences. The fifth area is concerned with what is usually the primary focus of evalutive research, i.e., the success in the training objectives. The final phase of the evaluation is concerned with the utilization of evaluative feedback. Each of these are objects of evaluation activities which try to answer a variety of questions in regards to the training programs. The six phases discussed here follow the chronological order of the planning process. However, different training programs might select to focus on different sets of evaluative activities according to the stage of their development and according to the partcular concerns and purposes that evaluative findings will serve.

The sources of information to be used for the various evaluative activities differ. In Table 1, we present a range of sources of information, from informal communication and unplanned participant observation, to use of formal information sources such as data collected through questionnaires, and documents such as local health statistics and administrative records. Correspondingly, the methods of data collection will vary according to the type of information sought and the sources of such information. Much evaluative information can be obtained by participant observation in meetings, classrooms, site visits and in field training observations. Other data collection methods include interviews, questionnaires, diaries, and statistics or other documentation available through independent sources.

The next column in Table 1 indicates some of the main contributions of evaluation. It will be noticed that evaluation can benefit many different aspects of the program. Some examples of uses include estimating program inputs, furnishing guidelines for action, deciding on program modification, and contributing to knowledge. The last column deals with the many different human skills that evaluative activities require. We will now discuss in some more detail the evaluative activities previously proposed.

A. Evaluation of the Relationship Between the Community and the Training Program. As mentioned earlier, it is not sufficient to ask the question, "Did the training program bring about the desired

TABLE 1. EVALUATIVE SCHEME FOR THE TRAINING OF HEALTH PERSONNEL.

Objects of Interest to Evaluation	Examples of Pertinent Questions	Principal Sources of Information	Possible Methods of Data Collection	Examples of Purpose of Evaluation	Needed Evaluator Skills
A. The relationship of the training program to the sponsoring organization and to the community	Does the training program fit into the community's health goals and priorities?	Planned and unplanned observation	Participant observation in meetings	Identify the felt needs of the community and access its receptivity for the training program.	Familiarity with community organization and with community diagnosis. Skills in anthropological research methods desirable.
	Is there consensus between the sponsoring organization, the community and the training institution on training needs, on training goals and on the selection of trainees?	Planned and unplanned communication Nominal group process	Informal interviews with interested community parties	Assess the chances of success of the training program.	
	Is there commitment for organizational changes that would make the application of the training possible?	Data on health services and health problems of the community	Use of existing documentation on health-related problems	Provide information on costs, time and staff requirements. Defend the program.	
B. The planning process of the training program	Are the goals of the program defined behaviorally?	Planned and unplanned observation	Informal and formal interviews. Review of records of meetings of task analysis and curricula comparison with other programs.	Systematic account of the training goals and procedure to serve as guide for the training activities. Will serve management in planning for resources	Training in program planning and evaluation, experience with the development of training programs
	Have trainees and their work organization participated in analyzing tasks and in building the curriculum?	Examination of task analysis and curricula			
	Is there provision for field practice and for supervision?	Planned and unplanned communication			
	Is there built-in evaluation?				
C. The structure and organization of the training institution	Does the vertical and horizontal communication permit change and flexibility?	Planned and unplanned observation	Participant observation of meetings. Informal interviews. Inventories of facilities Personnel needs	Assess the capacity of training institution to meet training needs. Provide information needed for management and for program planning. Cost/effectiveness	Understanding of the managerial process and familiarity with educational methods and technology.
	Is the staff adequate, qualified and satisfied?	Planned and unplanned communication on staff morale. Data on type and use of educational technology.			
	Is there innovativeness and a problem solving orientation?				
	Is the physical setting and	Structured self-			

Objects of Interest to Evaluation	Examples of Pertinent Questions	Principal Sources of Information	Possible Methods of Data Collection	Examples of Purpose of Evaluation	Needed Evaluator Skills
D. The training process	Is the program operating according to the plan? Do the learning experiences provide trainee involvement and participation? Are the materials pretested and effective? Are instructors and trainees interested and enthusiastic? Are trainees able to translate their knowledge into skills?	Observations on the training process. planned and unplanned. Communication (informal) with trainees and trainers. Data on the effectiveness of media and on the reaction of trainees to the program.	Participant observations. Informal and formal interviews with trainees and trainers Questionnaires to assess effectiveness of media and trainee reactions.	Improvement of the program on a day to day basis and identification of problem areas and difficulties for further use. Advancement of knowledge in media effectiveness.	Experience in training process, familiarity with instructional technology and interest in research.
E. Success in training objectives	Have the objectives of the training been met? Is the performance of trainees changed? Which aspects of the training were more or less successful? How do the changes effect the consumers?	Data on changes in knowledge, attitudes and performance from trainees, supervisors, colleagues and clients. Communication with training staff about success of the program.	Changes measured by participant observation diaries, interviews and quesionnaires. Independent measures of training consequences such as utilization compliance etc. on part of clients	Proof of the value of the program and fulfillment of contract obligations. Advancement of knowledge in the area of behavioral change.	Research orientation, knowledge of research design and measurement of change. Background in behavioral sciences.
. Utilization of information	Are evaluation findings used to improve the program? Are the findings diffused to interested groups, i.e. the community, the work organization, the trainees, etc.	Analysis of changes in the training process over time. Data on diffusion of evaluative findings. Informal and formal communication about awareness of findings with interested groups.	Records of curricula modification. Interviews with trainers and trainees. Questionnaires Independent measures of diffusion of evaluative findings.	Improvement of the program according to recommendation of evaluators and others, and maintenance of interest and involvement of the community in the training program.	Ability to interpret to synthesize and to communicate evaluative findings in writing and verbally.

change in performance?" Before asking this question, which is the concern of a later discussion, we must ask "Are the changes proposed by the training program desirable and by whom?" Too often, it is taken for granted the program will be beneficial to someone. However, before this can be assumed, it is important to examine critically the relevance of the training program goals to the community.

Some of the pertinent questions the evaluator has to ask relate to the degree to which the community participates in the decision to institute a training program, in the definition of the training needs and in the selection of trainees. The process of community input in training programs actually does occur in some instances, although not always in a planned fashion. The involvement of local agencies in a training program for health aides introduced by a health department is an example of this. The selection of young people to study medicine by the community in a Chinese setting is another. Information for this type of evaluation would usually originate in observations during meetings and communication with interested groups or community leaders. Such observations can be collected by planned, systematic techniques such as the nominal group process[26] or by unplanned and casual methods. Talking with people in staff meetings during site visits or in informal settings, for example, might furnish valuable information often missed by the use of formal research-oriented data-collection methods. An evaluator with anthropological training might be of particular value to this part of the evaluation activity. The contribution of the anthropologist in evaluative education research has been recognized by the school system of Berkeley, where a team of anthropologists is presently studying innovations introduced in the school and their effects on the students, their parents, and the community.[27]

This type of information will be useful in identifying the needs of the community and assessing its receptivity to the training program. Having such information would help the program management gear the training to the community needs and defend its continued support. The person responsible for evaluating this phase of the program needs community diagnostic skills and familiarity with community organization and anthropological research techniques.

B. Evaluation of the Planning of the Training Program. The planning process of a training program encompasses the activities of what is known as the "pretraining phase."[28] In this phase, the objectives of the training program have to be defined by the collaborative efforts of the parties involved. Trainees will participate by expressing their

training needs as they see them. The organization that employs them or plans to employ them will participate by providing a detailed list of the tasks it is expecting the trainees to fulfill after the training. The training institution will participate by analyzing these tasks into detailed components. Such components would include the final output of the tasks, what material or equipment might be used in the task, and what other people are involved in the task performance (e.g., client, co-worker, or supervisor). For each of the detail tasks, information on the necessary knowledge and skills has to be outlined and the level and degree of discretionary power and delegation of duties advised. The depth and breadth of theoretical knowledge necessary for a particular task must be decided on the basis of the nature of the tasks and the availability of other supporting or supervisory personnel. The technique of defining the depth and breadth of curricula in relation to the tasks performed is currently developed by Eleanor Gilpatrick under the concept of the "career ladder."[29] Task analysis is a procedure in the planning of training programs that guarantees the adequacy of the program and its freedom from extraneous, unnecessary material. Such analysis has been worked out successfully for the training of various types of health professionals.[30,31,32,33,34]

Once the tasks are spelled out in detail, the next step is the delineation of appropriate learning experiences for the trainees. Again, the role of the evaluator is to raise questions about the choice of learning experiences, the balance between theory and practice, and the possible constraints on the actual performance of the task learned. In the health field, where some tasks are legally reserved to certain specialities, legal constraints must be taken into consideration. One of the frequent errors in training is the assumption that the provision of class-room learning experience will translate into satisfactory skill performance in the work situation. The evaluator will be able to detect where in the planning process such assumptions have been made and provide alternative solutions.

Information for the evaluation of this stage can be obtained by reviewing the task analysis sheets, assessing the clarity and precision of the stated tasks and of the knowledge and skill requirements in order to achieve proficiency in the various tasks. The learning experiences should be evaluated in a similar fashion. The opinion of specialists or experts in curriculum development or other persons with experience in the given tasks would be valuable.

The evaluation of the planning process is vitally important to the outcome of the program. The information collected in this stage provides the concrete basis of the rationale, the goals, and the pro-

cedures of the program. It is the blueprint on which the training program will be constructed. The person responsible for the evaluation of this phase would need previous experience in program planning and in the development of training programs, including techniques of task analysis and curriculum development.

C. Evaluation of the Structure and Organization of the Training Institution. The structure and organization of the institution involved in the training program has important implications for the success of the training. Miles [35] has identified a number of dimensions relevant to the health of a training institution. These include task-related dimensions, dimensions related to maintenance needs, and dimensions related to the "changefulness" of the institution. The evaluator will be concerned with assessing the quality of these dimensions. Some of the pertinent questions outlined in Table 1 are examples of the problems the evaluator must deal with. They include questions about intraorganizational communications, about morale and learning climates, about openness to change and flexibility, about the number and qualifications of personnel, the adequacy of the physical setting, and the availability of teaching equipment. It is often the case that training facilities are evaluated primarily on the basis of their technical equipment and their supply of hardware or media. This is clearly an inadequate and partial view, probably based on the erroneous identification of the educational process with the mere production or use of media. While demonstration facilities, laboratories, and other such facilities are important for the success of a training program, they do not in any way constitute the training program by themselves.

The information necessary in order to evaluate the structure and organization of the training institutions includes planned and unplanned observation of the communication patterns within the training institution, the morale of the staff, and the prevailing climate. Such information might be collected by informal, unplanned observation in meetings and informal interviews, as well as planned observations aimed at identifying staff satisfaction and morale, vertical and horizontal communication patterns, leadership style, power distribution, etc. A structured self-assessment study using a list of predetermined evaluative criteria such as those suggested by Green [36] might be a very productive exercise.

In regard to the evaluation of human resources (teaching staff), physical setting and educational technology, data available through administrative inventories and personnel records could be sufficient. An often neglected area of training evaluation is that of cost-effectiveness of training activities. Innovative approaches to deal with

the complex problems of cost-effectiveness of health education which might be applicable to training programs as well have been suggested by Green. [37]

Realistically, such evaluative activity can only be applicable in settings where the training program under evaluation avails a training institution of its own. In many settings, trainees are "guests" in training institutions which are evaluated informally by their reputation in their community. In these cases, the concern of the evaluator is not so much to evaluate the training institution, but to selectively examine characteristics of the institution which might render it more or less appropriate for the purposes of the training program. To accomplish this evaluation effectively, the evaluator will benefit from experience and understanding in managerial processes, and familiarity with educational methods and educational technology.

D. Evaluation of the Training Process Itself. Blueprints for program activites are not the same as program activites. The way the training is carried out is as important an object of evaluation as the plan on which the training was based. Critical questions in this phase are related to the choice of learning experiences that provide opportunity for participation, direct experience and application of the skills in real life situations. This is the time of translating theoretical learning into actual problem solving, and the role of the teaching institution is, of course, of central importance here. The methods utilized in the training, pretesting of materials and methods, and the performance of the teaching staff are some of the crucial questions. Available research evidence has shown that instructional methods have to be selected on the basis of the trainee's background and motivation and according to the nature of the learning experience needed. There is abundant recent evidence that favors the non-didactic, participatory group learning in the training of health workers. [38,39] Of particular value in this area is the experience gained through the training of mental health workers and counselors. Research in this area has established the superiority of the group laboratory training model, [40,41,42,43] over the didactic academic model. Knowledge of the classical studies on the techniques of persuasion and communications, [44] as well as recent evidence on the effectiveness of the various channels of communication and presentation, [45,46] which guide selection of media and channels for the training, will also guide the evaluator's judgement about the quality and appropriateness of the training methods utilized. Appropriate modern training aids such as the video-tape [47,48] and teaching machines [49] are likely to improve the effectiveness and the efficiency of the training program. In the context of evaluation, specific research projects could be carried out in which the effectiveness of alternative training

methods could be assessed and compared.

