

Environment Is Everybody's Business

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IN THE FIELD of environmental health we are dealing, quite literally, with man's future in the society he has created for himself. Those of us who are working in that field are writing prescriptions for survival in a world grown incredibly intricate and complex.

President Lyndon B. Johnson summed up both our goal and our challenge when he told the country in his State of the Union message that "an educated and healthy people require surroundings in harmony with their hopes." In the Great Society, he said, "we want to grow and build and create, but we want progress to be the servant and not the master of man."

In a very profound sense, this is the essence of environmental health in today's world—to help the society of man reap the benefits of modern science and at the same time to protect ourselves against its possible hazards.

A Social Objective

For those of us engaged in maintaining and furthering environmental health, harmonious surroundings mean clean air, water, food, and neighborhoods. They mean control of natural hazards, and those created by man himself, to assure human well-being. And they mean a healthy and significant life in our homes, our places of work, and in the way we use our leisure time.

Considered thus broadly—and I believe we must avoid limited and compartmentalized

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thinking—a healthful environment becomes a basic social objective. Environmental health is a positive concept, designed not only to protect but to promote increasing levels of well-being.

Since, at the most elementary level, we equate business with buying and selling, I want to emphasize that environmental health is purchasable. We can create clean and healthful communities, we can protect our population from food poisoning, we can recast jobs and places of employment so that work will prolong rather than shorten life. Our technical proficiency and scientific knowledge are equal to all these tasks.

I am less sure about our interest and our willingness, as individuals or as a society, to summon up the energy necessary and to pay the large bill required for such accomplishments.

Also I am disturbed by the need, in dealing with the environment, to turn one outstanding liability into an asset. That difficulty was memorably stated by Izaak Walton who remarked: "I remember that a wise friend of mine did usually say, 'That which is everybody's business is nobody's business.'"

The environment is everybody's business, and this leads to a great number of difficulties. It is the business, the working life, of a variety of specialists: engineers, architects, radiologists, meteorologists, aquatic biologists, electron microscopists, toxicologists, systems analysts, planners, and many others.

It is the business of numerous agencies within and outside of government, and at every level of government. Nearly every agency of government, for example, has some responsibility for studying the environment or for controlling one of its resources. Moreover, the community response to environmental problems

in our coalescing urban areas depends on satisfactory adjustments within an intricate administrative system, involving hundreds of local jurisdictions.

It has also become the business of the American people who no longer are willing to tolerate unwise, uneconomic, and unhealthful use of the environment. This public interest is often manifested through voluntary organizations which call for quick solutions to many complex environmental problems.

We must find a way to harness this interest and energy and at the same time pursue an orderly statesmanlike course. This requires a high degree of cooperation and coordination. Coordination is one of the most difficult arts of administration; yet coordination is essential in an operation which stretches across many boundaries, geographic and administrative and philosophical. Since coordination is never perfect, the scope of interest in and involvement with the environment poses one of our first major problems.

The Urgent Challenge

The environment is everybody's business also in the sense that we are all, in some measure, responsible for fouling the air, water, and soils around us. Exhaust from our automobiles, detergent from our kitchen sinks, waste products from our business centers, agricultural areas, and industries are poured into the skies above and into the rivers nearby. Wastes from individual homes, factories, and farms are multiplied as our population expands in numbers and is concentrated into the great urban areas of the nation.

Environmental health is, therefore, urgent business. There are two reasons for this urgency: one that might be termed "external" and the other "internal."

The external reason for urgency involves the pace of scientific and technological development and the increasing public demand for action.

We can get some idea of the nature and magnitude of the problems simply by listing some of the dominant trends in American society today: the growth of our population; the ever-increasing diversity of our technology; the development of new industries; the increasing use of nuclear power; the magnitude of the

gross national product; the introduction of new chemicals into our food, water, air, and consumer products; the growth of huge metropolitan areas; altered means of communication and transportation; and increased leisure time and the demand for recreational facilities.

Moreover, the problems are multiplying with dazzling speed. Many U.S. cities, for example, experienced their first smog episodes within the past 5 to 10 years. My home town of Washington, probably the least industrialized U.S. city of its size, had its first-recorded instance of Los Angeles-type smog in June 1960; there have been several since.

As the years bring seemingly inevitable pollution to each city in the United States, one is reminded of the two little boys who were comparing their hands. "Mine's dirtier than yours," the first one said proudly. "Well," said the second, "you're a year older."

