Erik Erikson, one of the more gifted observers of child development in contemporary society, has described the central problem of adolescence as one of "ego identity." He points out that the adolescent in our culture, as he struggles to make the transition from childhood to nominal adulthood, is vitally concerned with clarifying who he is, what his assets and liabilities are, and what his role in society is to be. In his restless searching, he is likely to receive, at best, limited support from a culture which accords him dubious status, either as a child or adult.

One emerges from a reading of this report on the teaching of preventive medicine in the United States with the immediate impression that this entire discipline (if, indeed, it is a separate discipline) is passing through a similar "identity crisis."

Apparently even among its leaders, there are impressive differences of opinion regarding the proper content of teaching programs in preventive medicine—ranging from epidemiology and biostatistics to genetics, disaster medicine, welfare, community planning, and mental health. There is little consistency in the administrative frame-
work within which teaching programs are offered. Some schools have complex, multidisciplinary, independent departments of preventive medicine, others have none, and still others have intermediate arrangements, such as making preventive medicine a division of another department, like medicine. Some departments are staffed only by physicians ("only physicians can teach physicians"), others by a wide range of physical, biological, and behavioral scientists and technical specialists.

Doubts or dissatisfaction with the adequacy of the term "preventive medicine" itself appear to be reflected in the fact that of 81 departments noted, only 29 have been content to limit the departmental title to these words. Unlike their colleagues in anatomy or medicine, teachers of preventive medicine do not appear to agree with Gertrude Stein that "a rose is a rose is a rose." Finally, there are substantial divergences among the various department chairmen about what are the basic sciences underlying preventive medicine (over 20 different disciplines were mentioned by at least one-third of the chairmen); about whether preventive medicine is actually a specialty (approximately half thought it was and half thought it was not); about the optimal training for work in this area; and about future directions of the field. It would, indeed, appear that preventive medicine is undergoing an "identity crisis."

Furthermore, as in the case of the adolescent, preventive medicine appears to have received relatively limited understanding and support from the surrounding culture. According to the authors, in at least 15 per cent of institutions continued existence of established departments has been threatened, or abolition has actually occurred. Nor has the enthusiasm of medical students for formal programs in preventive medicine always been overwhelming. As one report states, "those teachers who wish to gain the interest and sympathy of the students for preventive ideas in medicine have a more difficult task and have to work harder and more persuasively for their ends than their clinically oriented colleagues."

What accounts for the "identity crisis" with which preventive medicine appears to be struggling? In a number of ways, its efforts to develop a clear-cut self-image and its sometimes marginal status
in the medical school culture are paradoxical. As the authors of
this report clearly indicate, preventive medicine has in many re-
spects a long and distinguished history, and the pioneers who can
properly be listed in its genealogy have names to be reckoned with—
Virchow, Pasteur, Lister, Koch, Jenner, Semmelweis, and many
others. Preventive aspects of medicine and public health have played
a vital role in the revolution in health standards which has occurred
in this country since the turn of the century, and they give every in-
dication of playing an equally crucial role in the immediate future
in the underdeveloped nations of the world.

How then can we understand preventive medicine's current strug-
gles with itself and with its culture? It appears to me that there are a
number of factors which must be considered in any such attempt at
clarification. Most are referred to, at least implicitly, by the authors
of this report, although they have made an almost Herculean—and
to my mind not entirely necessary or satisfying—effort to avoid im-
posing interpretations of their own on the data they present.

In order to discuss these factors with any degree of clarity, it be-
comes necessary to adopt some broad definition of the area of pre-
ventive medicine—no matter how diverse may be the individual em-
phases of various workers in the field, as already noted. According
to the authors of this report, "this term means the prevention of
disease processes at any phase of their development, preferably be-
fore such processes begin." In this view, such a broad conception of
preventive medicine "concerns itself with long-term prevention of
disease and disability, with attention to broad areas of environ-
mental, social, behavioral, and host factors, early detection of de-
veloping disease processes, provision for restoration to maximal func-
tion of the disabled, and the establishment of socio-economic systems
appropriate to the problem. This conception is quite different from
the traditional public health programs of the past, on the one hand,
and the clinical prevention practiced by individual physicians in
their private offices, on the other. This conception represents a
fusion of these two older ideas and the further development of this
fusion."