The information needed in answering questions in these areas can be obtained through direct observation of the training process by participant observers and planned and unplanned communication with trainers and trainees. A useful framework for evaluating the training process through a content-analytic assessment of sensitivity training has been developed by O'Day.[50] Its use in training situations of health personnel might yield useful insights in trainee-trainer interactions. Data on the reactions of trainees and trainers and on their satisfaction with the training methods by the use of anonymous questionnaires might also yield useful information. In the field of higher education, student reactions are now widely used in an attempt to increase student participation in the educational process.[51] The effectiveness of the various training methods in eliciting interest and participation in the training process can be assessed with questionnaires. Appropriate dimensions for evaluating training methods have been developed and tested in a number of settings.[52] The effectiveness of training methods in bringing about changes in knowledge, attitudes, or performance of the trainee will be discussed later.

The evaluation of the training process serves a number of important functions. First, it provides the continuous opportunity for a critical examination and adjustment of training procedures. Secondly, it provides a pretext for group discussions and exchange of ideas between trainees, trainers, and other staff, necessary for achieving a climate of collaboration and enthusiasm for the learning process. Comparative data on the various training methods used can also contribute to our knowledge of training methodology.

The person responsible for this evaluation component of the program needs experience in training methods such as teaching and communication skills and group leadership, as well as familiarity with educational technology and interest in research.

E. Evaluating the Success of the Training Objectives. The majority of "scientific evaluation" of training programs concentrate on this aspect of evaluation and attempt to answer the question: has the training program succeeded in its intent? This is obviously the focal concern of all evaluative research endeavors and deserves primary, although not exclusive, attention.

This phase of evaluation presents particular difficulties, some of which have already been discussed in the beginning of this paper.

Research design is sometimes incompatible with training goals and procedures. To the extent that experimental and quasi-experimental research designs such as those summarized by Campbell [15] can be worked out, the experimental approach remains the most valid method of assessing the effect of the training program on trainees' performance.

The choice of a control group is the most difficult task of the evaluator in this phase. A common error is to compare trained with untrained persons who never entered the training system. The fallacy here is the assumption that these two groups differ only in regard to their training experience. A similar erroneous assumption is made in comparing training outcomes of particularly disadvantaged groups (e.g., remedial treatments), with standards that pertain to the general population. Random assignment to experimental and control groups from a common pool of employees or applicants needing or requesting training is the best, although not always workable, method for avoiding such problems.

Another serious methodological problem in this area is related to the criteria of success. These are commonly related to the degree of explicitness and concreteness of the program objectives. There is little consensus on what constitutes an acceptable set of criteria in evaluating training outcomes. This is probably due to the variety of such outcomes, and the differing importance of each according to the situation.

One conventional evaluative criterion of training outcome is that of changes in the earning capacity of the trained individual. [53] This criterion, however, might be of little use in the monopsomistic setting, where the trainee often has no alternative but to return to his original work situation after the training.

Changes in trainee's knowledge, attitudes, and behaviors can be assessed by a number of methods requiring a varying degree of rigor. Knowledge changes, for whatever they are worth, are usually measured with the pretest and post-test method. Longer period follow-up on retention of such knowledge may be a better criterion, since it provides information not only on what is retained in the long run, but also what facts are used (what is not used is forgotten). Attitude changes can be assessed either directly from the trainee or indirectly from his supervisor and colleagues. There are innovative ways of measuring such changes available now. In the assessment of attitude change, for example, the semantic differential has been found to be a useful instrument. [54]

Another possible instrument of data collection would be the diary. The trainee can record daily the problems he or she encounters during both the pre-and post-training period. Such diaries, in addition to evaluation, could also be useful in the planning process in conjunction with the analysis of tasks and the development of the curriculum.

In the indirect assessment by supervisors, one study found that the performance, rather than simply the verbal response of the supervisor, in certain situations is a useful measure of trainee effectiveness. [55] Peer review methods in which trainees are actively involved in self-assessment and assessment of others, combined with appropriate incentives, have been found useful in the industrial setting and might be of use in the health service setting as well. [56]

Performance changes should eventually be reflected in the final outcome of the training program. In the health service setting such changes should be reflected in the way trainees are perceived by the clients and the impact they have on clients' health behavior (i.e., independent measures such as compliance, utilization patterns, preventive health behaviors, etc.). A double-blind design which might allow a stooge client to evaluate "trained" and "untrained" providers on certain behaviors would be an ideal approach to this problem. However, such an approach poses a number of administrative and ethical problems difficult to overcome. It is also necessary to keep in mind that in post-training evaluative studies, it is necessary to analyze not only the individual trainee's changed performance, but, more importantly, the degree to which the work organization has provided him with the opportunity to exercise fully the newly acquired skills.

The information obtained in this evaluative phase serves a variety of purposes: it provies the best possible evidence needed for program improvement. It serves as the best defense of the program (if the results are positive) and it often fulfills contract obligations. Another important contribution is, of course, to knowledge, and in particular in the area of behavioral change. The person responsible for this phase of evaluation needs preparation in research, including methodology of research design and instrument development, as well as a background in behavioral sciences.

F. Evaluation of Feedback Information. The final phase is an attempt to evaluate the degree to which evaluation findings are actually influencing the course of the training program. Another important question in this connection is related to the diffusion

of the evaluation findings and their use in the community. In order to evaluate this phase, we need information about the way evaluative activities are viewed and used by the training institution. Such information can be obtained by formal (interview, questionnaires) or informal communication with the training staff. Additional methods involve an anlysis of changes of the training of evaluative reports in the community could serve as another indicator of the utilization of feedback. The purposes of evaluating this phase are many. Evaluative findings are of little intrinsic worth. Their primary value lies in their use to guide and improve the program. However, it is not unusual that evaluative findings are given little or no consideration. In addition to their obvious use for program improvement, the communication of evaluative findings strengthensand reinforces the needed collaboration between the community, the sponsoring organization, the training institution, and the trainees. Finally, the need for public accountability and sharing of evaluative outcomes in public service programs is long overdue. 10

The person responsible for this phase of evaluation must have the ability to interpret data, to synthesize the significant findings, and to communicate them effectively, both verbally and in writing.

Examining the column relevant to the skills of the evaluator, it is easy to arrive at the conclusion that no single individual can undertake the role by himself. Many of the skills of the evaluator are likely to be available among the training, managerial, and technical staff of the training institution and the work organization. This analysis provides convincing evidence in favor of an interdisciplinary evaluative team composed of all or of some of the persons involved in training activities Such an approach would overcome the well-documented resistance arising from the introduction of an external evaluator. 57 However, the use of special external evaluators to assist the evaluative team with specific technical problems may not pose any difficulties.

The evaluative processes proposed here constitute essentially an educational process. It is educational not only in the sense that it encourages and reinforces the continuous, voluntary improvement of the training process based on knowledge of results, but at the same time it provides an open, participatory and democratic approach in which dialogue and constructive criticism are encouraged. By approaching evaluation as an education process, new ideas are received with enthusiasm rather than suspicion.

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EVALUATION OF HEALTH PROGRAMS:

A HEALTH EDUCATOR'S PERSPECTIVE

Adapted from

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"Introduction to Health Education"
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Evaluation of and research in health education have been the subject of two WHO technical reports, one or two SOPHE monographs, several HEW publications, an issue of the International Journal of Health Education, and a multitude of journal articles.[1] The materials fall into three general categories. The first cites the importance of evaluation and of research related to health education practice and exhorts practitioners to attempt these procedures with greater frequency. The second category contains the "how-to-do-it" literature, discussing the various methods for conducting research or evaluative studies. The final grouping encompasses reports of such studies - this group is quite small.

This entire body of literature concerns me. It is based on two incorrect premises which should be eliminated from the thinking of all health educators and all workers in the field of public health and medical care. Their perpetuation can lead only to ineffective health measures. These assumptions are: first, that health education is comprised of those educational activities manipulated by health educators; and, second, that the behaviors of individuals can be altered independent of changes in their general life circumstances.

WHAT IS HEALTH EDUCATION?

The first problem involves a definition of health education. In its 1969 Technical Report the World Health Organization expert committee stated that in its broadest interpretation: health education concerns all those experiences of an individual, group, or community that influence beliefs, attitudes, and behavior with respect to health, as well as the processes and efforts of producing change when this is necessary for optional health. This definition realizes the importance of all experiences. Unfortunately, the committee accepted a more limited meaning for the purposes of its report: the planned or formal efforts to stimulate and provide experiences at times, in ways, and through situations leading to the development of the health knowledge, attitudes, and behavior that are most conducive to the attainment of individual, group, or community health. Parenthetically, the definition adopted by the President's Committee on Health Education: "Health education is a process that bridges the gap between health information and health practices," seems completely useless.

Perhaps you are wondering how these definitional issues are related to evaluation. Well, if you plan to evaluate a health education program, you must first define what is to be studied. Most evaluative studies executed by health educators focus on the so-called "educational component" of a public health or medical care program. They divide a group of families into experimental and control groups and expose one group to individual counseling relative to family planning, another to group techniques, and a third to no education at all. Then they measure changes in knowledge, attitudes, and practices in the groups. Similar studies have been attempted in a variety of settings, hospitals, schools, clinics, etc.; but the focus almost always is on the health education component. To me this appears to be a gross form of professional inflation. If you rationally consider all the possible influences on a person's decision to seek services or not, or to comply with a physician's instructions or not; you must read the conclusion that the health education program is only one, and perhaps a relatively minor influence. Compare it with factors of accessibility: How far away is the clinic you are trying to educate pregnant women to attend? What hours is it open? Or consider acceptability: Are appointments scheduled at regular intervals or is everyone scheduled to arrive at the same time and then wait for the obstetrician to work his way through the patient load? What are the attitudes of the physcians and nurses towards young, poor, or minority group women? Perhaps your educational campaign can bring in some pregnant women for a first visit despite problems with accessibility and acceptability; but unless these problems are overcome, its continued success is unlikely.

To continue with the first example, is the health educator's task limited to developing, executing, and evaluating the individual counseling and the group discussions; or is our profession also responsible for determining that the family planning clinics are run by sympathetic staff and are easily accessible, or even that these clinics have adequate supplies of the contraceptives whose use is being advocated? If the answer to this question is "no," strike me from the list of health educators. I want no part of urging people to use unavailable materials in uncomfortable surroundings; and I am unwilling to believe that administrators and clinicians will "take care of" these matters with no prodding from health educators.

Let me give you another example of what I consider health education parochialism. Recently I sat, somewhat uncomfortably, as a health educator reviewed with an audience of health educators the variety of techniques which could be used to change the know-

ledge, attitudes, and practices of patients and other community groups. He did not stress posters, pamphlets, films, etc., the paraphenalia of the 1950's health educators; but rather used the social science approach of the 1960's version. During the break between speakers, I asked him whether he thought health educators had any responsibility for changing the knowledge, attitudes, and practices of the providers of health services, as distinguished from the consumers. He readily agreed that health educators did, and we then further agreed that the knowledge, attitudes, and practices of physicians, nurses, social workers, aides, etc. probably had as important an impact on consumers as anything the health educators did directly for or with the consumer. To his credit, the health educator commented on his omission before the introduction of the next speaker. But I am certain that despite this declaimer the audience was left with the impression that health education is what the health educator does. Although health eduators usually say that everyone does health education, they act as though only they did, and when they evaluate they only study what health educators have done.

These examples lead me to two conclusions. First, health educators must be concerned with all aspects of a health program, not just the so-called "educational aspects," or to put it another way, health educators must be concerned with the educational impact of all services provided by all personnel, not just with the educational services performed by health educators. Second, that there is little, if any, value in studying only the educational aspects of a program. Just as health educators must look at all aspects of program development and administration from the point of view of the prospective user and actively intervene when the planning or execution loses its client-orientation; so they must be involved in evaluating the effectiveness of the entire program and not just such educational efforts as were included.

THE CONDUCT OF EVALUATION

As a health educator, I also have some opinions about how evaluation should be conducted. First, relatively little is accomplished by a gross decision about whether a program is successful or not. To be useful an evaluation must determine why. Some of the answers to the why question can be accomplished by asking users and non-users, or compliant and non-compliant patients, about their reaction to the service. Other answers may be obtained by statistical analysis of use -- but beware of studying only consumer characteristics and ignoring provider characteristics. Why is it that in almost all studies of utilization, the utilizers are analyzed in terms of education, race, age, sex, education, and a myriad of

other variables; but the services they use and the providers of those services are considered one homogeneous mass? Why? Because of our biases!! We know that all physicians are not equally well-trained, that all nurses are not equally friendly, and that all social workers are not equally sympathetic, but we do not act on that knowledge when we conduct studies.