In any field we examine, the story is the same. There is now six times as much pollution in our rivers, streams, and lakes as 60 years ago, and the amount is still increasing. Every year more than 500 new chemicals and chemical compounds are introduced into industry along with countless operational innovations.

Our challenge is no less urgent when we consider the oldest health problems of the environment: water supply, waste disposal, and general sanitation. They have now taken on such vast dimensions and have become involved with so many economic and political issues as to be classed as new city health problems.

For example, the collection and disposal of solid wastes will be a continuing problem as long as some three-fourths of all communities with more than 1,000 population use open dumps or other poor means of disposal. These antiquated methods contribute to pollution, the propagation of disease vectors, odors, and ugly conglomerations of garbage and junk.

It is no wonder that the people are insisting on remedial action.

The public is also increasingly restive about paying the price of pollution—the price in dollars, in threats to their health, in blighted communities. The price is high, and it will grow higher unless we make the conscious commitment now to reverse the tide that threatens to engulf us.

The second, or internal, reason for urgency is the state of our knowledge. We know a good deal about the environment, and our knowledge is growing every day. Most important, we know enough to be aware of the extent of our ignorance—and that is the real beginning of knowledge.

Several years ago a committee of distinguished scientists reported that this nation was at least 10 years behind schedule in its research effort on environmental contamination. Today, with the situation aggravating instead of diminishing, we still have little exact knowledge of what takes place within the human body when it inhales, ingests, or comes into physical contact with toxic substances in small quantities over a long period of time. Possible genetic effects of long-term exposure to potentially harmful substances can only be guessed. Scientific protection against radiation is at the beginning stage of development. The effects of such physical forces as heat, cold, and noise are little known.

Throughout the centuries, man has shown great ability to adjust to varying environments. But there may be a limit to his ability to adapt, particularly in the face of the drastic and far-reaching changes of today's world.

Should we not be energetically, even frantically, at work to safeguard our environment and to protect our health? Of course we should be, yet we can identify some reasons why we are not moving as quickly as necessary.

One reason lies in the need to take corrective rather than preventive measures. It is very difficult to stop or remove pollution once it has a good start. At a recent air pollution control conference one speaker put it this way: "Once a process has become embedded in a vast economic or political commitment, it may be nearly impossible to alter."

We become used to doing things a certain way. The costs of changing, of retooling, of reorganizing are high. Frequently these costs fall unequally, and the part of society which may have to shoulder the major portion of the cost tends to resist.

Another reason is that we become accustomed to what Mark Twain called "all the modern inconveniences." Once we become used to a condition, it is difficult to see it clearly as a danger.

Whose function is it, at this point, to bring the efficiency and energy to bear upon managing everybody's business, the environment? As in any smooth-running establishment affecting the well-being of the total population, we all have our roles to play.

Responsibility for national policy, of course, lies at the highest levels of government. President Johnson has said: "The Great Society which we mean to build in America must be a healthy society. I pledge my wholehearted energies to make it that way."

He has repeatedly stressed his intention of creating a wholesome environment as one of the indispensable steps toward better health in the Great Society. In his Health Message to the Congress early this year—the first of his special messages, by the way, and indicative of the high priority he gives to health matters—he stated that he will deliver another special message on the pollution of our environment.

20th Century Solutions

The President's budget, submitted to the Congress last January, included an increase of \$17 million for environmental health activities in the Public Health Service. With this increase we hope to strengthen several of our programs and to initiate several important new activities.

For example, we are currently conducting studies on the effects of pesticides on human health. We hope to expand the community studies already underway and to accelerate our research efforts in the analysis of the health effects of the continued and long-range use of pesticides.

We are planning a concentrated effort to combat botulism poisoning by intensifying our research and development of public health methods to identify and control poisoned foods.

We hope to expand our attack on a major problem of our cities—solid waste disposal. For example, we plan to test and demonstrate a new process by which two substances, solid wastes and sewage sludge—both of which are useless and pose disposal problems—can be converted into something that will be useful as a soil conditioner. This project will be conducted in cooperation with the Tennessee Valley Authority. We hope that it will offer a 20th cen-

tury solution to an age-old, expensive, and increasingly serious problem.

In the fields of air and water pollution, we plan to increase our support of community programs, research, training, and technical services. There will be an increase in research activities in the determination of the health effects of sulfur compounds in the air, the removal of sulfur from fuels, and the development of air pollution control devices. We also plan to expand the cooperative project initiated in 1964 to control water pollution from acid mine drainage.