It would be difficult, in my view, to argue that the total problem
of achieving maximum health for the greatest number of human beings does not involve all of these considerations. Since over-all health, and not simply the treatment of established disease in individuals, is a legitimate concern for medicine, why are there any problems? It appears to this reviewer that there are several significant reasons:

1. At the simplest level, there is the tactical problem. How could one possibly hope to inculcate in a medical student a sophistication in all of the areas of medical, social, biological, economic, psychological, and emotional concern listed above, even if this were deemed desirable, which in the view of many it is not?

2. A related problem involves the optimal context for teaching the preventive aspects of medicine. Assuming that certain of these areas will be taught, how should this best be done? There are substantial differences of opinion here among chairmen of preventive medicine departments themselves, as the report makes clear. While there is apparently fairly common agreement that certain traditional subject areas, such as epidemiology, are best taught within departments of preventive medicine, many other areas are often seen as best taught within the context of medical education generally. In a significant number of instances, preventive medicine chairmen view themselves as the main defenders of certain concepts, such as comprehensive health care, principally by default of other disciplines, rather than by choice.

3. Personal background and training, sometimes quite fortuitous, tend to influence all of us in our views of what is important. Specialists in preventive medicine are certainly not immune to these influences. The man who comes to preventive medicine from a background in microbiology will bring with him an orientation different from that of the man with a background in public health, government service, or the behavioral sciences. As in the story of the blind man and the elephant, each will tend to perceive the "real" problem of preventive medicine somewhat differently. The fact that a substantial number of workers in this field have come to it from varied educational and experiential backgrounds, rather than directly through specialty training in preventive medicine, appears to have
contributed to the diversity of attitudes, subject matter emphases, and practices in the field.

4. Medical students, as well as many of their clinical teachers and future colleagues in the community, are for the most part oriented toward, and find their principal satisfaction from, the diagnosis and treatment of individual patients suffering from specific, already established, preferably acute diseases or injuries. This is an eminently understandable position, and there would certainly be room for concern if practicing physicians were not vitally interested in these problems. At the same time, however, this orientation is likely to lead at best to an impatience or boredom with broader problems of health care and disease prevention, and at worst to a feeling that these problems are irrelevant to medical practice. Obviously, such attitudes, to the extent they exist, do not make the task of the teacher of preventive medicine any simpler.

5. Permeating all of these considerations, and basic to any consideration of the current status of preventive medicine, is the fact that as medicine has advanced, and as the structure of our entire society has changed, the demands of preventive medicine have necessarily changed also. This produces dislocations in established values and in traditional ways of doing things, as well as creating needs for new approaches to new and ever more complex technological problems.

As the authors of the report note, preventive medicine has passed, in its long history, through the pre-bacteriologic era, the era of bacteriology and pathology, with its epochal discoveries, and, most recently, through what they call the public health era (characterized to a large extent by concentration on the application of preventive measures on a community basis to the control of communicable diseases). It has now entered an era characterized by a very broad “interest in man and his environment in relation to health and disease and by comprehensive methods of preserving health and preventing disease, involving a multidisciplinary effort.” Furthermore, many of these broader issues of health care in our society, such as planning and financing of medical care programs, control of environmental hazards, problems of occupational medicine, and so on,
raise basic and controversial questions of economic and political philosophy which have not been resolved, either within the confines of medicine or in the society as a whole. Thus preventive medicine, perhaps more than any other medical school discipline, including psychiatry, occupies the difficult no man's land between the traditional patterns of medical science and practice and the demands of a society in transition.

In view of all these factors, it does not seem too surprising that preventive medicine in its struggle toward an "ego identity" should be evidencing a few adolescent "growing pains." At the same time, it is of some comfort to realize that while the older, more settled adults in a society, with more clearly defined status, may have achieved a more comfortable, and perhaps a more graceful adjustment, this has often been accomplished at the expense of seeing the changing world as it actually is, not as it may have been, or as one would like it to be. Adolescents, on the other hand, are likely to see changing times more clearly and to be more sensitive to their demands, even though they may be somewhat confused about how to meet these demands, and, for a time, more awkward in their attempts to do so.

It seems very clear to me, and I believe to the authors of this report also, that the total health problem in our increasingly interdependent, crowded, technologically oriented society will continue to change, both in its nature and in its complexity, and that this change will demand new, and perhaps in some respects even revolutionary, approaches to the problems of health care. It also seems clear that medicine must play a vital, though certainly not an exclusive, role in these efforts.