McKinlay[2] is one of the few social scientists who have pointed out this inconsistency, and investigators are just beginning to introduce provider variables into their analyses. In a study[3] of the Young Mothers Clinic for school-age mothers at the Yale-New Haven Hospital, Dr. Jekel and I found that the patients of nurse-midwives were more likely to return for a postpartum examination than patients of obstetricians. Even more interesting, we found that the number of visits made to the social worker for counseling and guidance during the prenatal period was as strongly related to the social worker to whom the girl was assigned as to any characteristic of the pregnant girl, including physical or emotional problems. Certainly health educators, when evaluating programs, should not fall into the stance, to quote Bill Ryan, of "Blaming the Victim" for non-utilization or non-compliance. The provider as well as the consumer should be studied.

Incidentally, perhaps these two sources of error: (1) concentrating on the "educational component" rather than on the entire program package; and (2) analyzing in terms of the client only, rather than also looking at the provider, have contributed to the negative results of a majority of evaluations of health education efforts. These negative findings, however, have not put health educators or evaluators out of business, usually they have been blamed on poor methods of data collection, inadequate samples, not allowing the health education program to run a sufficient length of time, etc., rather than on the sources of error I have suggested.

Limitations of Programs

To proceed to the other premise which colors evaluation not only in health education, but in health and medical care generally: that the behaviors of individuals can be altered independently of changes in their general life circumstances. This is the premise which would have us rely on obstetrical care for the reduction of infant mortality, or on dietary modifications for the control of diabetes, or on psychotherapy for the treatment of drug addiction. People whose lives over a period of 13 to 40 years have been characterized by poor nutrition, inadequate housing, and abysmal education probably are going to have premature babies regardless of the most

intensive efforts of the obstetrician for nine months. Dietary modifications are possible only in the context of a certain type of home life where food is prepared, rather than cans opened, where meals are served at regular hours, rather than picked up at will, and where some future goal is more important than the gratification which a sweet can produce in the present. The example of psychotherapy with the addict is more of the same, an attempt to change the individual while leaving his environment unchanged. Susan Reverby[5] has provided examples of the integration of health education and social change in Mainland China, which health educators should study.

Roland Warren, a sociologist, has commented on the limitations of most attempts at change, noting the convergence of the preferred research method in evaluation, namely, the controlled experiment, and the usual method of agency programming, namely, the specific, limited intervention. He states[6]:

> For various reasons of practice and practicality they (the agencies) confine themselves to a very limited, relatively identifiable type of intervention, while other things in the life situation of the target population are...left unaltered.

One of the best known social scientists in the evaluation field, Carol Weiss, also has pointed out the limitations of current evaluative studies:[7]

> It seems to me that now in some fields there is a limit to how much more evaluation research can accomplish. In areas where numbers of good studies have been done and have found negative results, there seems little point in devoting significant effort to evaluations of minor program variants. Evaluation research is not likely to tell much more. There is apparently something wrong with many of our social policies and much social programming. We do not know how to solve some of the major problems facing the society. Nor do we apply the knowledge that we have. We mount limited-focus programs to cope with broad-gauge problems. We devote limited resources to long-standing and stubborn problems.

She further condemns most evaluations, stating:

> By accepting a program emphasis on services (they) tend to ignore the social and institutional structures within which the problem of the target groups are generated and sustained. Although evaluation studies

can examine the effects of non-program variables, they generally concentrate on identifying changes in those persons who receive program services compared to those who do not, and they hold constant (by randomization and other techniques) critical structural variables in the lives of that particular population.

Both of these experts conclude by urging social scientists to spend more time on research into social processes and social institutions, rather than on evaluations. They realize correctly that significant changes in the health and welfare of populations result from changes in policies and institutions, rather than from health or social agency programs.

CONCLUSIONS

Where does this leave us as trained public health workers? Certainly I am not suggesting that we abandon all efforts in public health and medical care, rather that we view our programs in a reasonable perspective realizing that more may be accomplished by lobbying and through the ballot box than by small-scale health programs. Nor am I suggesting that we abandon health programs, rather that we improve them, using evaluation as one tool for that improvement. But let us, as health educators, not restrict our evaluative efforts to the so-called "educational component" of a health program--this is an "academic" exercise in the pejorative sense of the term--that is, it is of limited interest and use. The consumer does not separate out the educational component of a program. He responds, or does not respond, to the gestalt. As health educators we should assume responsibility for determining that all components of our programs evoke positive reactions in the consumer, and then it is that total package which we should evaluate.

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TOWARD A FRAMEWORK

FOR

INQUIRY IN HEALTH EDUCATION

by

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TOWARD A FRAMEWORK FOR INQUIRY IN HEALTH EDUCATION

by

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Author's Preface

We, who identify ourselves as health educators, begin our careers as professional practitioners. In fact, health education emerged as a field of knowledge as a result of the need for the application of the educational approach to problems of behavioral change in the health sphere. The result is that most of us are more adept in thinking about a problem and searching for relevant solutions.

Our natural preoccupation with practical application does create difficulties however, because application varies greatly depending upon the setting in which a behavioral change problem is located. In fact, application in different settings already has led to the establishment of separate health educations--such as, school health education and community health education. The future promises still more such artificial differentiations.

If health education is to achieve a disciplinary status, we must identify and articulate the central core of concerns (without reference to application) that are unique to the field, and that distinguish health education from other disciplines. If a unique field of inquiry does not exist for health education, then it is not a discipline, and it's professional practice component will gradually disintegrate as a field of endeavor.

This paper is one attempt, however elementary, to begin the necessary articulation process.

* *

A continuing task for any discipline is the search for more coherent and provocative theoretical frameworks to guide its research and its practice. The purpose of this paper is to contribute toward the conceptualization of the art and science of health education, and to suggest a way of looking at a substantive base from which the field of inquiry may be guided. Emphasis is given to a clarification of terms and to an elaboration of the major areas of concern in health education, their interrelationships, and underlying assumptions. The evolving conceptual framework is illustrated with questions for inquiry. Finally, some of the relationships between inquiry, professional practice, and curricular design are discussed.

Clarification of Terms

The term health education has many connotations. It has been defined sometimes in terms of purposes and outcomes, other times in terms of processes and approaches. For example, health education has been described in the literature as a means of improving personal and community health, as the development of a sense of responsibility in people for their own health, as classroom teaching about health, as the education of health personnel, and as a program or a department of a health organization. Attempts to define health education in terms of organization or application render the term somewhat ambiguous and do little to identify or clarify the core of substantive concerns that cut through these varied approaches to definition.

The basis of health education obviously lies in the relationship between health and human behavior. More specifically, the core of its knowledge is the understanding of human behavior in terms of its health consequences, and understanding the processes of change in human behavior as these related to the promotion of health and the prevention of illness. As etiology has become

known throughout the history of disease in man, human behavior has been implicated as a factor in causation, and frequently as a critical one. For example, the types and amounts of food people select and prefer, their daily ritual of work, rest, and exercise, the manner in which they relate to others, are but a few of the many forms of behavior having a role in disease causation. Moreover, the rapid pace of techno-social change in contemporary life and its wake of identity crises, environmental pollution, overpopulation, drug addiction, and other problems, provides continuing testimony of the intimate relationships between human behavior and health outcomes. It seems clear that promotion of human health is not possible without understanding the human behaviors related to it. In fact, health promotion is frequently dependent upon influencing changes in health-related behavior. The processes by which behavioral change occurs, therefore, are concern for inquiry, as is the impact of change itself on the healthy functioning of the individual, social group, and community.

The term health-related behavior change more accurately identifies the focus of the field of inquiry and avoids reference to applications included in the various definitions of health education. Also, it avoids the misleading assumption that a unique class of behavior exists which might be labeled health behavior. Such an assumption would imply that some human behaviors lead to disease causation or health promotion, and that others do not. It is difficult, if not impossible, to identify any human behavior that is not potentially health-related in one way or another. Some health-related behaviors are clearly health-directed in the sense that the actor is aware of seeking a health goal, such as using medication to relieve symptoms, or obtaining medical care. However, most health-related behavior is motivated by factors other than the actor's conscious concern for his health. (Georke et al, 1968)

A Framework for Inquiry

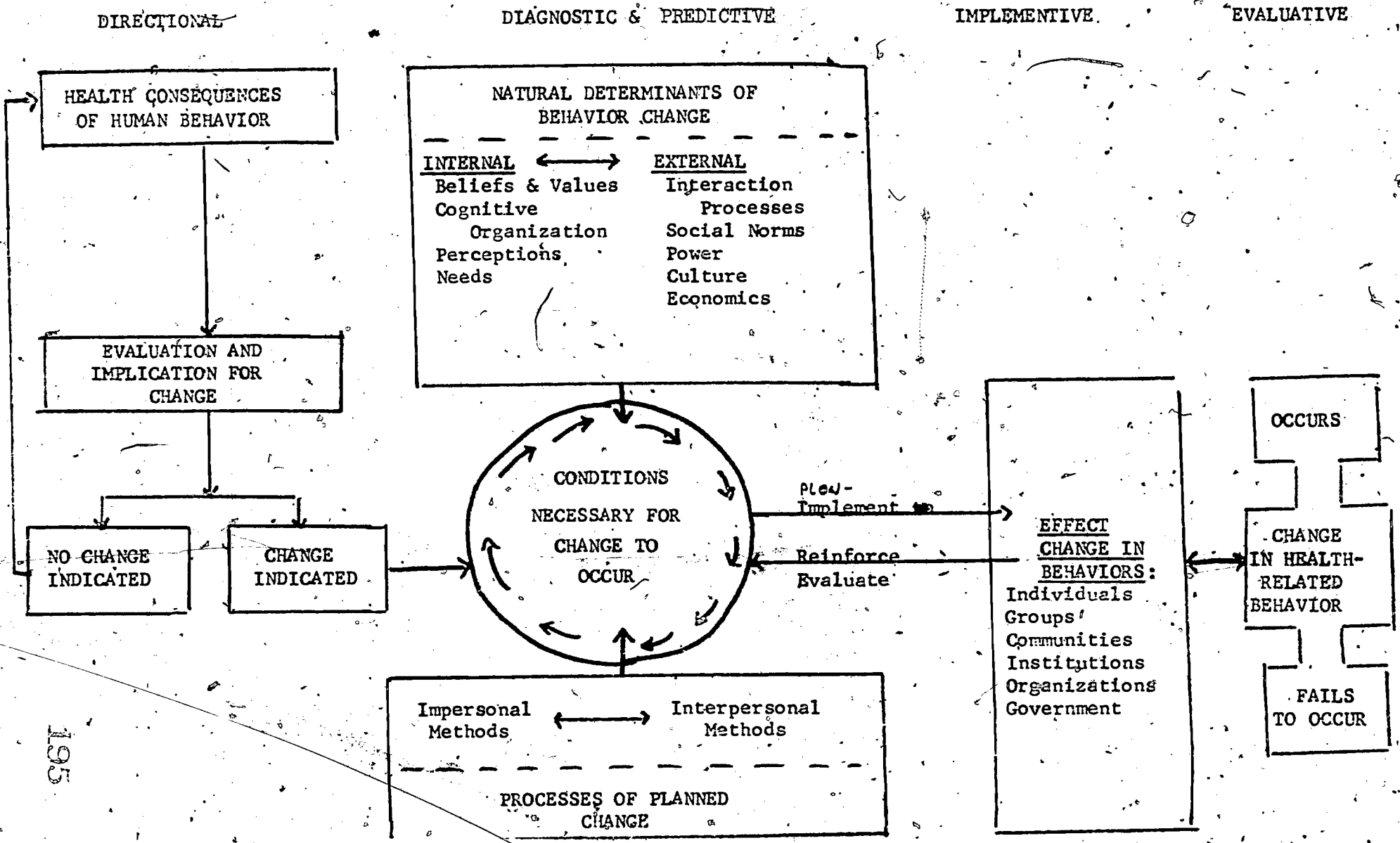
Presumably, a field of inquiry is provided with shape and direction by the nature of the problems it seeks to clarify or resolve. If so, then the identification of its general areas of concern and their interrelationships would provide a framework within which specific questions can be asked. The paradigm (page 4) is an attempt to place the core of concerns in perspective. Major concerns emphasized are: the health consequences of human behavior, the natural determinants of behavior change, the processes of planned change, and the transactional relationships between natural and planned change determinants as these affect the conditions necessary for change to occur.

The health consequences of human behavior involve understanding the relationship of any given pattern of behaviors and their consequences for achieving or maintaining a state of wellness. For example, what are the consequences of a pattern of drug-dependent behaviors for the health of the individual? the social group? the community? What is known about the causes, treatment, and prevention, of these health consequences? What differences do the health consequences make in terms of optimal functioning of individuals, groups, and community? The analysis of these factors determines if health education has a contributing role to play in the solution of any given health-related issue or problem.

Another facet of this concern is the health consequences of change, itself, on the living unity of the individual, social unit, and community. The problem is well illustrated by a World Health Organization report that describes a situation in which "new" medicine, introduced into a community, brought a loss of faith among the people for their traditional medicine. When the new medicine proved too expensive, people found themselves without any medicine. Obviously, a change in any one aspect of living will have repercussions in other aspects. What are the relative consequences for health of a change as compared with the original behavior? What disruption in other

Figure I

CORE OF CONCERNS IN HEALTH EDUCATION



patterns of beliefs, attitudes, and habits could be expected? What would be the effect of a change on the total pattern of existing interrelationships for those involved? What are the alternative kinds of change to be considered? Thus, what is the desirability for change or no-change in the health-related behavior?