Most important of all, in my opinion, we are taking steps to provide a focal point for far-ranging and coordinated research, training, and control programs in the environmental health sciences. I have just listed some components of our environmental health program, but I want to emphasize that we regard them as separate facets of the same problem. The same chemicals, for example, may impinge on the individual in community air, in milk, food, water, and in his occupational environment—not once, but repeatedly.

Obviously, different techniques may be required to cope with the threats present in different sectors of the environment. It may be necessary to manipulate the environment for broader purposes than the protection of the population against specific diseases, as is the case in water pollution control. But the man-environment relationship is "one and indivisible."

In the business of environmental health, therefore, we need to look beneath and beyond the immediate operating responsibilities of official agencies at all levels, as well as those of industries and scientific institutions. And we need to keep man at the center of our considerations.

Recently, the Department of Health, Education, and Welfare began the final stage of planning a major center for the study of man and his environment. Called the National Center for Environmental Health Sciences, it will bring together a group of scientists and administrators to establish a national leadership effort in this field. The North Carolina Research Triangle—a hub of academic, scientific, and industrial activities—has been selected as the site of the Center, but it is also anticipated that addi-

tional environmental health facilities will be established in other locations in the United States.

One of the Center's primary functions will be to develop and maintain a national overview of the needs in environmental health research and to help fill in the gaps, either in its own laboratories or by contracts and grants to universities and other nongovernment institutions. It will appraise and analyze our national requirements in the environmental health sciences and our directions for the future. To accomplish this task, the Center will require a wide range of competencies in many scientific fields.

We have high hopes for the Center, of course, as the nucleus for a major new thrust against the problems of the modern environment. But the problems are national in scope and call for a national response. Research workers in universities and laboratories throughout the country will continue to be a vital part of the total effort.

All of us have a share in developing techniques and resources that will contribute to a healthier environment. And all of us must recognize change, anticipate change, and work toward change.

The greatest change—a prerequisite to all others—is a change in our thinking and attitudes. John Erskine said: "The body travels more easily than the mind, and until we have limbered up our imagination we continue to think as though we had stayed home. We have not really budged a step until we take up residence in someone else's point of view."

Business as usual when the business at hand is the environment must yield to new philosophies and approaches.

Those of you who are university faculty members, research workers, engineers, scientists, and businessmen have a responsibility beyond that of working in your classroom, laboratory, or office. At this point in history, that responsibility is to contribute to public understanding of what is happening in our environment and of what can and should be done in plotting our future course.

This conference enables experts from different specialties to exchange views and to plan together. We need to provide such opportunities from time to time. We need to pause in

our research and in our action programs to provide for the kind of thinking that will result in the application of knowledge from one field of activity to another.

We need to incorporate as part of our technological process an evaluation of the effects of new procedures or products on society as a whole. This moment of hesitation, this slight pause before a leap into action, may be the dose

of preventive medicine that will give to millions good health in place of disability and death. It is the pause that can give us clear skies and clean water. It is the application of the philosophy of preventive medicine to society.

Protection of the environment is everybody's business—a most noble enterprise in which our profits are a healthier world for ourselves and for all the generations to follow.

Public Health Service Staff Appointments

Dr. Stanley F. Yolles has been appointed director of the National Institute of Mental Health, succeeding Dr. Robert H. Felix, who retired October 1, 1964.

Dr. Yolles began his work at the Institute in 1954 as staff psychiatrist at the Mental Health Study Center, of which he became director. From 1960 to 1963, he served as associate director for extramural programs of the National Institute of Mental Health, and was appointed deputy director in 1963.

A graduate of New York University Bellevue Medical Center, Dr. Yolles completed his residency in psychiatry at the Public Health Service Hospital in Lexington, Ky., in 1954. He holds a bachelor's degree from Brooklyn College, a master of arts degree from Harvard University, and a master of public health degree from Johns Hopkins University.

Dr. Robert S. Gordon, Jr., has been named clinical director of the National Institute of Arthritis and Metabolic Diseases. He succeeds the late Dr. Joseph J. Bunim.

Dr. Gordon has been associated since 1951 with the National Heart Institute, most recently as a senior investigator in the laboratory of metabolism.

A native of New York City, Dr. Gordon received his A.B. degree from Harvard college and his M.D. degree from Harvard Medical School in 1949. He served his internship and residency at Presbyterian Hospital, New York.

Dr. Gordon is known for his research on the physiological role of free fatty acids in the blood. His studies showed that free fatty acids are the forms in which fat is mobilized from adipose tissue. Subsequently he developed a diagnostic test using radioactive polyvinylpyrrolidone which has made possible the widespread recognition of diseases in which there is a loss of protein in the digestive system.