René Dubos has remarked, "The more complex and dependent on technology society becomes, the more urgent it is for modern medical science to determine what must be done to make the world biologically safe—not only for ourselves, but also for future generations."

At the same time that basic scientific advances have made possible a remarkable reduction in acute disease, they have helped to create or to intensify other kinds of health problems. For example, as more
people are saved from acute illness, and as they live longer, the problems of chronic disease increase in relative importance. As the authors of the report note, chronic diseases pose somewhat different kinds of problems—developing over longer periods of time, often appearing more strikingly multiple in their etiology, and showing a more intimate relationship to social, psychological, and economic factors.

Furthermore, as science has advanced it has tended, paradoxically, to increase man-made environmental health hazards. The chemical residuals of pesticides in our foods, poisonous gases from automobiles and industrial waste (and until recently radioactivity) in the air we breathe, and pollution in the water we drink are mounting health problems which offer few easy solutions. In fact, while the underdeveloped countries are now beginning to wrestle with the epidemiological problems that this nation was struggling with over half a century ago, we are now facing equally serious problems of environmental health, created in large measure by our own scientific advances.

Take still another example: There can be little doubt that changes in the age distribution of the population; increasing urbanization of our citizens; social disorganization in the heart of our cities; geographic mobility of workers, with a consequent lessening of family ties between generations; cultural deprivation among minority groups, ethnic and otherwise; automation and its resultant, highly uneven pockets of prosperity and unemployment; the population explosion; increasing specialization in most occupations, including medicine; and many other sociological, economic, psychological, and technological changes in our society are all intimately related to the problems of maintaining optimal physical and mental health in the nation.

All of these problems are extremely complex, but none can be sidestepped if we are serious about the goal of optimal health throughout our society. And since all of them have ramifications beyond the borders of individual care of sick persons, and beyond the borders of traditional public health practices characterizing the early part of this century, they involve in one way or another the broadened
definition of preventive medicine adopted by the authors of this report.

If medicine is to assume its proper share of the burden in tackling these problems, the kind of preventive medicine which is concerned with their solution must be taught, at least to some extent and in one fashion or another, in our medical schools. And medical students must somehow be convinced of its relevance to their future role as physicians. Whether this can ultimately best be done within the framework of formal departments of preventive medicine, within the context of training in many other departments, or, as I happen personally to think, through a combination of the two, is a tactical problem for the future. But about the strategic problem, the necessity for including these approaches in the curricula of the future, there can, it would appear, be little room for doubt.

Change comes hard for all of us, and its advocates are usually greeted with something less than unbridled enthusiasm. But as Sigerist says, in a foreword cited by the authors in the final chapter of this report, "It is important to be aware of the fact that the medical ideal has changed a great deal in the course of the centuries and is evolving constantly. Medical education, therefore, can never reach definite forms, but is obliged to adapt itself to ever-changing conditions."

One of the important continuing functions of our professors of preventive medicine must be to keep us mindful of these changing conditions and of our responsibilities to adapt to them. In this task, they will need all the "adolescent" boldness, sensitivity, and imagination they can muster.

The authors of this report have performed a useful function in better acquainting us with the diversity of current attitudes and practices in preventive medicine. Some of the information they have obtained, such as the data on the background and attitudes of department chairmen, appears limited in its utility by a lack of comparative yardsticks from other disciplines. Thus, while we glean a good deal of normative information about leaders in preventive medicine, we cannot determine in many instances whether this indicates similarities to or differences from the heads of other medical
school disciplines. It appears, for example, that a greater percentage of chairmen of preventive medicine view the behavioral sciences as having an immediate relevance to medical school curricula than might be the case in some other departments. However, without comparative findings, we cannot be sure.

In addition, a few of the questionnaire items administered by the investigators do not always appear to have included the most relevant, most inclusive, and least overlapping alternative responses possible. Finally, this reviewer would have welcomed a greater sampling of the informal opinions of the chairmen themselves. Those that were included, while obviously not capable of statistical weighting nor so intended, were among the most thought-provoking parts of the report. However, no single investigation of a field can meet all of the goals that might be considered desirable, and the authors of this report have certainly gone a long way toward demonstrating the broad spectrum of contemporary preventive medicine, its problems, and its prospects.

Furthermore, the concluding opinions they express about desirable future directions for teaching in this field (though rather modest and restrained), and the examples they cite of some of the more interesting and original teaching practices which they encountered in the course of their survey, should prove valuable to many professors of preventive medicine, as they continue to examine their own programs.