When changes in behavior of individuals, groups, or a community are needed to promote health or prevent illness, the health educator has the task first of predicting the conditions necessary for these changes to occur. This task involves an understanding of the natural determinants of change in behavior, the processes of planned change and the transactional relationship between the two.

Predicting conditions necessary for change in behavior to occur is based first upon understanding what natural determinants of change in behavior (factors and forces) exist in the situation before actual planning for change is attempted. The assumption is made that human behavior is neither passive nor static, but is continuously changing through experience. Past and present thinking-feeling-acting experiences tend to influence future responses. The questions to be answered are: "What is going on in the man-environment relationship? What does it mean with respect to a change under consideration?"

The field of inquiry is concerned, therefore, with the individual with all of his inner forces: his beliefs and values and the way he cognitively organizes his world to derive his own special meaning, his needs and goals, and the order of priority he places upon them, his biological constraints, and how all of these internal forces interact to influence his action. Of concern, also, is the understanding of any particular health-related behavior, not in isolation, but as part of a larger complex of behaviors (habits or patterns of behavior) that provide supporting needs, beliefs, and values, to maintain the status quo. Questions exemplary of this area are:

What are the relationships between people's health-related behavior and their beliefs, values, goals?

In what pattern of activities does the health-related behavior occur?

In what ways are different perceptions associated with early seeking of medical care, or with delayed action?

What patterns of advice-seeking exist on matters of health? How does advice-seeking vary with type of symptoms perceived?

A second group of natural determinants of change in behavior are those forces outside the individual, but interacting with inner forces in a behavioral sense. In this respect are significant others and group systems that shape and maintain behavioral norms, and provide social support or recognition to the individual; the larger social systems, such as the work organization, or the community with its power structure, social stratas, and economic influences--all of these are dynamic forces, external to the individual, that influence his health-related behavior (Roberts, 1970). Questions exemplary of this area of inquiry are:

What differences in composition of decision-making groups have relevance for change in various health-related behaviors (family, peers, other groups)?

What social support factors must be present for an individual to maintain a newly accepted health practice?

What natural determinants of behavior influence the processes of diffusion of new health practices among people?

Predicting conditions necessary for change to occur is dependent also upon an understanding of processes of planned change. It is useful at this point to make a distinction between how people acquire or change knowledge, skill, or other behavior, and how people can be taught these things. The former involves theories

of human behavior; the latter is concerned with theories of communication, education, and intervention (Knutson, 1967). Planned change occurs at the interface of these two sets of factors.

Learning theory usually is concerned with a process that involves pre-defined goals toward which learners are guided. An external value judgment is implicit as to the desirability of the learning goals and the criteria for success. Planned change is concerned, additionally, with change that occurs without pre-defined goals, for example: factors other than knowledge and understanding may lead to rejection or acceptance of change, such as perceiving an innovation as being inconsistent with traditional ways of life, or accepting change because it is perceived as being approved by the members of one's group. Thus, the broad context of influences generated in interaction processes, as for example, participation, decision-making, group dynamics, and the impact of social climate or social norms, are also involved in the educational process.

Planned change intervention concerns not only the perceptions, needs, and actions of target individuals, but a range of secondary targets, such as the family, small groups, community power groups, policy decision-makers, health agencies,--all the forces, external to individuals, that may facilitate or impede favorable changes in health-related behavior among members of the primary target group. The development of such social supports, that are consistent in direction, is needed to stimulate and sustain favorable changes in health-related behavior of individuals identified with the problem. Questions exemplary of this concern are:

> What combination and sequence of planned change interventions are most effective for strengthening people's perceptions of a relationship between a prevalent health problem and the seeking of medical care?
>
> What are the influences of different interacting patterns of impersonal and interpersonal sources of information on the stages of adoption of a new health practice by a population group?

What proportion of people and segments of a population need to be educated about environmental pollution in order to initiate a natural diffusion of information leading to community action to prevent pollution?

Relatively enduring changes in behavior tend to require understanding, involvement, and commitment. In fact, man appears reasonably skillful in resisting the efforts of others to change his behavior, unless/ he understands, consents, and participates in the endeavor. To the extent that this observation is valid, it is assumed that man, himself, is necessarily part of any planned behavioral change effort. He is, in fact, transacting with it. Given the assumption that behavioral change is an ongoing, natural process, planned change is viewed as variables intervening at one or more points in the flow of these unplanned influences on health-related behavior. The natural determinants of change in behavior, both internal and external to man, have a transactional relationship with the intervention processes of planned change, that is, each set of forces interact to modify the other. For example, if planned change interventions regarding the value of smaller families are, in fact, integrated into the existing norms of a family's reference group, the modified social norm influences family behavior. On the other hand, if a planned intervention is distorted or rejected by the group, the intervention itself is nullified or modified. In fact, it may stimulate resistance by a group whose original position was neutral. Thus, predicting the conditions necessary for change to occur requires the understanding and ability to predict the nature of the transactional relationship between forces of natural, ongoing behavior and planned change interventions. The following questions exemplify this area of inquiry:

What is the relationship between group discussion and decision processes and carrying out a personal commitment to cease smoking behavior?

What natural determinants of behavior change must be present as predictors that information alone is likely or unlikely to lead

to a change in health-related behavior?

What is the relationship between the content of a planned change intervention and the group needs as perceived by the group for whom the change is intended?

The foregoing framework for inquiry is intended as a way of looking at the field in a systematic way. As phenomena of health-related behavior change are studied and gaps in existing knowledge are filled, confirmation or denial of the assumptions made will be possible. The emergent theory will further clarify and refine the core of concerns of the discipline.

Relation to Other Disciplines

To some extent all fields make use of concepts from other disciplines in an effort to gain a better understanding of a problem under investigation. In fact, research efforts may be diminished if the knowledge of other related disciplines is not readily at hand. Findings from the field of inquiry in health education need to be related to understandings from other fields of investigation and at the same time make a unique contribution to the general pursuit of knowledge about man and his environment.

The study of health-related behavior change proceeds from a strong base of knowledge from the behavioral and biological sciences. All of these disciplines are concerned with inquiry into human behavior. A useful distinction can be made, however, between the focus of inquiry in health education and that of other disciplines. An anthropologist, for example, may study health-related behavior as a means of understanding the cultural patterning of beliefs about health. The concern is with the investigation of an aspect of culture, not with the health outcomes of behavior nor the processes of health-related behavior change. The health educator, on the other hand, studies concepts of culturally sanctioned belief systems to better understand the health-related behavior of a people and the conditions which may impede or facilitate change in that behavior, but he does not investigate belief systems nor culture per se. The unique focus of health education is the study of man's behavior and behavioral change in terms of consequences or outcomes for his health.

Relationships Among the Field of Inquiry, Professional Practice and Curricular Design

Although the field of inquiry and professional practice are not the same, both are formulations of the same basic concerns. The purpose of inquiry is not to effect change in health-related behavior, but to understand its nature. The purpose of practice is to apply the knowledge and understandings of health-related behavior change to change problems in a wide range of settings such as schools, medical facilities, neighborhoods, whole communities, legislative bodies, and many others.

The concept of a field of inquiry and a unique disciplinary focus in health education has several implications for curricular design. First, it assumes that there is a substantive core of knowledge that is health education. Second, it assumes that there are not different kinds of health education such as school health education or community health education, but, rather, that there are differences in applications of the body of knowledge to change problems in various settings. If these assumptions are valid, then it logically follows that there would not be separate curricula for school health education, community health education or public health education. Indeed, there would be only health education with a core of courses on the substantive knowledge of the discipline for all health education students. Additional course offerings that focused upon the application of the body of health education knowledge to change problems in particular settings, target groups or problem areas would provide specialized knowledge and skills in concert with a student's career interests and goals. There would be no rational purpose to maintain separate accreditation standards for programs of study labeled school health education or community health education or for programs located inside or outside of schools of public health. There would be a clearly defined discipline with which all health educators could identify regardless of the settings in which they practice.

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CONSIDERATIONS FOR THE DESIGN

OF A

COMPREHENSIVE HEALTH EDUCATION DELIVERY SYSTEM

by

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What has become obvious to each of us, the longer we practice in health education, is that it frequently becomes an isolated and fragmented activity within agencies and among agencies. Occasional jointly planned programs within agencies can be seen, but they are few and far between. Interagency cooperation on selected health problems occurs once in a while, but multiple agency collaboration in a concerted way over extended periods of time is rare. Furthermore, as the President's Committee on Health Education has found, health education is fragmented at all levels, with frequent dublications in delivery and serious gaps in services to specific groups.

What should be clarified at the outset is that the term "delivery system" is somewhat of a misnomer in this paper. It tends to imply a one-way system, like the United Parcel Service which carries packages and drops them at the door. In truth, a delivery system for health care generally, and health education more specifically, must be a transactional process, or a series of interactions. In such a system, needs are arrived at and programs are planned through the joint determination of both consumers and providers. For health educators at least, use of a phrase such as "health education transactional system" would be more descriptive terminology than "delivery system," for it is the transactional element that is crucial.

As we witness a period of considerable resurgent interest in health education - a renaissance, or perhaps more accurately, a reformation - we are seeing a period of increased resource allocation and a period of increased legitimation of the field. Indeed, one could say health education is an idea whose time has come at long last. This "re-birth" in health education must be a comprehensive one, and as such, it requires that each of us reorganize our thinking about how it should be provided, by whom and under what conditions. It also challenges our profession to take a fresh and critical look at the comprehensiveness of our

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profession and to recognize a greater necessity to develop a unified organizational approach to problems of the profession itself, instead of the fragmented one that exists currently. The profession mirrors the delivery system and vice versa at the present time, and both must become increasingly comprehensive.

To be comprehensive from the standpoint of practice, health education first of all must be planned and carried out using a systems view of human behavior which recognizes that there are almost always multiple causes of behavior and multiple interventions required to change it. Thus, health education cannot be planned in isolation from other change strategies and intervention approaches. To be comprehensive from the standpoint of organizational arrangements, health education must be planned and carried out among the major providers in society that have established responsibilities for the health and education of the populations. It is the organizational dimensions of a comprehensive health education delivery system that this paper will focus on, since these dimensions may provide directions for new legislation, institutional arrangements, and the allocation of resources.

DELIVERY SETTINGS

Health education services, as they are currently provided, are based in a multitude of agencies and institutional arrangements at local, state, and national levels. Each of these has a unique history of voluntary or governmental sponsorship and program development, and each by no means has health education as a solitary objective. In both the broad preventive and curative aspects of medicine and public health, health education is a component whose relative worth has fluctuated like the stock market. However, with increasing knowledge about human behavior, new findings and innovations in health care, and increasing consumer demands for health services, the value and importance of health has increased. Demands for health education services nationwide appear to exceed the resources, particularly manpower resources at all levels. How then may we design a delivery system for health education that is comprehensive, economical and feasible? What are some of the requirements and organizational boundaries?

While it would be possible, perhaps even desirable, to reconsider the delivery of health education services by focusing strictly on groups within the population (i.e. young children, mothers, industrial workers, senior citizens, etc.) or on specific health problems (i.e. overweight, drug addiction, venereal disease, cancer, etc.) neither of these approaches are practical in their absolutes. Rather it is more feasible to look at current delivery settings, where those institutions that have responsibility for both population groups and health problems operate, to determine how they might function more comprehensively.

The multitude and diversity of delivery settings for health education make difficult any discussion of them individually, but most people could accept the following as at least four key categories:

1. educational institutions - (i.e. public and private schools, colleges and universities)
2. health organizations - (i.e. voluntary health agencies, health departments and other official agencies)
3. health care facilities - (i.e. hospitals, HMO's, clinics, ambulatory care centers)
4. media organizations - (i.e. television and radio, newspapers)

It is likely that business and industry could be added, since employee health education has achieved increased importance in recent years. For lack of space, however, I will deal only with the four delivery settings cited.

EDUCATIONAL INSTITUTIONS

Every White House Conference on Child Health, starting with the one convened by President Hoover in 1932, has called for action on school health education. There has been at least one major study or report on school health education every five years since then that has recommended action, provided guidelines for programs, suggested new health education curricula, or provided new health teaching materials. Only in a few instances can progress be seen in terms of sound or innovative, comprehensive health teaching programs. In many schools, the status quo has been maintained, and in some schools, less is done than was done several years ago.

Obviously schools, as socializing institutions for children and youth, play a key role in the development of a health activated citizenry. No design of a comprehensive health education delivery system can be made without inclusion of the educational institutions. Few individuals, professionals and laymen alike, will dispute the argument that when children and youth are introduced to knowledge of personal and community health practices at an early age and guided in the processes of making sound health decisions with appropriate social supports as they mature, they are in a better position as adults to maintain their health and influence the health of their families and communities.

If our educational institutions are ever going to participate in a comprehensive health education delivery system, changes will have to occur at each level of operation within the settings. From the administrative and lay policy makers to the curriculum supervisors and classroom teachers, attitudes must be altered to gain support for school health education that is still only on the drawing boards. It is true that quality health education is expensive, but no more so than quality civics education, and likely less so than some other areas of the school curriculum. If the economics of delivering health education in the schools is the crucial issue, then the message to taxpayers and all potential consumers has not been made clear.

What the public is unwilling to spend for prevention education, it ends up spending for care and treatment. In other words, what is not accomplished in the prevention of illness and the promotion of wise health practices through early and continuing health programming, is paid for at a later date, and more expensive rate, in the care and treatment of health conditions - a sort of "fly now pay later" view, it would seem.

Little progress is likely to be made in improving school health education and expanding its scope until a broader view is accepted by consumers. There needs to be more collaboration between the leadership in medicine and public health and the leadership in educational institutions to persuade the public and the legislators who represent them that this is indeed the case. This transactional process must be begun to bring about the attitudinal changes, fiscal support and sound legislation necessary to make schools an integral part of a comprehensive health education delivery system.

HEALTH ORGANIZATIONS

Government supported health agencies such as health departments, and voluntarily supported health organizations such as cancer societies and heart associations have in common primary educational functions to prevent disease and illness, to alert the public to community health problems, and to serve as advocates for the public's interest in research and the training of professional personnel. Such educational opportunities and responsibilities also place health organizations in strategic positions in the design of a comprehensive health education delivery system.

The financial costs and social burden to the nation of having a citizenry uninformed or unmotivated to take appropriate health actions has been staggering where estimates of costs have been made. The need for public health education is apparent to everyone concerned with the solution of health problems, and it is rare to find any community health organization that does not

include it as a major goal or program activity, whether or not it is clearly reported or budgeted.

Recent nationwide public opinion polls have begun to document the need for more effective educational programming by health organizations. Although people on the average believe they are well informed about health care, when asked questions about specific illnesses, many cannot answer correctly. Ignorance exists about major killers in the United States to say nothing of other causes of morbidity and mortality. From studies and experience we know there are many indicators of needs for more effective health education such as the following:

- Widespread belief in self-treatment for arthritis and rheumatism, unproven remedies for cancer, and in non-prescription treatments as cures for asthma, allergies and diabetes.

- Much delay in seeking treatment when symptoms of cancer appear, or in securing health examinations in the absence of symptoms, which confirm further the problems of encouraging people to take preventive or therapeutic actions on their own behalf.

- Ignorance among individuals concerning the possible presence of hypertension and apathy among those who are diagnosed and for whom treatment is initiated, since few patients follow the treatment regimen.

- Inadequate use of readily available diagnostic services for the detection of cervical cancer. Only one in four women 20 years of age and over has a Pap smear annually.

Although most health organizations have some commitment to health education, their ability to deliver it to specified target groups, particularly those in low income areas, is frequently limited. The pressures of sheer numbers created by urban populations in particular, have meant that health education services have reached only a minimal number of individuals. Yet there are often more services in urban areas than in rural areas. For lack of sufficient numbers of trained personnel and a full commitment from most agencies to public health education, the quantity and availability of learning opportunities about health and health services is limited. All available information suggests that the beneficiaries of community health education programs are few compared to the total population.

That considerable ignorance, fear and apathy exist in the population, and that morbidity and mortality figures for preventable illnesses are higher than they should be, are rather clear indicators that gaps of sizeable proportions in the delivery of health education services exist.

They may occur because the agency has a limited approach to public health education, relying, for example, solely on film showings in community meetings or the distribution of literature. They may occur because individuals tend to "tune out" on programs that are too disease oriented. Gaps may occur because agency programs do not reach specified audiences physically or psychologically. But the problem is one of resource allocation and interorganizational coordination. Official health agencies, in particular health departments, are now frequently underfunded which has led not only to programming difficulties, but also to staffing problems in the competitive market for trained health educators. In the voluntary agencies, however, the problem is more a matter of competition for funds, fragmentation of health education services brought about by specialized agency interests, and higher priorities for basic research in biomedical sciences, than a shortage of resources per se. Among some agencies that depend on public contributions there also seems to be a greater concentration of health education services among those who contribute funds or who might contribute funds. Some voluntary agencies have also applied a large portion of their health education budgets to public relations or fund raising campaigns in the mistaken belief they were doing health education.

Among agencies supported through some type of united appeal arrangement, there has frequently been a serious error made in combining health education and health information in single budget categories. In some communities, health education is viewed as identical to health information and given a low priority because health information is viewed by citizens' advisory boards as being the method by which agencies "toot their own horns." Fortunately there are some hopeful changes being made in this allocation procedure. In the Detroit United Fund, which is part of the Michigan United Fund, for example, and which is the largest such united appeal organization in the country, health education and health information have been lumped together for many years in one line item or funding category and formerly rated fourth priority on a four point scale for allocation of funds. Recently, however, health education has been separated from health information, with health information remaining at a fourth priority on a four point scale, but with health education moving to a second priority, surpassed only by high priority direct health care services to clients.

If health organizations are to participate in a comprehensive health education delivery system, interorganizational competition for resources and visibility must be moderated, not only for essential collaboration in meeting commonly held objectives, but also for critical evaluation and application of the use of existing resources for more carefully selected services. Leadership within the organizations must be persuaded to take a more comprehensive view of health education if the delivery of their educational services is to be comprehensive in practice.

HEALTH CARE FACILITIES

Health care facilities, once isolated in their communities as centers solely for repair and rehabilitation, are now being drawn into the mainstream of comprehensive health care that seeks health education of the patient and his family for successful recuperation and long term maintenance of optimal health.

Studies of compliance with medical regimens are not always comparable, but when they are all viewed in a general way, it would appear that patients do not comply with at least one-half to two-thirds of the recommendations made by their physicians. However, sufficient research has been done to indicate that planned educational interventions have produced substantial reductions in readmissions to hospitals for patients with congestive heart failure; reductions in use of emergency rooms for patients with asthma; and reductions in broken appointments and increased compliance and self care with a variety of patients. Patients have been found to be more cooperative in the taking of laboratory tests when they are given the opportunity to learn about them. Patients, too, can be taken off administered injections and placed on oral medications after they are given an opportunity to learn the how, what, when, where and why of self-care. With the documentation that now exists, practitioners should be discussing and advocating the "educational management of patients" as an integral part of the medical management of patients in hospitals, clinics and other health care facilities.

Some important policy changes regarding the provision of health education services in health care settings are now underway. One of these is the statement on personal and community health education adopted by the American Hospital Association for its 7,000 member hospitals in May 1974. This policy statement gives considerable impetus to hospitals to expand their health education programs so that they can reach inpatients, outpatients, hospital staff, and people in the community.

Through several health education demonstration projects, the American Association of Medical Clinics is also attempting to stimulate the development of patient education services in private group practices throughout its 290 member clinics that have 9000 physicians and serve 17 million patients. Perhaps more important, however, are plans by third party payers to provide for reimbursement for patient education, which will provide the essential funds to expand the needed health education services in hospitals and to support personnel with educational skills within hospitals.

For several years it has been increasingly apparent that the patient's "right to know" would evolve into a number of doctrines that would have far reaching effects in the realm of medicolegal

jurisprudence. Within recent years, a burgeoning of court decisions have been made dealing with the topic. The legal dimensions of patient education are of considerable importance as noted in the Report of the Secretary's Commission on Medical Malpractice (1973) in which it was found that there must be more effective communication between physician and patient with special emphasis on a full discussion of diagnosis, prognosis, proposed course of treatment, complications and adverse results of treatment, since these have the greatest potential for malpractice litigation. In the Commission's recommendations, patient education is viewed as an essential practice for the reduction of malpractice litigation.

In cases before the courts, a patient's actual prior comprehension or pre-treatment understanding is being considered as a standard for judging malpractice. A physician may fully describe the nature of a treatment, but still be subject to liability because the patient did not understand the explanation. The doctrine of informed consent may indeed evolve into the doctrine of the "right to understand."

As these judicial precedents become law, they are being built into further legislation for health care. As such, they will require practitioners and health care facilities to develop careful programs for the teaching of patients and for determining what the patient has learned. The time is not too distant probably when Professional Service Review Organizations may also include questions about health education for patients in evaluations of quality of care, and it is likely that the Joint Commission on Accreditation of Hospitals will begin to set standards in this area. Such precedents will have major effects on the quality and availability of health education services.

In terms of a comprehensive community health education delivery system, it is clear that health care facilities will carry a substantially larger share of the responsibility than they have in the past. This is occurring for legal reasons, for economic reasons, and for reasons relating to the need to link health care services and education of patients and consumers more closely.

MEDIA ORGANIZATIONS

It is hard to find any changes that have been greater in this century than the changes in the field of mass communication. Shaping of our symbolic environment by the mass media has become an enormous operation on the part of the communications industry, government, and business. It is time to ask how that symbolic environment is being shaped to support health practices.

At least one study in a major metropolitan area which was brought to the attention of the President's Committee on Health Education found that five percent of all television time was allocated to transmitting inaccurate or misleading health information. On the other hand, the great potentials and promise of television to support good health, illustrated by such accomplishments as the many documentaries on health care and the forthcoming series on health developed by The Children's Television Workshop augur well for the future.

From the standpoint of a comprehensive approach to health education, it behooves professional health educators to find new and collaborative ways to work with the media, particularly the national media, and to bury once and for all the old cliche that "information is not education." The truth is that there is very little education without information, and the problem is how to plan information programs that support and reinforce educational programs, and vice versa. Health educators need increasingly to build toward comprehensiveness. It cannot be done without a recognition of the media organizations, and the usefulness of media as an adjunct to sound education programs.

TOWARDS A COMPREHENSIVE HEALTH EDUCATION DELIVERY SYSTEM

In each of the delivery settings for health education just described, it can be seen that each institution, agency or facility has a delivery system of its own, functioning more or less loosely. The particular missions of each in relation to the broad, generally accepted goals for national health, and the individual characteristics of their institutional arrangements, make them not nearly so compatible as collaborators in a comprehensive health education delivery system as one might ideally hope. The element of competition alone, not only between goals and priorities but also for funds and visibility, involves deeply seated attitudes and practices that will be slow to change, including some in the health education profession itself.

Comprehensiveness, in and of itself, as a systems goal, needs some further definition if it is to be viable. Certainly it must allow for diversity of responsibility and function, for differential access to resources and health education manpower, and for consumer participation to name but a few elements. Yet if it is to be realized, certain transactional processes must be developed and implemented by the leadership within each of the delivery settings through some collaborative mechanisms and joint communication. I would suggest that at least eight processes be considered as follows:

(1) Processes by which a continuous and adequate flow of data necessary for planning health education reaches and is utilized by all those concerned with management and delivery of health education services.

(2) Processes by which consumer or lay input into planning and appraisal of quality is kept viable and productive on a continuing basis.

(3) Processes by which direct health education contacts are made with consumers or client groups of all ages and social groupings on a systematic basis.

(4) Processes by which quality control of services is maintained through effective review and evaluation.

(5) Processes by which needed health education manpower at all levels is recruited, trained, placed, adequately supervised and upgraded in terms of technical competence.

(6) Processes by which coordinated and interorganizational planning and program execution can occur on vertical and horizontal planes.

(7) Processes by which health education planning can be linked appropriately to on-going planning in each delivery setting and to the health and social planning mechanisms on regional, state, and national levels.

(8) Processes by which collaboration among all concerned organizations and institutional arrangements can be maximized.

Given these processes as among the minimal requirements of a comprehensive health education delivery system, it would seem possible to structure the delivery of services within each state in a three level arrangement. At the first level would be the service delivery area (e.g. city, county, or some smaller unit); at the second, a regional coordination and service center (e.g. multiple counties or districts); and at the third, a state center for policy development, manpower planning, and research and development. To foster communication and collaboration among the states would be a national center, either governmental or private - or combination of both, such as the National Center for Health Education recommended by the the President's Committee on Health Education, responsible for developing standards, stimulating new developments, and maximizing national resources such as the mass media. A useful model is currently represneted by Comprehensive Health Planning with its "A" and "B" levels and a national level policy operation. The system, however, must include "on line" health education services to people no matter where they are in schools, the community at large, or health care facilities. In needs to

operate in a very decentralized and independent way at the local level to meet local needs, but have resources and technical backstopping expertise available on a regional basis. It needs to have within it some incentives for cooperation and interorganizational programming and must have some clout for assuring accountability.

Obviously some kind of legislative commitment and funding of foundation support would be necessary to get such a design off the drawing boards. Responsibility for initiating the transactional processes and designing the system at the local level might be given to a health education consortium or council composed of representatives from the various local delivery settings. At the next level, I would see a regional health education council, that might be organized within the context of the Comprehensive Health Planning structure, or within other regional arrangements for human services. It, too, would need funds allocated to it to pass on to local communities, and to utilize for regional developments in health education. Tax incentives for business and industry to cooperate should be considered. Allocation of funds to local communities could be based somewhat on the concept of certification of need, and should be followed up with some test of accountability. Local communities would not have to participate, but if the resources were substantial enough, and if some of the funds currently channeled to local communities were channeled through a regional health education council, there would be motivation to move in this way. Incentives need to be built in that will encourage the voluntary and private sectors to get involved in the local health education consortia, and procedures would be needed to give those groups a voice on the regional health education council.

Top level policy development and planning, research, manpower development, and the broad issues would be left to state and national centers with authority to cut across organizational lines among state level health, welfare, and education agencies and with capability of involving the private and voluntary sectors.

If there is a sound base of governmental, voluntary and private involvement at national and state levels, the transactional processes will be enhanced at regional and local levels. I do not think coordination happens by chance, nor will it happen through coordinating councils that have no resources and no clout when it comes to review and accountability. A comprehensive health education system needs support from Congress and State legislatures to propose and support enabling legislation and to allocate funds. Such a system must be one also that strengthens the key universities which would serve as manpower suppliers for the system.

As important as the processes and structure for a comprehensive health education delivery system, however, is a commitment to health education and a development of trust among the potential partners. Without commitment and trust, no design for interorganizational arrangements can be drawn, and the opportunity to obtain the benefits of a comprehensive system will be lost.

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THE POTENTIAL OF COMPARATIVE ANALYSIS FOR HEALTH EDUCATION RESEARCH: COMPATIBILITY WITH PRACTICE

by

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THE POTENTIAL OF COMPARATIVE ANALYSIS FOR HEALTH EDUCATION RESEARCH: COMPATIBILITY WITH PRACTICE

Patricia Dolan Mullen and Richard Reynolds

Are there strong links among theory, research, and practice in community health education? Most practicing health educators and students in health education would probably reply in the negative. With the maturation of our profession, the state of the existing theory and appropriateness of usual research methods for the needs of the practitioner have been questioned. This paper addresses these issues from the standpoint of a qualitative research method which is concerned with discovering basic social processes of human interaction.

I. THE PROBLEM

In the past health education has relied primarily upon behavioral and other social sciences (and upon related fields such as social work and adult education) for its priciples and theories. The wisdom of this eclecticism is not disputed. However, in recent years there has been a movement toward integration, refinement, and adaptation of these "imported" theories into a conceptual scheme of what constitutes health education.

Beryl Roberts (1960) spoke directly to this issue of theoretical pluralism and the need for health education research. In her 1959 presidential address to the Society for Public Heath Education, she said:

> We have been neither consistent nor concerted in efforts to conceptualize the basis of our practice, to synthesize available knowledge, to document and study our experience, or to order the research carried on by our professional colleagues, and by basic scientists or those interested in our field (p. 21).

> Those who identify the social sciences as the roots of health education have been prone to lean too heavily upon them. We have expected social scientists to do too much for us; indeed, it has often appeared that we expected them to identify the knowledge upon which we can base our practice (p.23).

And later, in a report for the World Health Organization on research needs in health education she noted that discriminating selection of

knowledge from other fields and even systematizing that knowledge is not enough: "a profession must establish its own concepts and principles and conduct research to augment and refine its body of knowledge" (1968:9).

The favored modes of research in health education have tended to be deductive, hypothesis-testing, and statistical or experimental. Infrequently, descriptive methods from anthropology have been used. The results of these approaches have often been less than fruitful for health education practice for the following reasons:

--the variables have provided little leverage for intervention (e.g., the usual demographic characteristics) or because relevant variables have been emasculated by their being "operationalized;"[1]

--the focus has been dictated by theoretical rather than empirical concerns;

--they describe rather than conceptualize and specify propositions among the concepts;

--they are generally static,[2] that is, they describe conditions or situations rather than processes.

Derryberry (1963) questioned the focus and methods of health education research. He asked,

> Have we focused too much on the measurement of health information?...Have our studies concentrated on the status of attitudes more than change?...Have we concerned ourselves with the "easy to measure" aspect of the problem to the neglect of the more important elements?..How much research have we focused on the dynamics of health habit formation... (p.217)

Although he identified keys for unlocking some of the information that practitioners need to know--the dynamics of change, the "hard-to-measure" aspects of complex problems--he did not go so far as to question the basic research strategies.

Hochbaum (1965) delved more deeply into the methodological orientation of health education research. "We in the field of health and educational research have been infected by our brethren in the physical sciences with the adoration of precise numbers and with quantitative methods in general" (p. 144). He felt that applied research had been confused with "scientific" research, and he

enumerated the arguments for "meaningful" data analysis and for the applicability of the results to be the ultimate aim of (applied) health education research:

1. In most research aimed at the improvement of health education, the meaning and interpretation of data... are more crucial than...statistical sophistication...

2. The value of research methods depends entirely on the degree to which they allow the accumulation of data in which we can have confidence, whose meaning we can interpret correctly, and from which we can deduce equally meaningful and practically applicable implications for the solution of the problem studied;

3. We must accept the need to compromise and to find a ...balance between the rquirements of sound scientific research and what is possible in a given research situation; but we must think carefully about the effects of this compromise, even consider the possibility that the problem is not researchable [now] (p.145).

Of course, concern for the utilization of research in action programming is not a problem of health education only. (For example, see Zetterberg 1962; Suchman 1963; Rogers 1967; and more recently, Khan and Reynolds 1973.) The questions raised by Hochbaum and others are part of a long-standing debate about "applied" versus "basic" research. Our purpose here, however, is not to review the arguments nor to perpetuate the dichotomy.

II. AN ALTERNATIVE STRATEGY FOR HEALTH EDUCATION[4]

This paper introduces a research strategy to health education which, in our view, promises to aid us with the problems of integration and extension of theory, to contribute to our practice by focusing upon processes of human interaction and identifying relevant, behavioral variables, and to do greater justice to those whom we wish to study by eschewing a pre-conceived theoretical framework and allowing their "story" to emerge from their statements.

Comparative analysis is a general sociological/anthropological method of research involving the systematic choice and study of several comparison groups which can be social units of any size-- from people and their roles to groups, programs, institutions, nations, or world regions. The general notion, developed by Weber, Durkheim, Mannheim, and social anthropologists, has been advanced methodologically by Glaser and Strauss through the

approach which they call the "discovery of grounded theory." It is this refinement of comparative analysis that we wish to present to researchers in health education.

Comparative analysis is an inductive, hypothesis-seeking strategy for generating plausible, "middle-range" substantive and formal theory. By "middle-range" Glaser and Strauss (1967) mean that such theories "fall between the 'minor working hypotheses' of everyday life and the 'all-inclusive' grand theories" (pp. 32-33).[5] Comparative analysis especially lends itself to what Roberts saw as an alternative to the "basic-applied" distinction in research--what Merton (1959) termed "double relevance," referring to dual results for "practical use" and "systematic knowledge" (p. 21).

The grounded theory approach identifies processes, successions, transitions, and other dynamics of human action. The analysis traces social processes--identifying their dimensions and characteristics and the conditions with which they vary. Briefly, there are two sub-types of social processes:

--structural processes such as "bureaucratization" and "routinization;"

--social psychological processes exemplified by "becoming," "soliciting," "health-optimizing," and "passing."

"Basic social processes" are those which account for or explain most of the variation in behavior within the unit(s) of social life under investigation. For instance, Gerson (1974) found that "re-normalizing" is the basic social (psychological) process for people who have successfully undergone a kidney transplantation, and Charmaz (forthcoming) identified "shouldering the burden" among family members of the chronically ill. Comparative analysis, then, is the social psychology of gerunds rather than nouns.

The procedures of this method are systematic and provide for constant verification of the hypotheses and propositions it generates in the empirical world. Chronologically, these operations are unlike the linear models used to test or verify hypotheses: data gathering, analysis, and integration go on simultaneously, although their mix at any one time differs over the course of a study. Bearing this in mind, we shall say a little about each of the overlapping steps which lead to the generation of a substantive grounded theory. (We have chosen to concentrate on theory for a substantive area, since this is the first step to formal theory-making and is extremely useful itself.)

After some of the data are gathered (e.g., ten to fifteen in-depth interviews), first level analysis begins. Each datum is inspected by asking, "Of what concept is this an indicator?". This process, open coding, inductively generates categories and their characteristics from indicators--actual episodes, definitions, and meanings from the data. These codes are flexible, and they are not mutually exclusive. Since indicators are not necessarily unidimensional, each is coded into as many categories as possible.

Substantive categories or codes are of two kinds: (a) those which are taken from the language of the people who were interviewed--in vivo words such as "budgeting oneself", "convincing", and "bearing the uncertainty"; and (b) those implicit, taken-for-granted codes such as "social loss" and "conditional dependence" which are constructed by the researcher along the lines of his discipline or carefully borrowed from existing work. Substantive codes usually contain vivid imagery, and they tend to be the behaviors or processes to be explained.

During open coding the analyst constantly compares indicators to other indicators and the new indicators to concepts (codes) as they emerge. Thus, by the grounded theory approach, dimensions of categories come from the data as opposed to being logically-deduced or forced from previous theory. These emergent distinctions make the concepts rich and sensitive in explanatory power.

The questions raised during the early stages of this process are:

1. What is this study about conceptually?
2. What is actually going on in the human interaction?
3. What are the major social psychological problems here?
4. What accounts for the answers to questions #2 and #3?
5. What are the basic social processes operating?

These ways "into" the data and the careful development of categories and their emerging interrelationships begin to reveal a core analytical framework. Thus, open coding's "fracturing the story" begins the conceptual reorganization of descriptive material.

Constant coding and analyzing in memoranda written about the categories and their interaction delimit the developing theory to a more parsimonious set of concepts. Theoretical codes inter-

relate and organize the substantive codes. One student of the grounded theory approach commented about this process:

> As I worked with the memo's and read and re-read the data, it became apparent that many of the substantive codes were not separate categories, but rather facets, dimensions, conditions, strategies, and consequences of fewer higher level concepts (Wilson 1974).

(Among the many groups of theoretical codes are causes, contexts, contingencies, consequences, covariances, and conditions.)

As more data are collected on the concepts, the coding guide becomes, 1) what property of...2)what category of...3) what part of...the emerging theory does this incident in the data indicate? The analytical memoranda which are continually being produced from the coding in turn point to directions for further data collection--either questions for new interviews or comparative groups or subgroups which should be sampled. The conceptual categories, therefore, introduce a new point of view and make possible certain deductions leading to further data collection--theoretical sampling. This is the data collection process in which the researcher "jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges" (Glaser and Strauss 1967:45).

The idea of theoretical sampling is difficult to grasp for those of us whose background, training, and expertise are in research strategies which aim to test hypotheses, measure the magnitude of relationships, and yield frequency distributions. Theoretical sampling has other purposes. The researcher using this approach looks for variation, for situations which provide new properties of the processes--based on the substantive and theoretical concepts and their incipient relationships. To quote Wilson (1974) again,

> I sought to discover multiple and varied relationships between and among concepts rather than attempting to prove a linear causal hypothesis between two. Such an approach is designed to yield "molecular" rather than linear theoretical models.

Glaser has summarized several important points in a lecture on the differences between the two sampling strategies:

	Theorectical Sampling	Statistical Sampling
Purpose:	To discover concepts, hypotheses, and their interrelationships, i.e., theory; the magnitude of the relationships may be, but is not necessarily, part of the hypotheses.	To obtain accurate evidence on distributions of people among categories to be used in descriptions or verifications.
Adequacy:	Judged upon how wisely and diversely the analyst has chosen his groups for "saturating" categories according to the type of theory--formal or substantive--he wished to develop. Inadequate sampling is characterized by a theory that is thin and not well integrated and by many obvious, unexplained exceptions.	Judgment is based upon techniques of random and stratified sampling used in relation to the social structure of a group or groups sampled.
Closure:	Must be learned. Data collection for a grounded theory study stops when new categories and their related aspects stop appearing in the data.	Must continue with data collection until the predetermined sample size is achieved.

The aim of grounded theory is not complete coverage in a descriptive, logico-deductive, or scholarly sense--its goal is theoretical completeness, that is, the explanation of a social phenomenon in relevant terms.

Because of the different objectives of the grounded theory approach, Glaser and Strauss (1967) argue that the principles of "rigorous" quantitative verification in e.g., reliability, validity, sampling, coding, frequency distributions, formation of concepts, and construction of hypotheses, are inappropriate for judging its credibility:

> We have suggested that criteria of judgment be based instead on the detailed elements of the actual strategies used for collecting, coding, analyzing, and presenting data when generating theory, and on the way in which people read the theory (p. 224).

The criteria they recommend, therefore, relate both to the properties of the theory itself and to the presentation of the evidence for conclusions and the operations by which the evidence has been assessed. The most important attributes of a credible grounded theory are carefully specified integration of the categories, the clarity of the theoretical framework, density (that is, development of the properties and conditions of the dimensions of the theory through multiple comparisons), and the relative absence of unexplained exceptions in accounting for the major variation in a basic social process.

III. POTENTIAL CONTRIBUTIONS OF COMPARATIVE ANALYSIS TO HEALTH EDUCATION

"Theory-building": Selection and integration of social science theory

There are several ways of working with existing theory. One is confrontation, in which a new theory supplants an old one (this is not necessarily done on the merits of the new or old theory, however), and a second is synthesis, exemplified by work such as Roberts' (1960) on decision-making. Both are useful and have their place in social science and in community health education practice. Grounded theory offers a third alternative--that of transcending or bringing parts of other theories into a new, overriding theory. Using a credible substantive grounded theory as a bridge between the data and formal theory largely prevents the distortion, forcing, and neglect of data by a formal theory. The analyst is in a better position to judge the usefulness of existing theories.

In Mullen's current study of people who have had heart attacks, an important condition is that of having an invisible physical handicap. This has led to exploration of the deviance literature for work on situations in which people wish to disguise or mute an aspect of themselves that is socially stigmatized, that is, to "pass". One comes upon articles such as F. Davis' "Deviance Disavowal: The Management of Strained Interaction by the Visibly Handicapped" (1964), which help to conceptualize aspects of one's own data and which then yield ideas for further literature searches--e.g., on the social-psychological consequences flowing from successfully passing and on selective revealment--and further data collection to ascertain the relevance of the new ideas in the group(s) being studied.

Comparative analysis could be helpful in another important aspect of building theory for health education--in the realm of practice theory; for example, the process of community organization within various institutional settings, building interagency relationships,

informally educating administrators and colleagues, and facilitating interdisciplinary cooperation. It would seem that further development of the theories of our practice would be a significant contribution to teaching, to the practitioner, and to the profession as a whole.

Thus, we see two advantages of this approach: it enables the researcher to make informed or "grounded" decisions about the relevance and fit of existing social science concepts and theories and to integrate them at a higher conceptual level. And, its focus upon processes, their stages and consequences and the ways in which the processes are affected by various structural and other conditions, makes it a good candidate for producing the theories of health education practice which are needed by the profession.

Applicability

The presentation and the nature of a ground theory are such that it does not require an interpreter between the researcher and the practitioner; the practitioner can read it, relate it to his own experience, and apply it. Glaser and Strauss (1967) point out four interrelated properties of a grounded theory requisite for its successful application:

> The first...is that the theory must closely fit the substantive area in which it will be used. Second, it must be readily understandable by laymen concerned with this area. Third, it must be sufficiently general to be applicable to a multitude of diverse daily situations within the substantive area, not to just a specific type of situation. Fourth, it must allow the user partial control over the structure and process of daily situations as they change through time (p.237).

These criteria for application are rarely met by a deduced theory, since the data typically are forced into preconceived categories, and whatever cannot be fitted in is ignored.

An example of the understandability of a good grounded theory comes from Glaser and Strauss' (1965) study of terminal care. They later note (1967) that their

> ...categories of "death expectations", "nothing more to do", "lingering", and "social loss" designate general properties of dying patients that unquestionably are vividly sensitizing or meaningful to hospital personnel (pp. 240-241).

To meet the generality criterion it is more desirable to "accumulate a vast number of diverse qualitative 'facts' on many different situations in the area" (Glaser and Strauss 1967:243) than to use rigorous methods to produce precise, quantitatively validated data on which to base the theory, since such "facts" change quickly and basic research methods yield relatively few general concepts.

By "control" these two authors have in mind that the person applying the theory

> ...must be enabled to understand and analyze ongoing situational realities, to produce and predict change in them, and to predict and control consequences both for the object of change and for other parts of the total situation that will be affected. As changes occur, his theory must allow him to be flexible in revising his tactics of application and in revising the theory if necessary. (Glaser and Strauss 1967:245).

An example of a controlling variable (N.B. the difference between this and a variable such as "socioeconomic status") from the study of dying (1965) is the "awareness context" or the total situation of who knows what about the patient's oncoming death. This is a controllable variable, since it can be (and literally is) managed by the practitioners involved with people's dying.

From the standpoint of practice we are more interested in the types, range, magnitude, and conditions of occurrence than the frequency. Frequency, as it is commonly construed, is useful in estimating probabilities. However, since "normal" circumstances (the setting in which a health educator may work, for example) do not usually conform to normal curves, it is the conceptual rather than the statistical understanding which is useful in giving the practitioner control over the daily realities of his work and allowing him to predict the likely results of his actions.

One further point to emphasize is that a grounded theory has "practice validity". It is subject to verification by those who are immersed in the empirical world, and it can be modified through the experiences gained in applying it.

Process versus unit analysis

Processes are the life of health education. Comparative analysis is a process oriented research method which meets Blumer's (1969b) specifications for a strategy which would "trace the lines of

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defining experience through which ways of living, patterns of relations, and social forms are developed, rather than to relate these formations to a set of selected items: (pp. 138-139).

Roberts (1968) pointed out two general loci of important work to be done in health education research: intra- and extra-mural processes. The latter is widely recognized as a domain of health education; that is, reaching out from the agency to people. The former, intramural processes, are also of high priority, however.

> Health education is also fundamental in the processes which are carried on within an organization...planning; teamwork; co-ordination...administration; training; supervision; consultation; evaluation--all these processes enter into the development and implementation of programmes and must engage an organization and its staff (p.3).

Our present research strategies are of limited help in increasing our understanding of processes in the substantive areas with which health education is concerned because they are unit-focused. By this we mean the analysis of social units such as those mentioned above (men and their roles, institutions, etc.) as well as other conventional examples--race, sex, socioeconomic status, and age cohorts. These analyses tend to be bound to finite times, places, and people, and as such, are quickly outdated. Studies of the beliefs, attitudes, and practice vis à vis family planning and other health concerns provide baselines for pre- and post-test evaluations, and they offer suggestions for program development.

However, in contrast, the grounded theory approach uses social units to study the movement of social life through time. Rather than one or two snapshots, we get a motion picture. Social processes have greater generality because they transcend specific identities of particular units:[6] the unit only provides the social conditions under which the process varies.[7]

Level of analysis

Choosing the level of analysis for the study of a social problem area is highly consequential in terms of the solution(s) chosen to ameliorate or eliminate the problem. One view of research recognizes three levels: (1) rates (descriptive, verificational, and distributive), and (2) modal patterns of behavior, and (3) personal patterns. While it is undoubtedly clear that comparative analysis is not concerned with rates, we feel it necessary to stress that the goal is explaining modal patterns of behavior, not personal patterns.

Concern with the latter is common in the literature of deviancy, illness behavior, and mental health. Such work accounts for personal patterns with personal biographies, i.e., in terms of individual psychology and personality. Another way personal patterns can be described is as dispositions. Lofland (1971) summarizes this concept:

> Dispositionalist accounts call upon pre-existing, special proclivities of persons in accounting for their present actions...Such disposition or affinity may be phrased in terms of personality, other biographical conceptions, cultural training, social class, and so forth. Despite variation in relative emphasis upon personal or social factors (e.g., personality as opposed to culture), the invocation of temporally and geographically remote or diffused variables equally amounts to a dispositionalist causal account (pp. 66-67).

Grounded theory emphasizes the social psychological level in which situational patterns account for patterns. These are patterns of people, abstracted from personal identities. In this way, an answer to the question, "Why do juveniles steal 'hi fi' sets?" is "because they are easy to pawn". (Why a particular boy steals a "hi fi" set is not explained.) In typing behaviors we leave our actor a free agent who can walk in and out of the process. The person is not typed one-dimensionally. He is not a deviant--rather, he is someone who engages in deviating. This counteracts the tendency of agencies of social control (juvenile courts, schools, and health departments, for example) to rush him into the role/label of "deviant".

To carry forward Lofland's categories, modal pattern explanations emphasize situations. Such an explanation is illustrated by Whyte's (1948) account of why waitresses cry. He does not discuss these women's personality traits. Instead, he focuses upon the organization of their work which often subjects them to upsetting cross-pressures. The orders from superiors, "orders" from impatient and demanding customers, and even requests from co-workers sometimes build up to a point at which a waitress will break down and cry.

In typing behaviors, in focusing the analysis upon modal as opposed to personal patterns, we are more faithful to the humanistic view of man which characterizes health education.

These points relate closely with what we have to say in the next section about the definition of the "problem" by a researcher using the grounded theory approach. Both discussions emphasize that explanations of behavior patterns fruitfully can be seen as problems with which the individual is coping and not as inherent within him.

Problem definition

In using the grounded theory approach the "problem" is allowed to emerge from the data and is thus defined by the actors in the situation. This is consistent with the philosophy of health education, but certain of our established research strategies force pre-structured questions and interview schedules upon people without asking them how they define their situations (and problems). We sometimes find ourselves representing established interests in trying to change the wrong people, as Ryan so cogently pointed out in Blaming the Victim (1972). He described a research and program planning formula with which we are all familiar, but his perspective certainly challenges us:

> ...First, identify a social problem. Second, study those affected by the problem and discover in what ways they are different from the rest of us as a consequence of deprivation and injustice. Third, define the differences as the cause of the social problem itself. Finally, of course, assign a government bureaucrat to invent a humanitarian action program to correct the differences (p. 8).

We think that Glaser and Strauss' strategy makes it much less likely that the researcher will "blame the victim" or recommend solutions which aim to change only the patient, the "hard to reach", or others who pose problems to us as health professionals. Several impressive studies by researchers using this method (See Quint 1969, Davis 1973, Reif 1973, and Charmaz 1973) bear out what Reif (forthcoming) has said:

> [This] mode of analysis which focuses on the core social/psychological problems of those who are chronically ill has greater explanatory power--accounts for more of what goes on behaviorally--than approaches which view the medical problem as central. Actions of the sick person which seem anomalous, inexplicable, or irrational when described in relation to the medical objectives, appear quite understandable and appropriate when analyzed in terms of the social and psychological consequences of illness. Non-compliance...can be re-conceived and re-explained in terms of the patient's selective utilization of the regime in order to maximize his occupational and social functioning.

Thus an approach which concerns itself with the meanings, definitions, and interpretations which are made by the subjects of the study, depicts their world view and priorities more accurately than methods which begin by preconceiving that world and its meaning. And it is that that helps us as practitioners to see a patient's or community's problem holistically, and to recognize that from the other's view there may be some condition about which the professional can do nothing except offer awareness and acceptance.

IV. CONCLUSION

To summarize this introduction to the grounded theory approach to comparative analysis and its properties and potentialities for health education, we would like to stress what we believe to be its overriding strength as a research strategy--its unusual compatibility with the principles of our professional practice.

The other point to be emphasized bears directly upon the question we posed at the beginning of this paper--"Are there strong links among theory research and practice in community health education?" Substantive grounded theories would flesh out these linkages to a much greater degree. Their empirical "grounding" makes them understandable to those who are involved in the substantive area, and they immediately introduce the reader who is unfamiliar with the area to important variables. Existing social science research and theory "make sense" when they are related to the data through a grounded theory.

Hopefully, we have produced a provocative "talking paper" for further exploration and discussion which will encourage more of our researchers to consider this as a part of their methodological training.

* *

NOTES

1. According to Blumer (1969b)

> ...The statement of the variable relation merely asserts a connection between abbreviated terms of reference...the very features which give variable analysis its high merit--the qualitative constancy of the variables, their clean-cut simplicity... ease of manipulation...ability to be brought into decisive relation--are the features that lead variable analysis to gloss over the character of the real operating factors in group life, and the real interaction and relations between such factors. (p. 138).

2. Blumer (1969b) sees static variable analysis as useful in "those areas of social life that are not mediated by an interpretative process" and in areas which are mediated by an interpretative process as a way of identifying patterns which are stabilized (p. 139).

3. D'Onofrio (1969) summarizes this conflict in her discussion of the inverse relationship between the fineness of measurement and the level of sophistication of the concept as it is operationalized.

4. The discussion of comparative analysis in this section is based upon The Discovery of Grounded Theory: Strategies for Qualitative Research by Glaser and Strauss (1967); Mullen's five-quarter seminar with Glaser and eight graduate students in sociology during which the method as a process was demonstrated using the participants' data and ideas; Reynolds' experience with the grounded theory approach in his doctoral dissertation (1973); and numerous conversations of both authors with Harold Gustafson, Director, Doctoral Studies Program in Health Education, School of Public Health, University of California, Berkeley.

5. The latter two terms come from Merton (1949:10).

6. Blumer juxtapposes this with

> ...an approach that sees social action as a product and then seeks to identify the determining or causative factors of such action (1969a:56).

7. Two studies which resulted from comparative analyses confined to the stages of development and types of actors within single institutions are Reynolds (1973) and Wilson (1974). Neither is a description of its setting except as social conditions for the basic social processes which they discovered. The processes are generalizable to other units.

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A HEALTH EDUCATION CHALLENGE

TO A

PARTNERSHIP IN HEALTH FOR THIRD WORLD PEOPLE

by

Laura Anderson, M.P.H.

and

Wylda B. Robinson, M.P.H.

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TO A PARTNERSHIP IN HEALTH FOR THIRD WORLD PEOPLE

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"Everytime a man has contributed to the victory of the dignity of the spirit,
Everytime a man has said no to the attempt to subjugate his fellows,
I have felt solidarity with his act."

Quotation from Frantz Fanon

This paper is addressed to community health educators and their mode of operation in Third World communities in this country. It is intended to pose a challenge--to create new and different sensitivities, reactions, responsibilities, accountabilities, awarenesses and conceptual thought. In essence, it is designed to foster an examination of health education's role in providing service to Third World people, with the intent of bringing about a change in the health status of these persons.

The theoretical framework used herein is derived from three conceptual constructs: the Blaming the Victim Process, developed by William Ryan[1] in his insightful book of the same name; Numerator/Denominator approaches to problem solving and Consumer/Professional balances, developed by Donald Muhich[2] in a paper written for the Juvenile Justice system.

The motivation for this paper stems from our feeling that a sizable number of community health educators are afflicted with a tunnel vision which makes them susceptible to oppressive and regressive techniques in dealing with the health needs of Third World people. The subtleties of this susceptibility are such that we often end up mitigating against the survival of the very people we set out to help.

Our beloved Dorothy Nyswander put it so well in her 1967 address to health educators in speaking of the Open Society:[3]

"The health educator is not trained to be an observer of society, he is trained to be a participant. Yet, for each of us it will be no easy task to question the realities of the democracy in which we live. The very effort of extricating ourselves from our cultural shell to look objectively at the shell, may be well-nigh impossible for some. It will be an Operation Bootstrap. For we, too, are caught up in the conformities and the values of the established order. If working in the established order has brought us a foreign-made car, a color television and a fur stole, it must be a good society. If others are less fortunate, why don't we make them like us?"

We have, therefore, seized the opportunity of the Nyswander tribute to share with other health educators our response to Dorothy's challenge to a real change in health for those who are of the Third World.

HEALTH IN THE THIRD WORLD

As all of us realize, health is a very personal thing to all people. The fact that it is personal adds to the difficulty in formulating comprehensive health systems that educate as well as deliver health care and health maintenance to a large number of people. Further compounding this task are the inequities in our society which devaluate the importance of health and survival of Third World persons in our country and thus, health as a human right for all in America, becomes ludicrous and health maintenance for everyone an impossible dream.

It's probably worthwhile here to define our use of the term "Third World" for the clarity of the remainder of this paper. This definition was adopted at U.C. Berkeley to describe a group of people in America who do not conform to the traditional description of societal class systems. They're not simply poor, but rendered powerless to change their lives by a complex social system that regards them as rejects. Social scientists debate the nomenclature of this group of people and alternately refer to them as the "hardcore poor", the "oppressed", the "disinherited", the "powerless", the "ne'er-do-well", the "deviants". We have settled for the label, "third world", adopted from Fanon's international concept of a third world. For in Fanon's third world there exists a power resource in people not only to redefine their personal status, but to unite and humanize the rest of the world.

Nonetheless, the basic agreement in all definitions is that the manifest behavior and underlying motivational patterns of these people differ enough from the norms of the larger society

to justify special consideration. This group is composed of people disenfranchised from the mainstream of this country's social structure and power source for one or more of the following reasons: racism, poverty, institutionalization or incarceration. For our purposes, these third world persons are power-poor, not by choice or nature, but by circumstances perpetuated by the system which controls the distribution of power.

Third world people have no thrust and little trust in the health system. Frequently, there is a feeling of helplessness on the part of the third world person, of being at the mercy of strangers or groups of strangers, who are at best fulfilling a destructive mission against them and who do not really care about their survival. Conversely, survival is uppermost in the minds of all individuals of the third world.

There are stereotypical images of third world people in America. As broadly characterized, they apply most aptly perhaps to ethnic poor in large urban ghettos. However, with variations in details and circumstances, the category includes numerous other groups: Indians on reservations, hillbillies, black sharecroppers, skidrow derelicts, older people in isolated hotel rooms, prisoners of penal systems and institutionalized populations in general. These third world people present a unique problem or set of situations for the health planner and health educator. They need the services offered by the health delivery system urgently, but are antagonistic toward the system even while using the services, as is the system while providing them. Hardly a partnership in health.

HEALTH EDUCATORS THINK FUNNY

Health educators, as well as other health professionals, although occasionally in disagreement among themselves around the issues of goals and objectives of programs, generally agree that the nature of the health problem of the third world to be attacked is located within the behavior or characteristics of the target population for whom the program service is designed. It follows, therefore, that a change in the behavior or attitude of the target population, i.e., those identified as having the problem, would bring about a solution and render their redemption. They, the target population, should thereby be enabled to cope in prescribed and acceptable ways--and solve their problem--just like us!

This theoretical fix is called blaming the victim. A very subtle and seductive five-step process which proceeds in the following manner:

First step the health educator and planners identify the problem as perceived from the vantage point of statistical incidence and prevalence among the institutionalized priorities. Let's take, for example, out of wedlock adolescent pregnancies.

Second step is to examine the grossly identified problem and research the incidence among various populations and come up with the inevitable third world, poor, adolescent girl as the victim.

Third step is to examine closely those characteristics and behaviors which are different from ours or the rest of the population and declare them as contributary to the problem.

In the fourth step we make plans which will affect these attitudes and behaviors in the target population, in order to bring them into line with those who do not have the problem (us). The kicker here is the focus on the target population for this necessary adjustment and/or change of behavior.

In the fifth step we proceed full speed ahead to blaming the victim by setting up and funding programs which will accomplish this task.

As health educators, we should feel quite familiar with this process of problem identification and solution because it is standard program planning process. We identify the problem, we select the target and we get the job done. Incidently, we evaluate on the amount of behavioral change which has taken place in the target population as a gauge of our success in solving the problem, rather than whether there has been an increase or decrease in the prevalence and incidence of this problem over the long haul in the community. There are many built-in failures in this process, the most glaring of these being the failure to include ourselves and our preceptions as part of the problem and our possible change in attitude and behavior as part of the solution. Another is obviously the non-inclusion of the victim or target population in our problem definition process. The fact is that much of what we see in the third world is not initiative to the health problem, but reactive to social conditions of racism and poverty. Finally, the assumption that the problem can be eradicated by a change in the behavior of the victim, a compliance if you will, to the oppressive factors of their society, rather than a change in the social system.

Again, from Dorothy Nyswander:

> "The review of my work as a health educator against the criteria of an open society has been a painful process. I do not like what I see. It appears to me that most of my efforts were expended in working on the symptoms of a closed society; the basic conditions giving rise to the symptoms were untouched."[4]

THE CHALLENGE TO RE-THINK

Radical re-think is obviously in order, but how do we health educators break out of the tunnel? Ryan and Muhich both agree, but use different terms, in order to describe the challenging approach to intervention and problem solving for health educators.

Health statistics which are frequently used to point up health problems are expressed in terms of incidence or prevalence related to the phenomenon investigated in the population at large. People with the health problem are the numerators of the fraction, while the population at large represents the denominator. A good example of this is the prevalence of alcoholism in this country. It is said that alcoholics are about 4.2% of the population. This number is generated from a fraction which had roughly nine million people in the numerator (the number of alcoholics) and 220 million in the denominator (the approximate population of the U.S. including alcoholics). Most health programs are designed to "attack" the numerator of the fraction in order to reduce the incidence and prevalence of a disease (translate: blaming the victim). And yet, no one has ever demonstrated the ability to reduce the incidence of any problem by attacking the numerator alone, and ignoring the denominator. We are always talking baseline, but do nothing of substance to influence it. Our best record in this approach with alcoholics is that one person becomes sober and another takes the stool at the bar.

This is not to say that numerator approaches are ineffective with regards to change in individuals, but simply to say, that, it is not possible to effect total change in the health phenomenon through numerator approaches.

It is clear to us that any approach to a real change in health phenomena in the third world will necessarily be a mix of numerator and denominator approaches, with a majority of the resources to be put into the denominator if we are seriously interested in change. Because inherent in the denominator approach is the idea that health problems are a function of social arrangements within the community and since the social arrangements are constant and quite imperfect and inequitable, such problems are both predictable and more important, preventable through education and

and system change. A word of warning--denominator approaches should not be viewed as being synonymous with prevention approaches. This is too narrow a conception of denominator approaches, although many denominator approaches are aimed at prevention. Prevention programs are more easily conceived because we need only to identify the potential victim. However, denominator approaches make it necessary to identify the social system's part in the problem also. If we do not affect the social arrangement system, it will continue to produce a fixed amount of people with the same problems.

This theoretical frame is particularly pertinent to third world people since the major effect on their health status is derived from the social system. Our resources for community education and system restructure must be maximized in these communities concurrent with the development of resources to help the individuals affected.

"WE HAVE SEEN THE PROBLEM AND IT IS US"

Beyond the dynamics of the conceptualization of the denominator approach to problem solving in the third world community is the health educator's self view in the problem set. We must begin to see ourselves as not only part of the solution, but part of the problem. It is very difficult for us to accept this premise as a helping person. It is very difficult for the bell-shaped normals to see themselves as part of the deviant ends, even though we evolve off the same continuum. Our role as problem perceiver is seldom integrated into the problem identification process and marked for adjustment.

This brings the question to mind that if we, and not the "target population" see the problem, is it perhaps our problem in the sense that we see it as a problem, and need to change our perceptions or attitudes? Certainly a question to be raised for all helping people in a third world community, and once raised, to be tested out by community assessment of priority in importance to their state of wellbeing. To the credit of some health educators has been the alignment with consumers and community people in order to identify and impact on health problems in third world communities. This partnership is most important not only for the health educator's potential program success, but important to the issues of power in third world communities.

Third world people need and want involvement in the planning process for health problems. They not only want to plan for themselves, they also want a part of the operation and administration of the service program. Consumer-community participation in the program planning process, while loudly touted, is very seldom looked at in terms of a partnership. The area of debate has not

been centered so much on whether the residents should have input, but more specifically on how much input, i.e., power, should be allowed the consumer.

Muhich has suggested a community-specialist partnership ratio in order to guide the decision-making process and planning and maximize those talents which exist in each of the partners in order to effect successful health education planning. He identifies several steps in the planning process and the ratio of input.[5]

Step 1: Problem recognition and definition: community input 80%, expert input 20%

Step 2: Problem resource and assessment: community input 60%, expert input 40%

Step 3: Goal setting: community input 50%, expert input 50%

Step 4: Program design: community input 40%, expert input 60%

Step 5: Implementation strategy: community input 20%, expert input 80%

Step 6: Evaluation and feedback: community input 90%, expert input 10%

Step 7: Future recognition and assessment: community input 50%, expert input 50%

These seven steps represent a reversal or at least a drastic change in the traditional community input/expert ratio.

Occasionally we find prototypes of community organizational efforts that really incorporate these principles. One such example of a non-traditional approach in terms of partnership can be found in RAP, INC.--located in Washington, D.C. Originally established as a living-in arrangement for former drug addicts, it contributes its success to a partnership with the community. The community support ranges from financial aid to volunteers who do physical labor to refurbish and maintain the premises to donations of food and clothing. Most important, however, is the moral support. RAP in no way has a symbiotic relationship with the community like some halfway house that first may be resisted and then merely tolerated. The relationship between RAP and the facility and its neighbors can be likened to an extended family. It is important to mention that methadone is not prescribed, for it is their philosophy that doing so is trading one addiction for another and does not solve the problem--only adjusts the individual to the social system's requirements. The net result

would be an individual still incapable of self direction as well as the kind of decision-making that contributes to self liberation and eventually to the liberation of the mind and spirit to which Fanon spoke. Instead of the use of methadone, what has been instilled and fostered is a sense of belonging to a caring community, a true partnership in health.

A CHANGE IN HEALTH FOR THE THIRD WORLD

The discussion in the first part of this paper addresses the need to change our problem-solving process in relationship to the health of the third world people in order to take part in a significant change in their health status. For as long as we blame the victim and substitute numerator interventions for denominator-based problems, we will be unable to deliver better health care to the third world.

We have also stressed the role of the health educator as a partnership with the community moving away from the elitist model of planning to a partnership model which is based on shared input power to achieve longstanding education in the community. And last but not least, community health education in order to create a change must come to one important conclusion: that conclusion is that the problems cannot be isolated from the total socio-political atmisphere of oppression forced on third world communities. Professionals in health must make every effort to change this atmosphere for the benefit of all. Therefore, health educators, be challenged to re-think, re-plan, re-learn and broaden program approaches to include impact on basic system change.

One last quote from Dorothy for all of us:

> "There will be risk, pain and perhaps punishment, but through pain and risk-taking the health educator will learn who he/she is as a person and as a professional."[6]

We would only add, and so will the community.

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